



Beechcraft

BY TEXTRON AVIATION

Air Safety Investigations Non-Aircraft Incident/Accident Technical Report

Aircraft Incident/ Accident Information	Year: 2005	Make: Cessna	Model: 182T
	Serial number: 18281717		Registration: N716MC
Location: Heath, OH		Date: 02-01-22	Time: 1337 EST
Aircraft Owner		Aircraft Operator	
Wing & A Prayer LLC [REDACTED] Wilmington, DE 19801-3584		Paul R. Brown [REDACTED] Zanesville, OH 43701	
Report Information			
Chief Air Safety Investigator: Andrew L. Hall		Report #: ASI-22-AH-T	Report date: 07-08-22

Airframe

Impact Sequence and Airframe Structure

The aircraft was reviewed on site by the NTSB and this information was provided by the NTSB-IIC. Both wings, empennage and engine were separated from the fuselage during the impact sequence. The pilot's seat was separated from the cabin floor during the event. The NTSB-IIC photographed numerous sections of propeller cut tree branches throughout the energy path.

Airframe Systems

Flight Control System Information		
Control lock: Undetermined		
Flight Control Cable Continuity		
Ailerons: Established	Elevators: Established	Rudder: Established
Aileron tab: Not applicable	Elevator tab: Established	Rudder tab: Not applicable
Flap and Trim Positions		
Flap indicator: Undt	Flap handle: Up	Flap actuator: Up
Elevator trim: Indicator: Unknown due to damage	Actuator: Undt	
Rudder trim: Indicator: Unknown due to damage	Actuator: N/A	

Remarks:

None.

Airframe Fuel System Condition, Controls, and Read Outs		
Fuel strainer screen: Clean		Fuel strainer bowl: Clean
Main fuel tank gauge:	Left: Undt	Right: Undt
Fuel selector handle: Both	Fuel selector valve: Both	Fuel boost pump: On

Remarks:

The fuel tank finger screens were observed clean.

Landing Gear System Condition and Controls			
Gear position:	Nose: Fixed	Left: Fixed	Right: Fixed
Actuator position:	Nose: Not applicable	Left: Not applicable	Right: Not applicable
Landing gear selector: Not applicable			
Environmental System Controls and Read Outs			
Cabin heater: Undt	Cabin vent: Undt	Defrost: Undt	
Air conditioner: Undt	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: On		Stall heat: Not applicable	
Anti-ice:	Surface: Not applicable	Propeller: Not applicable	Windshield: Not applicable
ELT Information			
Installed? Yes	Manufacturer: Pointer	Model: 3000-11	Type: Undt
Serial number: 334353	Battery due date: 03-2022	Armed: Undetermined	Activated: Undetermined

Remarks:

None

Cabin and Equipment/Furnishings

Restraint System Information						
Seat	Occupied	Restraint type	Restraint used	Condition	Manufacturer	
1	Yes	3-Point airbag	Yes	Air bag deployed	See below	
2	No	3-Point airbag	No	Good	See below	
3	No	3-Point airbag	No	Good	See below	
4	No	3-Point airbag	No	Good	See below	

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

Remarks:

STC SA01700LA Inflatable Restraint System was installed at the factory.

The three-point air bag seat belt was observed in the latched position and the airbag had deployed. The pilot's seat and seat tracks were observed separated from the cockpit floor.

Instrument Panel

Navigation Instruments							
Digital primary instruments				Autopilot type: KAP 140			
Suction gage: Undetermined			Magnetic compass: Undetermined			Clock: Undetermined	
	PFD 1	PFD 2		PFD 1	PFD 2		
Airspeed:	Undt	Undt	Turn coordinator (airplane):	Undt	Undt		
Attitude (pitch):	Undt	Undt	Turn coordinator (ball):	Undt	Undt		
Attitude (roll):	Undt	Undt	Heading indicator:	Undt	Undt		
Altimeter:	Undt	Undt	Heading "bug":	Undt	Undt		
Altimeter setting:	Undt	Undt	Vertical speed indicator:	Undt	Undt		
Stand-by:	Airspeed: Undt		Attitude (pitch): Nose down		Attitude (roll): Inverted		
	Altimeter: 910		Altimeter Setting: 30.06				
Communication and Navigation Radios							
Radio	Control	Active frequency	Stand-by frequency	Radio	Control	Active frequency	Stand-by frequency
Com 1:	Undt	Undetermined	Undetermined	Com 2:	Undt	Undetermined	Undetermined
Nav 1:	Undt	Undetermined	Undetermined	Nav 2:	Undt	Undetermined	Undetermined
Obs 1:	Undetermined			Obs 2:	Undetermined		
Transponder:	Mode: Undetermined		Active code: Undetermined		Stand-by code: Undetermined		
Electrical Switch Positions							
Master battery: Undetermined			Master alternator: Undetermined			Avionics 1: Undetermined	
Stand-by battery: Off							
Lighting Switch Positions							
Navigation: Off			Rotating Beacon: Off			Landing: Off	
Taxi: Off			Strobe: Off			Instrument: Undetermined	
Ignition Switch Position							
Key: Both							

Remarks:

None

Powerplant Description

Engine Instruments						
Hour meter: 901.6		Tach RPM: Undt		Tach hours: Undt		
Manifold press: Undt		Oil temp: Undt		EGT: Undt		
CHT: Undt		Fuel press: Undt		Fuel flow: Undt		
Ammeter: Undt		Voltmeter: Undt				
Engine Control Positions						
	Cockpit	Engine		Cockpit	Engine	
Throttle:	Full in	Undt	Cowl flaps:	Closed	Undt	
Mixture:	Undt	Undt	Alternate air:	Undetermined	Undt	
Propeller:	Undt	Undt	Primer:	Undetermined		
Engine Condition						
Engine attached to airframe: No			Propeller attached to engine: Yes			
Engine compression: See below			Valve train continuity: Yes			
Vacuum pump drive shaft: See below						
Engine Fuel System Condition						
Fuel pump drive shaft: Not applicable			Fuel control inlet screen: Clean			
Fuel distribution valve screen: Clean			Fuel injectors: See below			
Magnetos Condition						
Left magneto attached: No			Right magneto attached: Yes			
Left magneto spark: See below			Right magneto spark: All leads			
Spark Plug Condition (per Champion Check-A-Plug Card)						
	1	2	3	4	5	6
Top	Normal	Normal	Normal	Normal	Normal	See below
Bottom	Not examined	Normal	Not examined	Normal	Not examined	See below

Remarks:

The engine, prior to the removal of the #6 cylinder, could only be rotated approximately 300°, after removal it rotated 360°. Damage to the top of the cylinder prevented complete rotation. The left magneto was separated from the engine and damaged during the impact and could not be tested. The diaphragm fuel pump was removed from the engine and when actuated was operational. The number 6 fuel nozzle was observed clean; the remaining nozzles were not inspected. The vacuum pump was removed from the engine and pumped air when rotated by hand. Neither of the spark plugs for the #6 cylinder were recovered.

Propeller

The propeller hub remained attached to the engine. One propeller blade was observed separated from the hub. All of the propeller blades exhibited leading edge damage and chordwise scratching.

Research & Testing

None

