

Air Safety Investigations Aircraft Incident/Accident Technical Report

Aircraft Incident/ Accident Information	Year: 1957	Make: Cessna	Model: 182A
	Serial number: 34309		Registration: N9909B
Location: Selma, CA		Date: 04-18-16	Time: 1805 PDT
Aircraft Owner		Aircraft Operator	
HBC Aero LLC [REDACTED] Rancho Murieta, CA 95683-9377		Same as owner	
Report Information			
Air Safety Investigator: Jonathon N. Hirsch		Report #: ASI-16-BS-T	Report date: 10-10-16

Airframe

Impact Sequence and Airframe Structure

As a result of a forced landing in an open field, the airplane nosed over and sustained impact damage to the nose gear, engine, propeller, engine cowling, wings, and fuselage.

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: See below	Rudder tab: Established
Flap and Trim Positions		
Flap indicator: N/A	Flap handle: 10	Flap actuator: N/A
Elevator trim:	Indicator: Between neutral and full nose down	Actuator: 7-3/8" ~ -4 degrees LE down
Rudder trim:	Indicator: Not applicable	Actuator: Undt

Remarks:

The 1957 Cessna 182A has two actuators which work together to trim the horizontal stabilizer. One of these actuators was measured and found to be extended 7-3/8". This extension would result in the stabilizer leading edge being approximately 4 degrees down. The "takeoff" position for the stabilizer is 3.5 degrees leading edge down.

Airframe Fuel System Condition, Controls, and Read Outs		
Fuel strainer screen: Clean		Fuel strainer bowl: Clean
Main fuel tank gauge:	Left: Empty Right: Empty	
Fuel selector handle: Off	Fuel selector valve: Off	

Remarks:

None.

Landing Gear System Condition and Controls			
Gear position:	Nose: Fixed	Left: Fixed	Right: Fixed
Environmental System Controls and Read Outs			
Cabin heater: Forward	Cabin vent: Forward	Defrost: Undt	
Air conditioner: N/A	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: Not applicable		Stall heat: Not applicable	
Anti-ice:	Surface: Not applicable	Propeller: Not applicable	Windshield: Not applicable
ELT Information			
Installed? Yes	Manufacturer: ACK Technologies	Model: E-01	Type: AF
Serial number: 053405	Battery due date: Undt	Armed: Undetermined	Activated: Undetermined

Remarks:

None.

Cabin and Equipment/Furnishings

Restraint System Information						
Seat	Occupied	Restraint type	Restraint used	Condition	Manufacturer	2nd seat stop
1	Yes	2-Point	Yes	Good	Non-OEM	Yes
2	Yes	2-Point	Yes	Good	Non-OEM	Yes
3	No	2-Point	No	Good	Undetermined	Not applicable
4	No	2-Point	No	Good	Undetermined	Not applicable

Seat Condition Information					
Seat	Orientation	Feet intact	Back intact	Base intact	Rail intact
1	Forward facing	Yes	Yes	Yes	Yes
2	Forward facing	Yes	Yes	Yes	Yes
3	Forward facing	Yes	Yes	Yes	Yes
4	Forward facing	Yes	Yes	Yes	Yes

Remarks:

None.

Instrument Panel

Navigation Instruments							
Analog primary instruments					Autopilot type: None		
Suction gage: Off Scale			Magnetic compass: 157°		Clock: 0700		
	Left side				Left side		
Airspeed:	0			Turn coordinator (airplane):	Level		
Attitude (pitch):	12° Down			Turn coordinator (ball):	Slightly Right		
Attitude (roll):	15° Right			Heading indicator:	340°		
Altimeter:	120'			Heading "bug":	N/A		
Altimeter setting:	29.98			Vertical speed indicator:	0		
Communication and Navigation Radios							
Radio	Control	Active frequency	Stand-by frequency	Radio	Control	Active frequency	Stand-by frequency
Com 1:	Undt	Undt	Undt	Com 2:	Undt	Undt	Undt
Nav 1:	Undt	Undt	Undt	Nav 2:	Undt	Undt	Undt
Obs 1:	128°			Obs 2:	095°		
Transponder:	Mode: ALT		Active code: 7373		Stand-by code: N/A		
Electrical Switch Positions							
Master battery: Off			Generator: Off		Avionics 1: Off		
Lighting Switch Positions							
Navigation: Off			Rotating Beacon: On		Landing: Off		
Taxi: Not applicable			Strobe: Not applicable		Instrument: Undetermined		
Ignition Switch Position							
Key: Off							

Remarks:

None.

Powerplant Description

Engine Instruments						
Hour meter: N/A		Tach RPM: 0		Tach hours: 3542.1		
Oil press: Off Scale		Oil temp: Low End		EGT: N/A		
Fuel press: N/A		Fuel flow: N/A		Ammeter: N/A		
Engine Control Positions						
	Cockpit	Engine		Cockpit	Engine	
Throttle:	Out 1-3/8"	Undt	Cowl flaps:	N/A	Undt	
Mixture:	Out 2-1/4"	Undt	Carburetor heat:	Forward	Undt	
Propeller:	Full Forward	Undt	Primer:	Forward		
Engine Condition						
Engine attached to airframe: Partially			Propeller attached to engine: Yes			
Engine compression: Yes			Valve train continuity: Yes			
Vacuum pump drive shaft: Intact						
Engine Fuel System Condition						
Fuel pump drive shaft: Not applicable			Carburetor inlet screen: Clean			
Magnetos Condition						
Left magneto attached: Yes			Right magneto attached: Yes			
Left magneto spark: All leads			Right magneto spark: All leads			
Spark Plug Condition (per Champion Check-A-Plug Card)						
	1	2	3	4	5	6
Top	Worn	Normal	Worn	Normal	Worn	Worn
Bottom	Worn	Worn	Worn	Worn	Worn	Worn

Remarks:

The propeller was removed and replaced with a shortened "test" propeller to facilitate an engine run. An external fuel tank was plumbed into the airplane fuel system at the right wing root. The engine was further secured to the fuselage with a strap and the nose of the fuselage was placed on a wooden stand since the nose landing gear had separated from the fuselage. The fuselage was held in place with straps to a forklift and another forklift was placed beneath the aft cabin to stabilize the fuselage. An external power supply was connected to the aircraft electrical system and the engine was started. Initially, the engine ran for approximately 80 seconds before stopping. Multiple attempts were made to run the engine again, however, the engine would only start when primed and would not continue running once the initial primer fuel was exhausted. The carburetor was then removed from the engine and disassembled. A small amount of undetermined debris was cleared from the Mixture Metering Sleeve using light air pressure. No other anomalies were noted with the carburetor. The carburetor was reassembled and reinstalled on the engine. Once the carburetor was reinstalled, the engine started and ran continuously until the mixture control was moved to the idle cutoff position.



Undetermined debris which was dislodged from the Mixture Metering Sleeve.

Propeller

The propeller remained attached to the engine. Both blades exhibited aft bending. The propeller spinner had a single depression which did not show any signs of rotation at impact.

Research & Testing

No additional research or testing is planned at this time.