



Beechcraft

BY TEXTRON AVIATION

Air Safety Investigations Aircraft Incident/Accident Technical Report

Aircraft Incident/ Accident Information	Year: 1980	Make: Cessna	Model: 180K
	Serial number: 18053166		Registration: N13159
Location: Columbus, OH		Date: 06-14-21	Time: 0852 EDT
Aircraft Owner		Aircraft Operator	
N13159 LLC [REDACTED] Worthington, OH 43085-3869		Christine Shumway Mortine [REDACTED] Worthington, OH 43085-3869	
Report Information			
Chief Air Safety Investigator: Henry J. Soderlund		Report #: ASI-21-CY-T	Report date: 03-14-22

Airframe

Impact Sequence and Airframe Structure

Photographs show the aircraft in a nose down attitude at the accident site.



FAA On Site Photograph IMG_0204.jpg

During the post-recovery examination damage to both wings was observed. The empennage was damaged during the recovery of the aircraft.

Airframe Systems

Flight Control System Information		
Control lock: Not installed		
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: Not applicable	Flap handle: Fully extended	Flap actuator: Not applicable
Elevator trim:	Indicator: Full nose down	Actuator: Undetermined
Rudder trim:	Indicator: Neutral	Actuator: Not applicable

Remarks:

On site photographs taken by the FAA showed the flap handle in the fully extended position.

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	Fuel boost pump:

Remarks:

The pilot reportedly turned the fuel selector handle to the OFF position before exiting the aircraft. Fuel system continuity was confirmed from the wing roots to the fuel strainer by blowing air through the lines. The wing fuel tank finger screens, fuel strainer screen, fuel control manifold screen, and flow divider screen were all clear of debris. No blockages were found in the fuel lines.

At an unknown time, a white sealer had been painted on a majority of the vertical surfaces and seams in the left tank. The sealer was cracked and only partially adhered to portions of the tank. Pieces of sealer, up to an inch in size and thinner than a piece of paper, were found loose in the bottom of the tank. A dark gray sealer was observed on top of the white sealer around the middle and outboard fuel tank drains.



TAI Wreckage Exam ASI-21-CY-052.jpg – Left fuel tank



TAI Wreckage Exam ASI-21-CY-051.jpg – Interior of left tank

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: Off	Cabin vent: Off	Defrost: Not applicable	
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: On		Stall heat: Not applicable	
Anti-ice:	Surface: Not applicable	Propeller: Not applicable	Windshield: Not applicable
ELT Information			
Installed? Undt	Manufacturer: Undetermined	Model: Undetermined	Type: Undetermined
Serial number: Undt	Battery due date: Undetermined	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	3-Point	Yes	Intact	Undetermined	No
2	Yes	3-Point	N/A	Intact	Undetermined	No
3	Yes	2-Point	N/A	Intact	Undetermined	Not applicable
4	Yes	2-Point	N/A	Intact	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	No	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: S-Tec			
Suction gage: Off scale		Magnetic compass: Undetermined		Clock: Undetermined			
	Left side				Left side		
Airspeed:	0		Turn coordinator (airplane):	Level			
Attitude (pitch):	15° nose up		Turn coordinator (ball):	Right			
Attitude (roll):	Level		Heading indicator:	029			
Altimeter:	560		Heading "bug":	015			
Altimeter setting:	29.89		Vertical speed indicator:	0			
Communication and Navigation Radios							
Radio	Control	Active frequency	Stand-by frequency	Radio	Control	Active frequency	Stand-by frequency
Com 1:	On	Digital	Digital	Com 2:	On	Digital	Digital
Nav 1:	On	Digital	Digital	Nav 2:	On	Digital	Digital
Obs 1:	270			Obs 2:	Not applicable		
Transponder:	Mode: Digital		Active code: Digital		Stand-by code: Digital		
Electrical Switch Positions							
Master battery: Off		Master alternator: Off		Avionics 1: Off			
Lighting Switch Positions							
Navigation: Off		Rotating Beacon: On		Landing: Off			
Taxi: Off		Strobe: Off		Instrument: Undetermined			
Ignition Switch Position							
Key: Off							

Remarks:

The avionics switch was a three position switch that automatically returned to the middle position. The standby vacuum pump control was in the full forward position. The radar altimeter indication was 0.

Powerplant Description

Engine Instruments						
Hour meter: 4687.8	Tach RPM: 0	Tach hours: 742.4	Manifold press: 29.9			
Oil press: 0	Oil temp: 0	EGT: N/A	CHT: 0			
Fuel press: N/A	Fuel flow: 0	Ammeter: 0	Voltmeter: N/A			
Engine Control Positions						
	Cockpit	Engine		Cockpit	Engine	
Throttle:	Full forward	Undetermined	Cowl flaps:	Open	Undetermined	
Mixture:	Full aft	Undetermined	Alternate air:	Undetermined	Undetermined	
Propeller:	Full forward	Undetermined	Primer:	Not applicable		
Engine Condition						
Engine attached to airframe: Yes			Propeller attached to engine: Yes			
Engine compression: Yes			Valve train continuity: Yes			
Vacuum pump drive shaft: Undetermined						
Engine Fuel System Condition						
Fuel pump drive shaft: Intact			Fuel control inlet screen: Clean			
Fuel distribution valve screen: Clean			Fuel injectors: See below			
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	See below	See below	Normal	Normal	Normal	Normal
Bottom	Not examined	Not examined	Not examined	Not examined	Not examined	Not examined

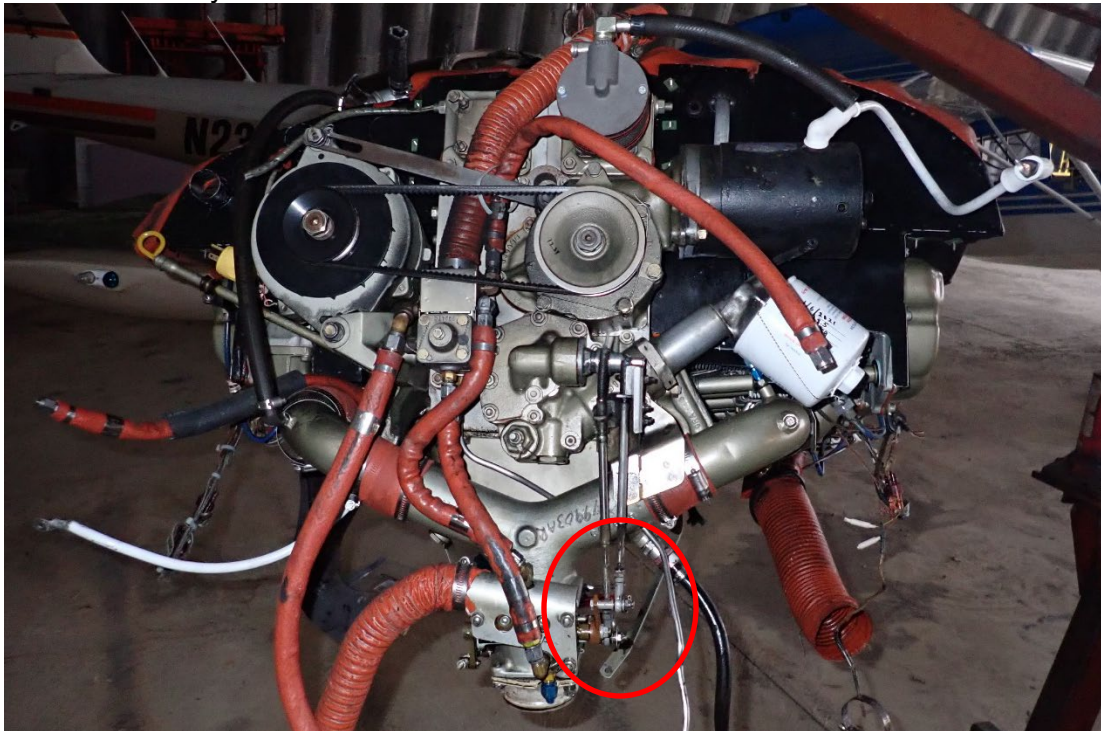
Remarks:

A white substance was observed adhered to a portion of the flow divider spring and the flow divider diaphragm was less pliable than normal. All of the fuel injectors were clear of debris except cylinder 2 which was partially obstructed. White combustion deposits were noted in cylinder 2 when it was examined with an endoscope; the other cylinders appeared normal. The cylinder 1 top spark plug was corroded. The cylinder 2 top spark plug electrode and insulator appeared lighter in color than the other top spark plugs.



TAI Wreckage Exam ASI-21-CY-104.jpg – Flow divider screen

The throttle body became wet with fuel when air was blown into the fuel lines.



TAI Wreckage Exam ASI-21-CY-083.jpg (cropped) – Throttle body leakage circled

Propeller

The propeller exhibited limited damage; one blade was bent slightly aft.

Research & Testing

None.