



Beechcraft

BY TEXTRON AVIATION

Air Safety Investigations Aircraft Incident/Accident Technical Report

Aircraft Incident/ Accident Information	Year: 1963	Make: Beechcraft	Model: P35
	Serial number: D-7217		Registration: N8572M
Location: Upland, CA		Date: 07-30-23	Time: 640 PDT
Aircraft Owner		Aircraft Operator	
Jeff R. Signor [REDACTED] Alta Loma, CA 91701-0223		Same as Aircraft Owner	
Report Information			
Air Safety Investigator: Kurt A. Gibson		Report #: ASI-23-BV-T	Report date: 10-19-23

Airframe

Impact Sequence and Airframe Structure

The aircraft impacted a hangar in a near vertical attitude. The left wing impact separated from the rest of the aircraft and remained on the roof of the hangar. A portion of the airframe engine mount structure remained imbedded in the hangar door. The aircraft then impacted the concrete tarmac in front of the hangar in an inverted attitude. A post impact fire ensued and consumed most of the fuselage, the empennage and the right wing also displayed thermal damage signatures.



Wreckage Overview (ASI-23-BV (2).jpg)

Airframe Systems

Flight Control System Information		
Control lock: Not installed		
Flight Control Cable Continuity		
Ailerons: Established	Elevators: See below	Rudder: Established
Aileron tab: Not applicable	Elevator tab: Established	Rudder tab: Not applicable
Flap and Trim Positions		
Flaps:	Indicator: Undt	Handle: Undt
	Left actuator: ~1.70", equates to retracted	Right actuator: Undetermined
Elevator trim:	Indicator: Unknown due to damage	
	Left actuator: ~.875" equating to neutral	Right actuator: N/A
Rudder trim:	Indicator: Not applicable	Actuator: Not applicable
Aileron trim:	Indicator: Not applicable	Actuator: Not applicable

Remarks:

The rudder control cables were continuous from their attachments at the differential mechanism outboard control arms to the ball ends that were found in the cockpit area. The elevator bellcrank/control arm at the differential mechanism was broken into two pieces, the fractures displayed

overload signatures. The elevator up cable was continuous from its control surface bellcrank/control arm to the cockpit. The elevator down cable continuity was through a break that displayed tension overload signatures. The elevator down cable remained attached to the elevator reduction bellcrank. The elevator down cable that attaches the elevator bellcrank to the elevator reduction bellcrank remained intact and was attached to both of its attachment points. Both elevator trim tabs were secured to their respective control surfaces and cables and the elevator trim actuator was capable of normal operation while pulling the elevator trim cables. The aileron balance cable was continuous from both attach points, however, a portion of the left wing bellcrank had fractured consistent with impact damage and remained attached to the balance cable. Left aileron direct cable continuity was established through a break that was consistent with tension overload. The right aileron direct cable was continuous from the bellcrank to the control chain.

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

Remarks:

The fuel selector valve cover had impact separated free from the fuel selector and the fuel strainer screen was not observed during the examination. The fuel selector valve was found in the OFF position detent. The fuel selector valve was capable of normal movement and was unobstructed in the LEFT and RIGHT positions.



Fuel Selector Valve (ASI-23-BV (205).jpg)

Landing Gear System Condition and Controls			
Gear position:	Nose: Undetermined	Left: Retracted	Right: Retracted
Actuator position:	Nose: Undetermined	Left: Undetermined	Right: Undetermined
Landing gear selector: Undetermined		Emer gear handle: Undt	
Environmental System Controls and Read Outs			
Cabin heater: Undt	Cabin vent: Undt	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: 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? Undt	Manufacturer: Undetermined	Model: Undetermined	Type: Undetermined
Serial number: Undt	Battery due date: Undetermined	Armed: Undetermined	Activated: Undetermined

Remarks:

Both the left and right main landing gear were found in the retracted position; however, the landing gear actuating arms had broken free from their respective landing gear and the landing gear actuator motor and gears were thermally damaged and a position could not be determined.

Cabin and Equipment/Furnishings

Restraint System Information						
Seat	Occupied	Restraint type	Restraint used	Condition	Manufacturer	2nd seat stop
1	Yes	2-Point	See below	Thermally damaged	Undetermined	Not applicable
2	Yes	2-Point	See below	Thermally damaged	Undetermined	Not applicable
3	Undt	2-Point	See below	Thermally damaged	Undetermined	Not applicable
4	Undt	2-Point	See below	Thermally damaged	Undetermined	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
4	Forward facing	No	No	No	No

Remarks:

The seats were all partially consumed by thermal forces and were impact damaged. Three of the four lap belt buckles were found in the wreckage and none of the located buckles were buckled.

Instrument Panel

Navigation Instruments							
Analog primary instruments				Autopilot type: Undetermined			
Suction gage: Undt		Magnetic compass: Undt		Clock: Undt			
	Left side			Left side			
Airspeed:	Undt		Turn coordinator (airplane):	Undt			
Attitude (pitch):	Undt		Turn coordinator (ball):	Undt			
Attitude (roll):	Undt		Heading indicator:	Undt			
Altimeter:	Undt		Heading "bug":	Undt			
Altimeter setting:	Undt		Vertical speed indicator:	+3,000 fpm			
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:	Undt			Obs 2:	Undt		
Transponder:	Mode: Undt	Active code: Undt		Stand-by code: Undt			
Electrical Switch Positions							
Master battery: Undetermined		Master alternator: Undetermined		Avionics 1: Undetermined			
Lighting Switch Positions							
Navigation: Undetermined		Rotating Beacon: Undetermined		Landing: Undetermined			
Taxi: Undetermined		Strobe: Undetermined		Instrument: Undetermined			
Wing Ice: Undetermined							
Ignition Switch Position							
Key: Undetermined							

Remarks:

All of the instruments and switches were thermally damaged.

Powerplant Description

Engine Instruments						
Hour meter:	Undt	Tach RPM:	Undt	Tach hours:	Undt	
Oil press:	Undt	Oil temp:	Undt	EGT:	Undt	
Fuel press:	Undt	Fuel flow:	Undt	Ammeter:	Undt	
Manifold press: Undt						
CHT: Undt						
Engine Control Positions						
	Cockpit	Engine		Cockpit	Engine	
Throttle:	Forward	Undt	Cowl flaps:	Undt	Undt	
Mixture:	Forward	Undt	Alternate air:	Undt	Undt	
Propeller:	Forward	Undt	Primer:	Not applicable		
Engine Condition						
Engine attached to airframe: No			Propeller attached to engine: See below			
Engine compression: See below			Valve train continuity: See below			
Vacuum pump drive shaft: Undetermined						
Engine Fuel System Condition						
Fuel pump drive shaft: Intact			Fuel control inlet screen: Clean			
Fuel manifold valve screen: See below			Fuel injectors: See below			
Magnetos Condition						
Left magneto attached: No			Right magneto attached: No			
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	Normal	Normal	Normal	Normal	Normal	Oil fouled
Bottom	Not examined	Not examined	Not examined	Not examined	Not examined	Not examined

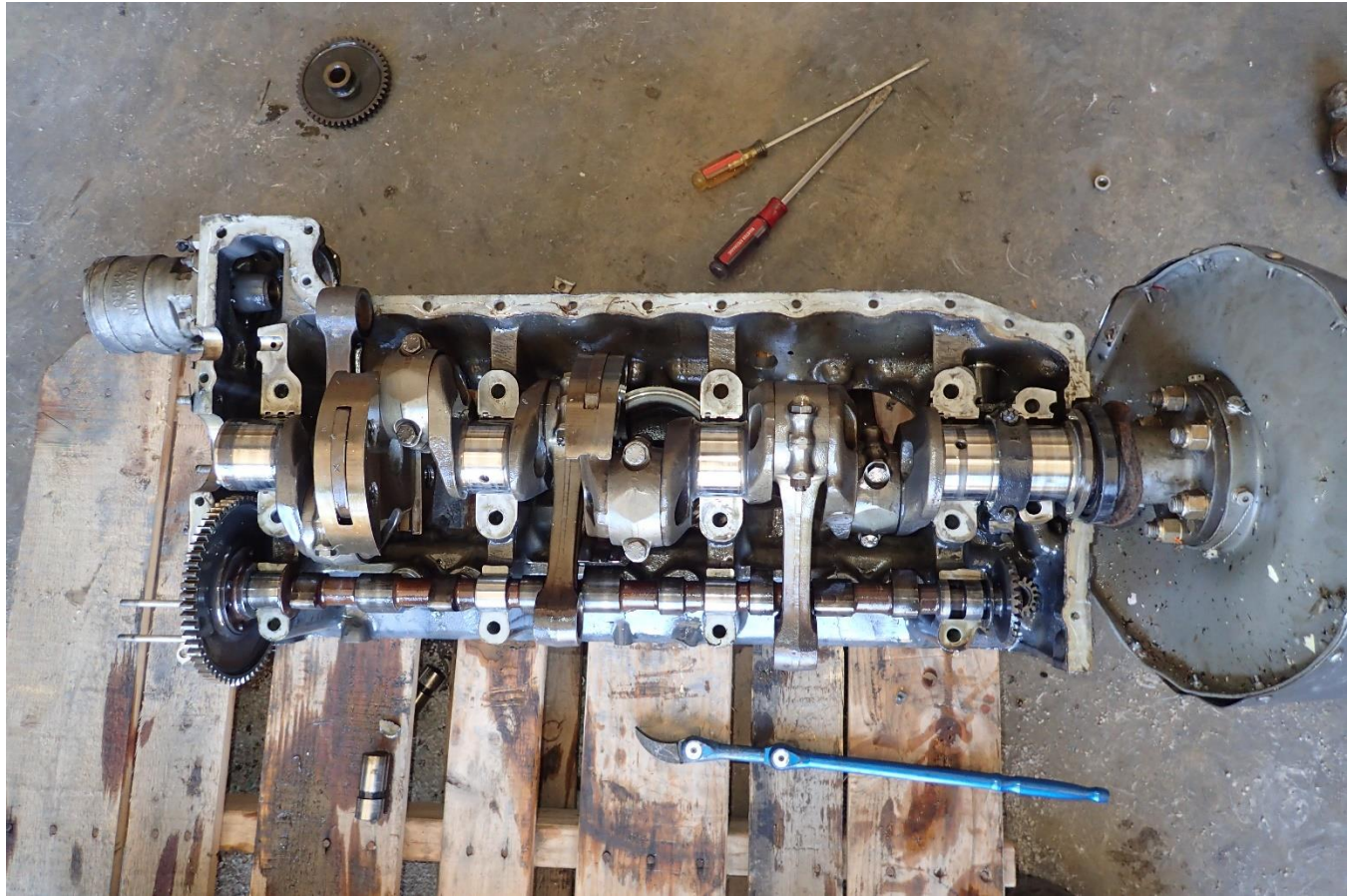
Remarks:

The engine was initially examined by a local Airframe and Powerplant mechanic under the supervision of the NTSB IIC. The mechanic reported that the crankshaft was not capable of rotation despite removal of all of the engine accessories. The oil sump was removed and portions of the crankshaft, connecting rods, and camshaft were visually examined. All the connecting rods remained attached to their journals and there were no signs of lubrication distress or main bearing shift. The throttle and fuel metering inlet screen was removed and was clear of any obstructions. The fuel pump drive shaft remained intact and was capable of rotation.

On 08-01-23 the engine was torn down by this investigator under the supervision of the NTSB IIC. The engine bearings all displayed significant wear; however, there were no anomalies noted that would have prevented normal operation. The cylinders, pistons, overhead components, and valve faces displayed normal operating and combustion signatures.



Engine Overview (ASI-23-BV (226).jpg)



Engine After Disassembly (ASI-23-BV (234).jpg)

Propeller

The propeller hub remained attached to the propeller flange and was fractured. Both of the propeller blades had separated from the hub and were found among the wreckage. One of the propeller blades displayed minor forward bending deformation and the tip was curled approximately 90°. The other propeller blade displayed S-bending deformation and had significant gouging on both the leading and trailing edges of the propeller blade. The blade tip had a small portion that had separated and was not located at the time of the examination. The impacted hangar door displayed several slash marks that were consistent with propeller strikes.



Propeller Blades (ASI-23-BV (138).jpg)

Research & Testing

A portion of the elevator down cable was retained by the NTSB for possible future examination.