

## Air Safety Investigations Aircraft Incident/Accident Technical Report

Aircraft Incident/ Accident Information	Year: 1984	Make: Beechcraft	Model: A36
	Serial number: E-2203		Registration: N100JB
Location: Colusa, CA		Date: 01-07-19	Time: 1050 PST
Aircraft Owner		Aircraft Operator	
Chalk Hill Consulting Group LLC [REDACTED]		Jeffrey Thomas Webber [REDACTED]	
Report Information			
Air Safety Investigator: Jennifer D. Barclay		Report #: ASI-19-AE-T	Report date: 07-08-19

### Airframe

#### Impact Sequence and Airframe Structure

The aircraft impacted a water irrigation pond in a right wing and nose low attitude. The aircraft was highly fragmented. The vertical stabilizer was not observed. The left and right horizontal stabilizers exhibited leading edge crush damage. The right horizontal stabilizer exhibited inboard skin tearing to the spar. The fuselage was separated at the aft wing spar and just aft of the baggage compartment. The right side of the fuselage was not observed. The left wing sustained minimal leading edge damage to the outboard portion of the wing. The inboard 3' of the left wing was substantially damaged forward of the flap. Most of the right wing was not recovered; the inboard skin with gear leg and gear door attached and a substantially damaged tip tank were observed.



Left wing, ASI-19-AE-038

## Airframe Systems

Flight Control System Information		
Control lock: Undetermined		
Flight Control Cable Continuity		
Ailerons: See below	Elevators: See below	Rudder: See below
Aileron tab: See below	Elevator tab: See below	Rudder tab: Not applicable
Flap and Trim Positions		
Flaps:	Indicator: Undt	Handle: Undt
	Left actuator: 2.2", Between 0° and 5°	Right actuator: Undt
Elevator trim:	Indicator: Unknown due to damage	
	Left actuator: 1.4"; ~5° tab down	Right actuator: 1.9"; ~25° tab down
Aileron trim:	Indicator: Undetermined	Actuator: Unndetermined

### Remarks:

Partial flight control cable continuity was established due to fragmentation of the wreckage. The rudder cables were attached to the rudder plate and were cut during recovery just aft of the baggage compartment. The elevator cables remained attached to the fractured bellcrank. Aileron cables were observed pulled from the wings and not attached to the fractured bellcranks. Aileron and elevator trim tab measurements were unreliable. The trim tab cables separated in tensile overload. The left flap and aileron remained attached to the left wing. The left flap actuator remained attached to the fuselage, its position indicated the flaps were retracted. The right flap actuator was not observed. Most of the right wing was not recovered.



Left aileron cables, ASI-19-AE-066

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

**Remarks:**

The fuel strainer and selector valve were not observed in the recovered wreckage. The fuel gauges were not observed in the instrument panel.

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		Emer gear handle: Undt	
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: Undetermined		Stall heat: Undetermined	
De-ice:	Surface: Not applicable	Propeller: Undetermined	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:**

The nose landing gear was separated during the impact sequence. The lower portion of the strut with lower torque links attached was separated from the strut assembly. The upper torque links were not observed. The main landing gear were separated during the impact sequence. The left main landing gear assembly was observed with the gear door attached. The right main landing gear upper strut assembly and gear door remained attached to a portion of the right wing skin. The lower portion of the right main landing gear strut separated and was observed with both torque links attached.

### Cabin and Equipment/Furnishings

Restraint System Information						
Seat	Occupied	Restraint type	Restraint used	Condition	Manufacturer	
1	Yes	3-Point	Yes	Cut	Beechcraft	
2	Yes	3-Point	Undt	Intact	Beechcraft	
3	No	3-Point	N/A	Intact	Beechcraft	
4	No	3-Point	N/A	Intact	Beechcraft	
5	No	3-Point	N/A	Intact	Beechcraft	
6	No	3-Point	N/A	Intact	Beechcraft	

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

**Remarks:**



Cabin section, ASI-19-AE-009

## Instrument Panel

Navigation Instruments							
Analog primary instruments				Autopilot type: Undetermined			
Suction gage: 0			Magnetic compass: Undt			Clock: Undt	
	Left side	Right side		Left side	Right side		
Airspeed:	30	Undt	Turn coordinator (airplane):	Undt	Undt		
Attitude (pitch):	Undt	Undt	Turn coordinator (ball):	Undt	Undt		
Attitude (roll):	Undt	Undt	Heading indicator:	Undt	Undt		
Altimeter:	23,350'	0	Heading "bug":	Undt	Undt		
Altimeter setting:	30.09	30.10	Vertical speed indicator:	Undt	Undt		
Stand-by:	Airspeed: Undt		Attitude (pitch): Undt		Attitude (roll): Undt		
	Altimeter: Undt		Altimeter Setting: Undt				
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: Undetermined			Alternator 2: Not applicable			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							

### Remarks:

The vertical speed indicator observed indicated a 275' climb, it was undetermined on which side of the instrument panel it was installed.

One vacuum pump was destroyed. Another was disassembled; the drive coupling and all vanes were intact. A gyro from the attitude indicator was observed with very light rotational scoring.

## Powerplant Description

Engine Instruments					
Hour meter:	Undt	Tach RPM:	N/A	Tach hours:	N/A
Oil press:	9.5	Oil temp:	Undt	EGT:	Undt
Fuel press:	Undt	Fuel flow:	Undt	Ammeter:	Undt
Manifold press: N/A					
CHT: N/A					
Voltmeter: Undt					
Engine Control Positions					
	Cockpit	Engine		Cockpit	Engine
Throttle:	Undetermined	Undetermined	Cowl flaps:	Undetermined	Undetermined
Mixture:	N/A	N/A	Alternate air:	Undetermined	Undetermined
Propeller:	Undetermined	Undetermined	Primer:	N/A	
Engine Condition					
Engine attached to airframe: No			Propeller attached to engine: No		
Engine compression: Undetermined			Valve train continuity: Undetermined		
Vacuum pump drive shaft: Intact					
Engine Fuel System Condition					
Fuel pump drive shaft: Undetermined			Fuel control inlet screen: Undetermined		
Fuel distribution valve screen: Undetermined			Fuel injectors: Undetermined		

### Remarks:

The aircraft was modified on 07-10-89 with the installation of a Rolls-Royce Allison 250B17C engine per STC SA3523NM.

The N1 gauge indicated 44%.

The engine was examined on 05-01-19 and 05-02-19. According to the engine manufacturer investigator, there was no evidence of pre-impact fire, damage or malfunction of the engine. There was significant evidence of high energy engine rotation at the time of impact. No pre-impact abnormalities were detected, and all observed fractures were consistent with overload fractures occurring during the impact sequence.

### Propeller

The propeller, gearbox and governor were not recovered from the accident site.

## Research & Testing

The NTSB IIC requested the pilot's personal medical records based on the results of the toxicology report. At the time this report was completed, the records had not been obtained.

Several feathers were located along the bank of the irrigation pond adjacent to the accident site. A sample was forwarded to the Smithsonian Institution and determined to be from a Northern Shoveler. The average weight of the duck is 1.3 pounds.