

**Beechcraft**

BY TEXTRON AVIATION

Air Safety Investigations Aircraft Incident/Accident Technical Report

Aircraft Incident/ Accident Information	Year: 2007	Make: Beechcraft	Model: Hawker 900XP
	Serial number: HA-0015		Registration: N526FC
Location: Telluride, CO		Date: 07-20-24	Time: 1339 MDT
Aircraft Owner		Aircraft Operator	
Swamp Bird LLC [REDACTED] Coral Gables, FL 33134-3070		Corporate Air Charters, LLC [REDACTED] Miami, FL 33186	
Report Information			
Senior Air Safety Investigator: Ernest C. Hall		Report #: ASI-24-CA-T	Report date: 02-03-25

Airframe

Impact Sequence and Airframe Structure

The aircraft entered the runway Engineered Material Arresting System (EMAS) and the nose landing gear collapsed aft and up into the bottom of the nose fuselage structure. Part of the nose landing gear protruded into the cockpit under the cockpit central control pedestal (also known as throttle quadrant but going forward in this report it will be listed as cockpit pedestal). The cockpit pedestal bottom attach points were separated and displaced up and aft.

During the nose landing gear collapse sequence, the aircraft skidded/slid to the right of the EMAS, swinging the back of the aircraft to a point where the nose of the aircraft was almost facing the direction which it entered the EMAS. Four-wheel black skid marks started at about the 1,000' runway departure end marker and continued into the EMAS. The Runway 9 threshold red edge marker lights were not damaged.

After the aircraft came to rest, the pilot could not shut down either engine. The pilot attempted to close the left and right high pressure (HP) fuel levers and the left and right low pressure (LP) fuel levers but could not get either lever into the fully closed detent due to the impact damage. The power lever angle at each engine fuel control unit was manually moved by hand force, by airport personnel, into the cutoff position to shut down each engine. The EMAS material coated the aircraft and was ingested by both engines.

Airframe Systems

Flight Control System Information		
Control lock: Not engaged		
Flight Control Cable Continuity		
Ailerons: Established	Elevators: Established	Rudder: Established
Aileron tab: See below	Elevator tab: See below	Rudder tab: See below
Flap and Trim Positions		
Flap indicator: See below	Flap handle: See below	Flap actuators: Not observed
Elevator trim: Indicator: See below	Actuator: Not observed	
Rudder trim: Indicator: See below	Actuator: Not observed	
Aileron trim: Indicator: See below	Actuator: Not observed	

Remarks:

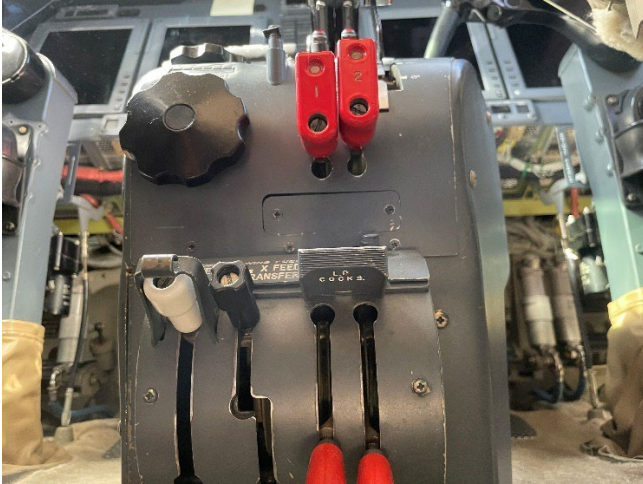
The aircraft was intact but with impact damage. All primary and secondary flight control cables were continuous from their respective control in the cockpit to their respective flight control surface. All trim controls in the cockpit could not be operated due to the cockpit pedestal impact damage. The flap handle and the flap mechanical indicator on the pedestal were found in the fully up (0°) position. Both wing flaps were also found in the fully retracted position. The aileron and rudder trim indicators on the pedestal were found in the neutral position. The elevator cockpit trim indicator was found in the center position (25°) of the takeoff green band/range (15° to 35°).

The cockpit speed brake/airbrake handle was found in the fully forward/closed position but the left- and right-wing airbrake panels (top and bottom) were found in the open/extended position but not in the lift dump extended position.

Airframe Fuel System Condition, Controls, and Read Outs			
Fuel filter screen:	Left: Undetermined	Right: Undetermined	
Main fuel tank gauge:	Left: 4,005 lbs	Right: 4,085	
Crossfeed: See below	Fuel boost pump:	Left: Undetermined	Right: Undetermined

Remarks:

The crossfeed and the ventral tank fuel valve levers located on the cockpit pedestal were found in the closed position. The left and right high pressure (HP) and the left and right low pressure (LP) fuel control valve levers were found above the cutoff/closed detent position. With hand force, this investigator either had difficulty to or could not push the HP/LP levers into the cutoff/closed detent position. Further examination revealed that the cockpit pedestal lower section attach points had buckled and shifted up and aft due to the nose landing gear protruding through the aircraft's bottom skin structure.



ASI-24-CA-102 – HP Fuel Valve Levers



ASI-24-CA-103 – LP Fuel Valve Levers

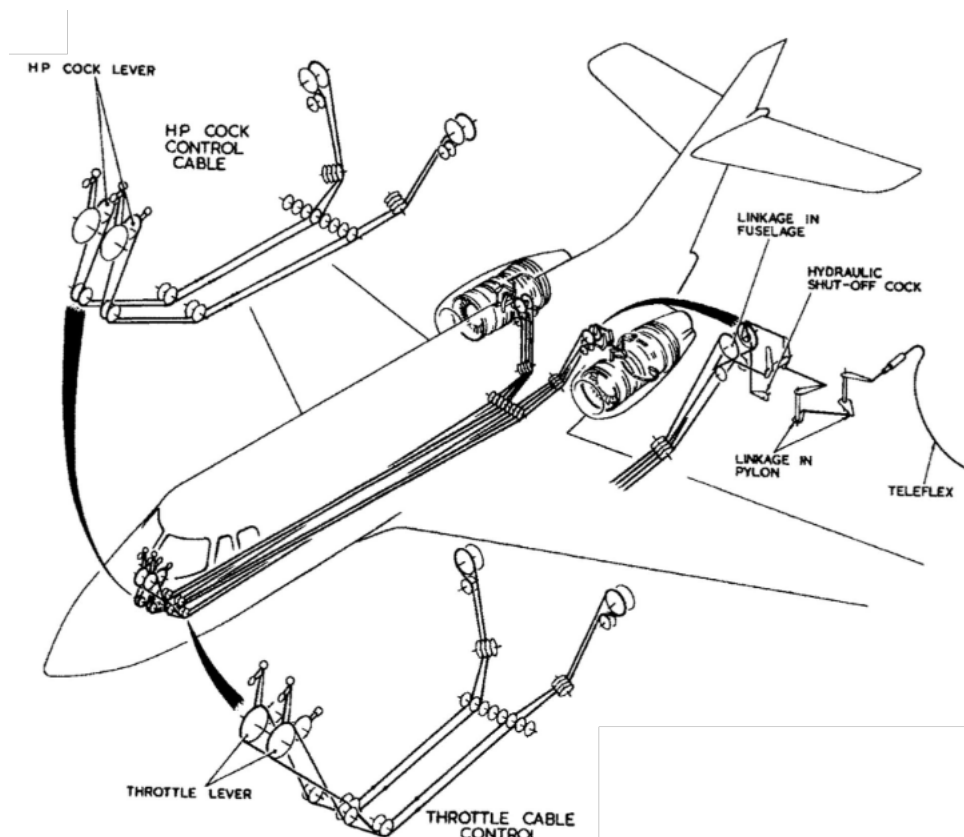
High-Pressure (HP) Fuel Levers: (Referencing AMM 76-10-00 – Power Controls – Description and Operation)

Each high pressure (HP) fuel cock lever, located on the cockpit pedestal, connects mechanically through cables and Teleflex controls to the fuel control unit (FCU). The levers control the opening and closing of the fuel control units from off (no fuel flow) to the idle fuel valve setting. The levers also connect mechanically with the hydraulic supply valves. Closing of a HP fuel lever simultaneously isolates the respective engine's hydraulic fluid supply.

Low-Pressure (LP) Valve Control: (Referencing AMM 28-20-00 – Fuel Feed System (Main Engines) – Description and Operation)

Two LP COCKS levers, located on the cockpit pedestal, are each connected mechanically to their respective valve by cables and control rods. Each lever moves within a gated quadrant and before a selection can be made, the knob on each lever must be pulled out against spring pressure; releasing the knob locks the lever in the selected position.

The HP and LP lever cables run along the inside belly of the aircraft from the cockpit pedestal aft to their respective control; LP cables run to their respective LP valve located in each wheel well and the HP cables continue through the aft pressure bulkhead then to their respective engine fuel control unit.



Cropped – AMM 76-10-00, Figure 1, Sheet 1 - Power Controls

Landing Gear System Condition and Controls			
Gear position:	Nose: See below	Left: Extended	Right: Extended
Actuator position:	Nose: See below	Left: Extended	Right: Extended
Landing gear selector:	Extended		Anti-skid: Undetermined
Aux gear control:	Stowed		Blow-down bottle quantity: Not applicable
Environmental System Controls and Read Outs			
Cabin heater:	Undetermined	Cabin vent:	Undetermined
Windshield heat:	Undetermined		
Air conditioner:	Undetermined	Oxygen system:	Undetermined
Oxygen quantity:	Undetermined		
Pressurization System Controls and Read Outs			
Cabin VSI:	Undetermined		Cabin altitude:
Undetermined		Source selector knob: Undetermined	
Icing System Information and Switches			
Certified into known icing?	Yes		De-icing boots installed?
No		Stall heat: Undetermined	
Pitot heat:	Undetermined		Stall heat: Undetermined
De-ice:	Surface: Undetermined	Windshield: Not applicable	
Anti-ice:	Surface: Not applicable	Windshield: Undetermined	
ELT Information			
Installed?	Yes	Manufacturer: Artex	Model: C-406-1
Type:	Undetermined		
Serial number:	Undetermined	Battery due date:	Undetermined
Armed:	Undetermined	Activated:	No

Remarks:

The extended nose landing gear collapsed aft and up into the bottom of the nose fuselage structure at the cockpit pedestal area.



ASI-24-CA-033 – Nose Landing Gear



ASI-24-CA-068 – Nose Landing Gear

The emergency locator transmitter was only visually observed.

Cabin and Equipment/Furnishings

Restraint System Information						
Seat	Occupied	Restraint type	Restraint used	Condition	Manufacturer	
1	Yes	5-Point	Yes	Good	Undetermined	
2	Yes	5-Point	Yes	Good	Undetermined	
3	No	3-Point	No	Good	Undetermined	
4	No	3-Point	No	Good	Undetermined	
5	No	3-Point	No	Good	Undetermined	
6	No	3-Point	No	Good	Undetermined	
7	No	3-Point	No	Good	Undetermined	
8	No	3-Point	No	Good	Undetermined	
9	No	3-Point	No	Good	Undetermined	
10	No	3-Point	No	Good	Undetermined	
11	No	3-Point	No	Good	Undetermined	

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	Rear facing	Yes	Yes	Yes	Yes
4	Rear facing	Yes	Yes	Yes	Yes
5	Forward facing	Yes	Yes	Yes	Yes
6	Forward facing	Yes	Yes	Yes	Yes
7	Side facing	Yes	Yes	Yes	Yes
8	Forward facing	Yes	Yes	Yes	Yes
9	Side facing	Yes	Yes	Yes	Yes
10	Side facing	Yes	Yes	Yes	Yes
11	Side facing	Not applicable	Yes	Yes	Not applicable

Remarks:

A couch in the left aft cabin consisted of seats 7, 9, and 10. The lavatory was seat 11.



ASI-24-CA-040 - Cockpit



ASI-24-CA-095 – Cabin

Instrument Panel

Navigation Instruments							
Digital primary instruments				AOA indicator: Undetermined			
Suction gage: Undetermined		Magnetic compass: Undetermined		Clock: Undetermined			
	Left side	Right side		Left side	Right side		
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		
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				Stand-by battery: Undetermined			
Left alternator: Undetermined				Right alternator: Undetermined			
Avionics 1: Undetermined				Avionics 2: Undetermined			
Inverter 1: Undetermined				Inverter 2: Undetermined			
Lighting Switch Positions							
Navigation: Undetermined		Rotating beacon: Undetermined		Landing: Undetermined			
Taxi: Undetermined		Strobe: Undetermined		Instrument: Undetermined			
Wing ice: Undetermined							
Ignition Switch Positions							
Left engine: Undetermined				Right engine: Undetermined			

Remarks:

The Navigation Instruments, Communication and Navigation Radios, Electrical, Lighting, and Ignition Switches were not examined.

Powerplant Description

Engine Instruments					
Hour meter: Undetermined					
	Left Engine	Right Engine		Left Engine	Right Engine
N1 RPM:	Undt	Undt	Oil temp:	Undt	Undt
N2 RPM:	Undt	Undt	Oil press:	Undt	Undt
ITT:	Undt	Undt	Ammeter:	Undt	Undt
Fuel flow:	Undt	Undt	Voltmeter:	Undt	Undt
Engine Control Positions					
Left engine:	Cockpit	Engine	Right engine:	Cockpit	Engine
Power lever:	Idle/Cutoff	~20°	Power lever:	Idle/cutoff	0°
Thrust reverser:	Stowed	Stowed	Thrust reverser:	Stowed	Stowed
Ground idle: Undetermined			Engine sync: Undetermined		
Fire Protection and Thrust Reverser Switch Positions					
	Left engine		Right engine		
Emergency stow:	Undetermined		Undetermined		
Covered fire switch:	Undetermined		Undetermined		
Engine Condition					
	Left engine		Right engine		
Engine attached to airframe:	Yes		Yes		

Remarks:

Engine instruments indications were digital.

Research & Testing

On 09-26-24, the NTSB-Led team removed the left and right Engine Digital Electronic Engine Control (DEEC), Cockpit Voice Controller (CVR), and the Enhance Ground Proximity Warning System (EGPWS) from the aircraft for later download and analysis. At the writing of this report, no download date or analysis information was provided to this investigator.

Reviewing the aircraft maintenance records provided by the NTSB, the record provided an aircraft empty weight of 15,943.50 lbs. dated 01-15-24 at West Star Aviation. Using the fuel onboard the aircraft at the time of the examination of 4,005 lbs. in the left wing and 4,085 lbs. in the right wing and using the standard basic 1C70 lbs. for each pilot, the aircraft weight was approximately 24,373.5 lbs. This does not include any baggage or equipment that the pilots may have had onboard the aircraft at the time of this accident and no fuel in the ventral tank.

Referring to the applicable aircraft flight manual Section 5 – Performance, Sub-section 5-20 – Take-off Field Length – APR ON, Figure 5.20.10 – FLAPS 15° Field Pressure Altitude (9000 feet) chart, page

14, referring to the chart and using a takeoff weight of 24,000 lbs. to 25,000 lbs. and the outside temperature at occurrence of 20°C, the chart showed the runway length needed would have been between 6,448' to 7,053' with 15° flaps.

Referring to the applicable aircraft flight manual Section 5 – Performance, Sub-section 5-20 – Take-off Field Length – APR ON, Figure 5.20.28 – FLAPS 0° Field Pressure Altitude (9000 feet) chart, page 34, referring to the chart and using a takeoff weight of 24,000 lbs. to 25,000 lbs. and the outside temperature at occurrence of 20°C, the chart showed the runway length needed would have been between 7,912' to 9,308' with 0° flaps.

KTEX runway length was 7,111'. It was undetermined if the aircraft taxied to A4, the entrance to Runway 27 threshold or at taxi way A3 at the Runway 27 1,000' runway marker.