

Air Safety Investigations Aircraft Incident/Accident Technical Report

Aircraft Incident/ Accident Information	Year: 1980	Make: Cessna	Model: 172N
	Serial number: 17273825		Registration: N5660J
Location: Afton, WY		Date: 08-13-18	Time: 0908 MDT
Aircraft Owner		Aircraft Operator	
Eagle Flight Services LLC [REDACTED] Afton, WY 83110		John C. Koehler [REDACTED] Afton, WY 83110	
Report Information			
Senior Air Safety Investigator: Andrew L. Hall		Report #: ASI-19-AQ-T	Report date: 02-05-20

Airframe

Impact Sequence and Airframe Structure

The on-site photographs of the wreckage indicate that the aircraft was significantly damaged during the mishap. The information in the remainder of this form was obtained from the FAA photographs.

Airframe Systems

Flight Control System Information		
Control lock: Undetermined		
Flight Control Cable Continuity		
Ailerons: Undetermined	Elevators: Undetermined	Rudder: Undetermined
Aileron tab: Not applicable	Elevator tab: Undetermined	Rudder tab: Not applicable
Flap and Trim Positions		
Flap indicator: 10°	Flap handle: 10°	Flap actuator: Undetermined
Elevator trim: Indicator: Unknown due to damage		Actuator: Undetermined

Remarks:

None

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

Remarks:

None

Landing Gear System Condition and Controls			
Gear position:	Nose: Fixed	Left: Fixed	Right: Fixed
Environmental System Controls and Read Outs			
Cabin heater: Cold	Cabin vent: Closed	Defrost: N/A	
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: Off		Stall heat: Not applicable	
Anti-ice:	Surface: Not applicable	Propeller: Not applicable	Windshield: Not applicable
ELT Information			
Installed? Yes	Manufacturer: Dorn & Margolin	Model: ELT6.1	Type: Undt
Serial number: Undt	Battery due date: 01-2019	Armed: Yes	Activated: Yes

Remarks:

According to information provided by the pilot, the ELT did aid in the location of the aircraft.

Cabin and Equipment/Furnishings

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

Seat Condition Information					
Seat	Orientation	Feet intact	Back intact	Base intact	Rail intact
1	Forward facing	Undetermined	Partially	Partially	Undetermined
2	Forward facing	Undetermined	Partially	Partially	Undetermined
3	Forward facing	Undetermined	See below	See below	Not applicable
4	Forward facing	Undetermined	See below	See below	Not applicable

Remarks:

The photographs provided by the FAA indicate the front seats remained in place, however the photographs did not show the rear bench seat.

Instrument Panel

Navigation Instruments							
Analog primary instruments				Autopilot type: None			
Suction gage: Off scale high		Magnetic compass: Undt			Clock: Undt		
	Left side				Left side		
Airspeed:	0		Turn coordinator (airplane):	Level			
Attitude (pitch):	Level		Turn coordinator (ball):	Left			
Attitude (roll):	45° Left		Heading indicator:	180			
Altimeter:	7,900		Heading "bug":	N/A			
Altimeter setting:	undt		Vertical speed indicator:	0			
Communication and Navigation Radios							
Radio	Control	Active frequency	Stand-by frequency	Radio	Control	Active frequency	Stand-by frequency
Com 1:	Digital	Undetermined	Undetermined	Com 2:	Digital	Undetermined	Undetermined
Nav 1:	Undt	Undetermined	Undetermined	Nav 2:	Undt	Undetermined	Undetermined
Obs 1:	Undetermined			Obs 2:	Undetermined		
Transponder:	Mode: Digital		Active code: Undetermined		Stand-by code: Undetermined		
Electrical Switch Positions							
Master battery: Off		Master alternator: Off			Avionics 1: On		
Lighting Switch Positions							
Navigation: Off		Rotating Beacon: On			Landing: On		
Taxi: On		Strobe: On			Instrument: Undetermined		
Ignition Switch Position							
Key: Off							

Remarks:

The information above was obtained from the FAA photographs.

Powerplant Description

Engine Instruments					
Hour meter:	Undt	Tach RPM:	0	Tach hours:	Undt
Oil press:	0	Oil temp:	0	EGT:	0
Fuel press:	N/A	Fuel flow:	N/A	Ammeter:	Undt
				Voltmeter:	Undt
Engine Control Positions					
	Cockpit	Engine		Cockpit	Engine
Throttle:	Full in	Undt	Cowl flaps:	N/A	N/A
Mixture:	Rich	Undt	Carburetor heat:	Cold	Undt
Propeller:	N/A	N/A	Primer:	In	
Engine Condition					
Engine attached to airframe:			Yes		
Propeller attached to engine:			Yes		
Engine compression:			Undetermined		
Valve train continuity:			Undetermined		
Vacuum pump drive shaft:			Undetermined		
Engine Fuel System Condition					
Fuel pump drive shaft:			Not applicable		
Carburetor inlet screen:			Undetermined		
Magnetos Condition					
Left magneto attached:			Undetermined		
Right magneto attached:			Undetermined		
Left magneto spark:			Undetermined		
Right magneto spark:			Undetermined		
Spark Plug Condition (per Champion Check-A-Plug Card)					
	1	2	3	4	
Top	Not examined	Not examined	Not examined	Not examined	
Bottom	Not examined	Not examined	Not examined	Not examined	

Remarks:

The pilot, in his statement to the NTSB-IIC, indicated that there were no mechanical issues with the engine.

Propeller

None

Research & Testing

1980 Cessna 172N Modified by STC # SA2196CE**S/N: 17273825; N5660J; D/A: 08/13/18; Afton, WY**

max gross wt 2550

useful load = 1026

Loaded Aircraft

	wt	arm	mom/1000	C.G.
Empty wt	1524	xxx	58.7	
Fuel	210	xxx	10.1	35 gallons
Front seat #1	160	37	5.9	
Front seat #2	215	37	8.0	
Rear seat # 3	180	74	13.3	
Rear seat # 4	0	74	0.0	
Aft baggage 1	5	95	0.5	
Aft baggage 2	0	123	0.0	
Total Wt.	2294	42.05	96.5	42.1

PLOT DATA

Envelope		Actual Data	
mom/1000	wt		
52.5	1500	96.5	2294 a
68	1950	86.4	2084.0
101.25	2550		
118.25	2550		
70.5	1500		

Note 1: Shaded areas require manual input

Note 2: A & b tags must be positioned manually

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