



# Aviation Investigation Final Report

<b>Location:</b>	NEAR ILIAMNA, Alaska	<b>Accident Number:</b>	ANC83FA131
<b>Date &amp; Time:</b>	July 24, 1983, 21:30 Local	<b>Registration:</b>	N4661Z
<b>Aircraft:</b>	CESSNA U206	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 135: Air taxi & commuter - Non-scheduled		

## Analysis

THE ENG LOST POWER JUST AFTER A WATER TAKEOFF. THE ACFT LANDED STRAIGHT AHEAD IN MUSKEG & TUNDRA COLLAPSING THE FLOATS. ENG TEARDOWN REVEALED A METALLIC 'NUGGET' IN THE LEFT INTAKE MANIFOLD BETWEEN THE #4 & #6 PORTS. NUMEROUS MARKS WERE FOUND ON THE INSIDE OF BOTH INTAKE MANIFOLDS. THERE WAS MINOR DENTING, SCRATCHING & PEENING ON THE INTERIOR OF THE 90 DEG ELBOWS FROM BOTH ENDS OF THE CROSSOVER TUBE, INTAKE VALVE PORTS, SEATS & VALVE FACES OF CYLS 4,5 & 6. THE NUGGET WAS COMPOSED OF THE SAME MATERIAL AS THE AIRBOX ASS'Y, CESSNA P/N 1250705, WHICH CONTAINED TWO HOLES APRX 2-1/2 SQUARE INCHES EACH IN THE AIRBOX WALL. THE HOLES WERE CAUSED BY FATIGUE CRACKS. THE SOURCE OF LOADING CAUSING THE FATIGUE CRACKPROPAGATION WAS DUE TO MEMBRANE &/OR BENDING LOADS IN THE AIRBOX WALL CAUSED BY OUT-OF-PLANE DEFORMATION. THESE DEFORMATION WERE MOST LIKELY CAUSED BY EXCITING A NATURAL MODE OF VIBRATION IN THE WALL. THREE DUCT FAILURES WERE REPORTED TO THE FAA IN 1983, TWO OF WHICH WERE IN C-210 ACFT.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

## Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (C) INDUCTION AIR CONTROL/SYSTEM - INADEQUATE
2. (C) AIRCRAFT/EQUIPMENT INADEQUATE - MANUFACTURER
3. (C) INDUCTION AIR CONTROL/SYSTEM - FATIGUE
4. (C) INDUCTION AIR CONTROL/SYSTEM - FAILURE,PARTIAL
5. (C) INDUCTION AIR CONTROL/SYSTEM - SEPARATION
6. (C) ENGINE ASSEMBLY,VALVE,INTAKE - FOREIGN OBJECT DAMAGE

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Occurrence #2: FORCED LANDING  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

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Occurrence #3: OTHER GEAR COLLAPSED  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

### Findings

7. (F) TERRAIN CONDITION - NONE SUITABLE
8. (F) LANDING GEAR,FLOAT ASSEMBLY - OVERLOAD

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	37, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>		<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	June 29, 1983
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	5809 hours (Total, all aircraft), 1869 hours (Total, this make and model), 5714 hours (Pilot In Command, all aircraft), 233 hours (Last 90 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CESSNA	<b>Registration:</b>	N4661Z
<b>Model/Series:</b>	U206 U206	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	U20605998
<b>Landing Gear Type:</b>	Float	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	July 13, 1983 100 hour	<b>Certified Max Gross Wt.:</b>	3600 lbs
<b>Time Since Last Inspection:</b>	31 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	325 Hrs	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	IO-520-F
<b>Registered Owner:</b>	RUST'S FLYING SERVICE	<b>Rated Power:</b>	300 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	On-demand air taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Unknown / 1500 ft AGL	<b>Visibility</b>	5 miles
<b>Lowest Ceiling:</b>	Overcast / 1500 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	20 knots / 25 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	80°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	13°C
<b>Precipitation and Obscuration:</b>	Light - None - Rain		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	Company VFR
<b>Destination:</b>	LAKE CLARK , AK	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	21:29 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	Grass/turf;Water
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	Vegetation;Wet
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 None	<b>Latitude, Longitude:</b>	59.850887,-154.559219(est)

## Administrative Information

**Investigator In Charge (IIC):** Stella, Marc

**Additional Participating Persons:**

**Original Publish Date:**

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=4042>

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