



Aviation Investigation Final Report

Location:	GILLETTE, Wyoming	Accident Number:	SEA92LA138
Date & Time:	June 27, 1992, 07:48 Local	Registration:	N2550T
Aircraft:	NAVION H	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor, 2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

IMMEDIATELY AFTER TAKEOFF, AT ABOUT 100 FT AGL, THERE WAS AN ABRUPT LOSS OF POWER. THE PILOT LOWERED THE LANDING GEAR & EXECUTED A FORCED LANDING STRAIGHT AHEAD. THE GEAR DID NOT FULLY EXTEND, AND RETRACTED AT TOUCHDOWN. POST CRASH EXAMINATION REVEALED THAT THE INDUCTION AIR 'SCAT' TUBE INNER WALL HAD COLLAPSED AT A 90 DEG BEND, RESTRICTING INTAKE AIR TO THE ENGINE. THE TUBING WAS INSTALLED AS PER A ONE TIME FIELD APPROVED STC. THE ALTERNATE AIR BYPASS WAS DOWNSTREAM OF THE 'SCAT' TUBING. THE TUBING WAS OF A DOUBLE WALL DESIGN WHICH CHARACTERISTICALLY CAN DELAMINATE WHEN EXPOSED TO HIGH HEAT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: AN ENGINE POWER LOSS DUE TO THE COLLAPSE OF THE INDUCTION AIR DUCTING, INADEQUATE MAINTENANCE, AND IMPROPER APPROVAL OF THE MODIFICATION.

Findings

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

Findings

1. (C) INDUCTION AIR DUCTING - COLLAPSED
2. (C) MAINTENANCE,MODIFICATION - IMPROPER - OTHER MAINTENANCE PERSONNEL

3. (C) ACFT/EQUIP,INADEQUATE COMPLIANCE DETERMINATION - FAA(PRINCIPAL MAINTENANCE INSPECTOR)

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

Occurrence #3: GEAR NOT EXTENDED
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

Pilot Information

Certificate:	Commercial	Age:	67, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):		Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	April 11, 1991
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	4246 hours (Total, all aircraft), 3808 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	NAVION	Registration:	N2550T
Model/Series:	H H	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Utility	Serial Number:	NAV-4-2550
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	April 21, 1992 Annual	Certified Max Gross Wt.:	3315 lbs
Time Since Last Inspection:	26 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1649 Hrs	Engine Manufacturer:	CONTINENTAL
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	TSIO-520-13A
Registered Owner:	ECKERT, EDWIN J.	Rated Power:	285 Horsepower
Operator:	ECKERT, EDWIN J.	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	GCC ,4363 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	06:48 Local	Direction from Accident Site:	160°
Lowest Cloud Condition:	Clear	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	1 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	13°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:	HELENA , MT (HLN)	Type of Clearance:	Traffic advisory
Departure Time:	07:48 Local	Type of Airspace:	Class D

Airport Information

Airport:	CAMPBELL COUNTY GCC	Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 2 None	Latitude, Longitude:	44.46075,-105.700172(est)

Administrative Information

Investigator In Charge (IIC):	Mccreary, Steven
Additional Participating Persons:	ROBERT SPEICHER; HELENA , MT
Original Publish Date:	October 15, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=42843

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