



National Transportation Safety Board Aviation Accident Data Summary

Location:	Dighton, KS	Accident Number:	DEN06CA081
Date & Time:	06/01/2006, 1700 CDT	Registration:	N14RY
Aircraft:	Grumman G-164B	Injuries:	1 Minor
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The airplane was taking off on an aerial application flight. Shortly after lifting off, the airplane's engine lost power. The commercial pilot set the airplane down on the runway toward the departure end. The airplane went off the end of the runway and into a wheat field. The airplane's main gear tires sank into the soft wet soil and the airplane subsequently nosed over causing the engine to fracture and separate from the fuselage and crushing the vertical stabilizer and rudder downward. The pilot sustained minor injuries. Visual meteorological conditions prevailed at the time of the accident. An examination of the airplane's engine revealed that the rocker arm boss on the number 1 cylinder had fractured leaving the exhaust valve on the cylinder closed and resulting in the subsequent engine failure.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The broken rocker arm boss causing the number 1 cylinder exhaust valve to stay closed and subsequently the engine failed. A factor contributing to the accident was the soft field the airplane set down in.

Findings

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

Findings

1. (C) ENGINE ASSEMBLY,ROCKER ARM/TAPPET - FRACTURED
2. (F) ENGINE ASSEMBLY,VALVE,EXHAUST - CLOSED

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: NOSE OVER
Phase of Operation: EMERGENCY LANDING

Findings

3. TERRAIN CONDITION - OPEN FIELD
4. TERRAIN CONDITION - WET
5. (F) TERRAIN CONDITION - SOFT

Pilot Information

Certificate:	Commercial	Age:	29
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	
Flight Time:	7206 hours (Total, all aircraft), 3500 hours (Total, this make and model), 28 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Grumman	Registration:	N14RY
Model/Series:	G-164B	Engines:	1 Reciprocating
Operator:	Root Spraying, Service	Engine Manufacturer:	Continental
Operating Certificate(s) Held:		Engine Model/Series:	R-975
Flight Conducted Under:	Part 137: Agricultural		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Weather Information Source:	Unknown
Lowest Ceiling:		Wind Speed/Gusts, Direction:	/ ,
Temperature:		Visibility:	
Precipitation and Obscuration:			
Departure Point:	Dighton, KS (K65)	Destination:	

Airport Information

Airport:		Runway Surface Type:	
Runway Used:		Runway Surface Condition:	
Runway Length/Width:			

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	
Latitude, Longitude:	38.408889, -97.235833		

Administrative Information

Investigator In Charge (IIC):	David C Bowling	Adopted Date:	10/03/2006
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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