



National Transportation Safety Board Aviation Accident Final Report

Location:	BUHLER, KS	Accident Number:	CHI93DCQ02
Date & Time:	08/01/1993, 0800 CDT	Registration:	N4864Q
Aircraft:	CESSNA 188	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

THE AGRICULTURAL SPRAY AIRPLANE LOST ENGINE POWER WHILE MANEUVERING OVER CROPS. THE PILOT MADE A FORCED LANDING IN A NEARBY FIELD. EXAMINATION OF THE ENGINE DISCLOSED A FRACTURED CAMSHAFT DRIVE GEAR.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the loss of engine power due to a fractured accessory (camshaft) drive gear.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) ACCESSORY DRIVE ASSY,DRIVE GEAR - FRACTURED

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: NOSE OVER
Phase of Operation: LANDING - ROLL

Factual Information

HISTORY OF FLIGHT

On August 1, 1993, at 0800 Central Daylight Time (cdt), a Cessna 188, N4864Q, owned and operated by Blue Sky Airspray took off from a private airstrip at Nickerson, Kansas. AT 0830 cdt while aerial spraying, the engine quit and the aircraft impacted the ground in a plowed field 9 1/2 miles northeast of Buhler, Kansas.

The aircraft sustained substantial damage to the left wing, left landing gear, horizontal stabilizer, and tail wheel. The pilot holds a commercial pilot's certificate and had a current airman medical certificate.

DAMAGE TO AIRCRAFT

The aircraft sustained substantial damage to the left wing, left landing gear, horizontal stabilizer and tail wheel.

PERSONNEL INFORMATION

The pilot, Rodney W. Hicks, was an employee of Blue Sky Airspray, Certificate No. CFJG798C, owned by Wallace D. Cook.

AIRCRAFT INFORMATION

The aircraft, a Cessna 188, was owned by Wallace D. Cook. The last inspection was an annual performed on 12/17/92. The aircraft had operated 136 hours since last inspection for a total time of 4894 hours.

AERODROME INFORMATION

Private airport in an uncontrolled area.

WRECKAGE AND IMPACT INFORMATION

The aircraft received substantial damage. Left wing and landing gear bent. Horizontal stabilizer bent and tail wheel bent. The aircraft impacted the ground in a plowed field with no damage to crops.

SURVIVAL ASPECTS

The accident was survivable due to low altitude and shoulder harness used by the pilot.

ADDITIONAL DATA/INFORMATION

The aircraft was released to the owner Wallace D. Cook on August 2, 1993. Tear down of the engine revealed gear teeth broken off of camshaft drive gear.

Pilot Information

Certificate:	Commercial	Age:	47, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Center
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	08/04/1992
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	10000 hours (Total, all aircraft), 5500 hours (Total, this make and model), 100 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N4864Q
Model/Series:	188 188	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Restricted	Serial Number:	18802600T
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	12/17/1992, Annual	Certified Max Gross Wt.:	3308 lbs
Time Since Last Inspection:	136 Hours	Engines:	1 Reciprocating
Airframe Total Time:	4894 Hours	Engine Manufacturer:	CONTINENTAL
ELT:	Not installed	Engine Model/Series:	IO-520-D
Registered Owner:	WALLACE D. COOK	Rated Power:	300 hp
Operator:	WALLACE D. COOK	Operating Certificate(s) Held:	
Operator Does Business As:	BLUE SKY AIR SPRAY	Operator Designator Code:	CFJG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	20 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Light and Variable / 10 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	24° C
Precipitation and Obscuration:			
Departure Point:	NICKERSON, KS	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	0800 CDT	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	THOMAS N SHOOKS	Report Date:	08/17/1994
Additional Participating Persons:			
Publish Date:			
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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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