



Aviation Investigation Final Report

Location:	CARTWRIGHT, North Dakota	Accident Number:	DEN89LA181
Date & Time:	July 28, 1989, 08:30 Local	Registration:	N8246H
Aircraft:	CALLAIR A-9	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

THE PILOT WAS SPRAYING THIOLUX ON A FIELD AND HAD JUST PULLED UP FROM SWATH RUN WHEN HE HEARD A LOUD BANG AND NOTED ENGINE RPM DECAY. GROUND WITNESSES ALSO HEARD THE BANG AND OBSERVED DARK SMOKE TRAILING FROM THE AIRCRAFT. THE PILOT MADE A FORCED LANDING IN AN ALFALFA FIELD. THE LANDING GEAR COLLAPSED, RESULTING IN SUBSTANTIAL DAMAGE. A SMALL CARBURETOR FIRE WAS ALSO EXTINGUISHED. THE ENGINE AND CARBURETOR WERE PARTIALLY DISASSEMBLED. EVIDENCE OF AN EXTREMELY RICH MIXTURE, BACKFIRE, AND CARBURETOR FIRE WAS FOUND. ALL THE SPARK PLUGS WERE BLACK. THE CARBURETOR WAS OVERHAULED IN 1987 BECAUSE THE ENGINE RAN ROUGH AND WOULD NOT DEVELOP FULL POWER, REGARDLESS OF MIXTURE CONTROL SETTING. THE CARBURETOR HAD ACCUMULATED 300 HOURS SINCE OVERHAUL.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A TOTAL LOSS OF POWER DUE TO AN IMPROPERLY ADJUSTED CARBURETOR WHICH RESULTED IN AN EXCESSIVE RICH FUEL-AIR MIXTURE. THIS REQUIRED A FORCED LANDING IN AN AREA WHERE NO SUITABLE TERRAIN EXISTED.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) FUEL SYSTEM,CARBURETOR - INCORRECT
2. (C) MAINTENANCE,ADJUSTMENT - IMPROPER - OTHER MAINTENANCE PERSONNEL
3. (F) FUEL SYSTEM,LINE - FIRE

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: MAIN GEAR COLLAPSED

Phase of Operation: LANDING - ROLL

Findings

4. TERRAIN CONDITION - NONE SUITABLE
5. TERRAIN CONDITION - ROUGH/UNEVEN
6. TERRAIN CONDITION - HIGH VEGETATION

Factual Information

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	32, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	April 12, 1989
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	3548 hours (Total, all aircraft), 400 hours (Total, this make and model), 3433 hours (Pilot In Command, all aircraft), 415 hours (Last 90 days, all aircraft), 103 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CALLAIR	Registration:	N8246H
Model/Series:	A-9 A-9	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	1119
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	March 22, 1989 Annual	Certified Max Gross Wt.:	3000 lbs
Time Since Last Inspection:	157 Hrs	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	JACOBS
ELT:	Not installed	Engine Model/Series:	R-755-A2M
Registered Owner:	AIR SPECIALTIES INC.	Rated Power:	300 Horsepower
Operator:	AIR SPECIALTIES, INC.	Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	WMOG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	SIDNEY , MT (SDY)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	08:00 Local	Type of Airspace:	Class G

Airport Information

Airport:		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:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	47.86024,-103.93048(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	OTTO D GOERGEN; FARGO , ND WESLEY K KING; FARGO , ND
Original Publish Date:	August 22, 1990
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=17755

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