



National Transportation Safety Board Aviation Accident Final Report

Location:	HENDERSON, NV	Accident Number:	SEA87MA018
Date & Time:	11/06/1986, 0144 PST	Registration:	N3219Q
Aircraft:	CESSNA 401	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

APPROXIMATELY 5 1/2 MINUTES AFTER DEPARTURE AND WHILE THE AIRCRAFT WAS CLIMBING ENROUTE, AN UNKNOWN IGNITION SOURCE TRIGGERED AN EXPLOSION OF FUEL/AIR VAPOR WHICH EXISTED WITHIN THE INTERIOR OF THE LEFT WING. WING SKIN FROM THE UPPER/LOWER WING SURFACE WAS LOST, HOWEVER, THE WING STRUCTURE REMAINED INTEGRAL AND THE PILOTS CONTINUED TO FLY THE AIRCRAFT EXECUTING A 180 DEGREE COURSE REVERSAL BACK TO MCCARRAN INTNL AIRPORT. SUBSEQUENT TO THE EXPLOSION A FIRE DEVELOPED WITHIN THE LEFT ENGINE AREA. AS THE AIRCRAFT CONTINUED BACK TOWARDS MCCARRAN THE AIRSPEED GRADUALLY DIMINISHED AND THE LANDING GEAR WERE LOWERED. SHORTLY THEREAFTER THE LEFT WING ENTERED A STALL CONDITION BROUGHT ABOUT BY A DECREASE OF AIRSPEED AS WELL AS THE DEGRADATION OF ITS LIFT DEVELOPING CAPABILITIES DUE TO THE EXPLOSION INDUCED DAMAGE. THE AIRCRAFT THEN ENTERED AN UNCONTROLLABLE LEFT ROLL SEVERAL HUNDRED FEET ABOVE GROUND FROM WHICH A SUCCESSFUL RECOVERY COULD NOT BE EXECUTED.

Probable Cause and Findings

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

Findings

Occurrence #1: EXPLOSION

Phase of Operation: CLIMB - TO CRUISE

Findings

1. (C) FLUID,FUEL - FUMES
2. (F) WING - EXPLODED

Occurrence #2: FIRE

Phase of Operation: MANEUVERING - TURN TO REVERSE DIRECTION

Findings

3. (C) ENGINE ASSEMBLY - FIRE

Occurrence #3: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: DESCENT - EMERGENCY

Findings

4. (C) AIRSPEED - INADEQUATE - PILOT IN COMMAND
5. (F) ANXIETY/APPREHENSION - PILOT IN COMMAND
6. (F) GEAR EXTENSION - PREMATURE - PILOT IN COMMAND

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

7. (F) REMEDIAL ACTION - NOT POSSIBLE - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Airline Transport	Age:	24, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	05/12/1986
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	2700 hours (Total, all aircraft), 17 hours (Total, this make and model), 56 hours (Last 90 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N3219Q
Model/Series:	401 401	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	4010019
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	11/03/1986, 100 Hour	Certified Max Gross Wt.:	6300 lbs
Time Since Last Inspection:	14 Hours	Engines:	2 Reciprocating
Airframe Total Time:	5083 Hours	Engine Manufacturer:	CONTINENTAL
ELT:	Installed	Engine Model/Series:	TSIO-520-E
Registered Owner:	WAYNE L. SOUTH	Rated Power:	300 hp
Operator:	WAYNE L. SOUTH	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:	SOUTH AERO SERVICE	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night/Bright
Observation Facility, Elevation:	LAS, 2174 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	0147 PST	Direction from Accident Site:	267°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	15 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	260°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	10° C / -4° C
Precipitation and Obscuration:			
Departure Point:	LAS VEGAS, NM (LAS)	Type of Flight Plan Filed:	VFR
Destination:	ALBUQUERQUE, NM (ABQ)	Type of Clearance:	VFR
Departure Time:	0137 PST	Type of Airspace:	Class A; Class B; Class E

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	In-Flight and On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	On-Ground
Total Injuries:	2 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	S. A MCCREARY	Report Date:	
Additional Participating Persons:	L. OLSEN; LAS VEGAS, NV M. GRIMES; LANCASTER, CA T. GUTSCHENRITTER; WICHITA, KS		
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 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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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).