



National Transportation Safety Board Aviation Accident Final Report

Location:	GRAND CANYON, AZ	Accident Number:	LAX91FA213
Date & Time:	05/13/1991, 1319 MST	Registration:	N6280H
Aircraft:	CESSNA 207A	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	7 Fatal
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

THE AIRPLANE CRASHED INTO A WOODED AREA ABOUT 8 MINUTES AFTER TAKEOFF. EVIDENCE AT THE WRECKAGE SITE REVEALED THAT THE AIRPLANE CRASHED THROUGH THE TREES AT A GLIDE ANGLE OF 8 DEGREES. THE GLIDE ANGLE FOR A POWER-OFF FORCED LANDING IS 6 DEGREES ACCORDING TO THE PILOT'S OPERATING HANDBOOK. THE PROPELLER DID NOT EXHIBIT ROTATIONAL DAMAGE. ENGINE TEARDOWN REVEALED THAT THE #1 CYLINDER HAD CATASTROPHIC DETONATION.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: DETONATION (OR PRE-IGNITION) IN THE NUMBER 1 CYLINDER, WHICH RESULTED IN EROSION (BURNING) OF THE NUMBER 1 PISTON AND SUBSEQUENT LOSS OF ENGINE POWER. A FACTOR RELATED TO THE ACCIDENT WAS: THE LACK OF SUITABLE TERRAIN FOR AN EMERGENCY LANDING.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) ENGINE ASSEMBLY,CYLINDER - OVERTEMPERATURE
2. (C) ENGINE ASSEMBLY,PISTON - BURNED

Occurrence #2: FORCED LANDING

Phase of Operation: LANDING

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: LANDING

Findings

3. (F) TERRAIN CONDITION - NONE SUITABLE
4. OBJECT - TREE(S)

Factual Information

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	26, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	07/02/1990
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	1168 hours (Total, all aircraft), 36 hours (Total, this make and model), 1070 hours (Pilot In Command, all aircraft), 98 hours (Last 90 days, all aircraft), 57 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N6280H
Model/Series:	207A 207A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:		Serial Number:	207-00463
Landing Gear Type:	Tricycle	Seats:	7
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	3800 lbs
Time Since Last Inspection:	0 Hours	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	CONTINENTAL
ELT:	Installed, not activated	Engine Model/Series:	TSIO-520-M
Registered Owner:	AIR GRAND CANYON	Rated Power:	285 hp
Operator:	AIR GRAND CANYON	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	EKBA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	GCN, 6606 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	1355 MST	Direction from Accident Site:	82°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	50 Miles
Lowest Ceiling:	Broken / 25000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	11 knots / 18 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	-18°C / -18°C
Precipitation and Obscuration:			
Departure Point:	GRAND CANYON, AZ (GCN)	Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	None
Departure Time:	0000	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	6 Fatal	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	On-Ground
Total Injuries:	7 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	richard V childress	Report Date:	07/02/1993
Additional Participating Persons:	FLOYD GOODYEAR; LAS VEGAS, NV GENE CORDELL; LAS VEGAS, NV DON ELAM; WASHINGTON, DC MICHAEL GRIMES; LANCASTER, CA		
Publish Date:			
Investigation Docket:	NTSB accident and incident docket 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](#).