



National Transportation Safety Board Aviation Accident Data Summary

Location:	HOUSTON, TX	Accident Number:	FTW00LA058
Date & Time:	01/03/2000, 1225 CST	Registration:	N999SW
Aircraft:	Cessna A185F	Injuries:	4 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The airplane was climbing through 3,500 feet after departure when the pilot heard a sequence of loud bangs. The pilot stated that the airplane started to vibrate, therefore, he elected to pull the throttle to idle and returned to the departure airport. The pilot stated that he could not make it to the active runway and elected to land on a grass strip located on the airport. The pilot attempted to slow the airplane before impacting a ditch. The airplane nosed over at 40 knots, coming to rest inverted. Examination of the engine revealed that the #4 cylinder head separated from its cylinder barrel as a result of fatigue cracking originating in the cylinder head threads. The engine was overhauled 111.5 hours prior to the accident, at which time, 6 channel chromed overhauled cylinders were installed. It could not be determined how many hours the cylinders had accumulated or how many times they had been overhauled. There is no requirement to track cylinder hours or overhaul occurrences.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the loss of engine power during climb as a result of fatigue cracking of the #4 cylinder head and its subsequent separation from its barrel.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF
Phase of Operation: CLIMB - TO CRUISE

Findings

1. (C) ENGINE ASSEMBLY,CYLINDER - FATIGUE
2. (C) ENGINE ASSEMBLY,CYLINDER - SEPARATION
3. MAINTENANCE,RECORDKEEPING - NOT REQUIRED - FAA(OTHER/ORGANIZATION)

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

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

Pilot Information

Certificate:	Commercial	Age:	39
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	1392 hours (Total, all aircraft), 62 hours (Total, this make and model), 1323 hours (Pilot In Command, all aircraft), 131 hours (Last 90 days, all aircraft), 27 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N999SW
Model/Series:	A185F A185F	Engines:	1 Reciprocating
Operator:	MARK J. ALLEN	Engine Manufacturer:	Continental
Operating Certificate(s) Held:	None	Engine Model/Series:	IO-520-D
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	LVJ, 44 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	Broken / 4700 ft agl	Wind Speed/Gusts, Direction:	10 knots / 20 knots, 250°
Temperature:	24° C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	(LVJ)	Destination:	LONGVIEW, TX (GGG)

Airport Information

Airport:	CLOVER FIELD (T02)	Runway Surface Type:	Grass/turf
Runway Used:	22	Runway Surface Condition:	Dry
Runway Length/Width:	2400 ft / 100 ft		

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	3 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:			

Administrative Information

Investigator In Charge (IIC): NICOLE L CHARNON

Adopted Date: 07/02/2001

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/>.

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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.