



National Transportation Safety Board

Aviation Accident Data Summary

Location:	MACOMB, IL	Accident Number:	CHI00LA085
Date & Time:	03/01/2000, 1900 CST	Registration:	N9552T
Aircraft:	Cessna 210	Injuries:	1 Minor, 1 None
Flight Conducted Under:	Part 91: General Aviation - Ferry		

Analysis

A Cessna 210 sustained substantial damage on impact with rough terrain during a forced landing following an in-flight loss of power. The pilot rated passenger reported minor injuries and the pilot was uninjured. A bank repossessed the airplane. The bank was informed that the engine was reportedly making metal. The bank's broker requested a ferry permit from the FAA for being out of annual only. An aircraft purchase agreement was completed between the bank, the aircraft broker, and the pilot rated passenger for the buyer of record. The agreement stated, 'Aircraft sold as-is, where is.' The bank's representative said that no representations were made to the purchasers, that no reports of the airplane status were passed on to the purchasers, and that the ferry permit was faxed to his location. A special flight permit limitation stated that '1. Carriage of persons other than essential crewmembers is prohibited.' The accident pilot said that his medical certificate had been expired at the time of the accident. The pilot rated passenger was an Airframe and Powerplant mechanic. The passenger endorsed the airplane's logbook, 'I have inspected this aircraft [and] found it to be airworthy for a one time ferry flight in accordance with this ferry permit.' The accident engine was examined and found to have a hole in its case near the number two cylinder. Disassembly revealed silver colored and silver and copper colored debris in the oil sump pan. The oil screen assembly was found secured by twisted safety wire. That safety wire was coated with oil like substance and a dust like substance was found adhering those twists. The screen and oil cooler contained debris. The crankshaft's cheek was found separated between the number two connecting rod and the number two main bearing. The cheek was discolored and deformed. The number two main bearing was found with its left half not in place. The aft crankshaft section was sent to the Materials Laboratory for detailed examination. The lab report stated, 'Fracture features for the fatigue region emanated from multiple origins on the surface of the aft radius of the second main journal, with primary initiation approximately in the center of the origin area. The boundary of the fatigue region was obliterated by mechanical damage. The surface of the aft second main journal cheek radius was scored and burnished. Ladder cracks were also observed in the cheek radius.'

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the inadequate maintenance inspection prior to the ferry flight by the pilot/mechanic rated passenger who endorsed the airplane as airworthy, the shift in the number two main bearing left half, and the fractured crankshaft. A factor was the rough/uneven terrain and the ferry permit's procedures not followed by the pilot in command.

Findings

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

Findings

- 1. (C) ENGINE ASSEMBLY,BEARING - SHIFTED
 - 2. (C) MAINTENANCE,INSPECTION - INADEQUATE - OWNER/PILOT MECHANIC
 - 3. (C) ENGINE ASSEMBLY,CRANKSHAFT - FRACTURED
 - 4. (F) PROCEDURES/DIRECTIVES - NOT FOLLOWED - PILOT IN COMMAND
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Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings

- 5. (F) TERRAIN CONDITION - ROUGH/UNEVEN

Pilot Information

Certificate:	Commercial	Age:	47
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Single-engine
Flight Time:	1387 hours (Total, all aircraft), 400 hours (Total, this make and model), 1265 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N9552T
Model/Series:	210 210	Engines:	1 Reciprocating
Operator:		Engine Manufacturer:	Continental
Operating Certificate(s) Held:	None	Engine Model/Series:	IO-470E
Flight Conducted Under:	Part 91: General Aviation - Ferry		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dusk
Observation Facility, Elevation:	BRL, 698 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None / 0 ft agl	Wind Speed/Gusts, Direction:	4 knots / , 290°
Temperature:	6°C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	JOLIET, IL (JOT)	Destination:	WHICHITA, KS (ICT)

Airport Information

Airport:	MACOMB MUNICIPAL AIRPORT (MQB)	Runway Surface Type:	
Runway Used:	0	Runway Surface Condition:	
Runway Length/Width:			

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	EDWARD F MALINOWSKI	Adopted Date:	04/19/2001
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 pubin@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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