



National Transportation Safety Board Aviation Accident Data Summary

Location:	ALMYRA, AR	Accident Number:	FTW01LA018
Date & Time:	11/01/2000, 1405 CST	Registration:	N8710W
Aircraft:	Piper PA-28-235	Injuries:	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that the flight was in cruise at 7,000 feet when ' the engine quit without notice, as though the mags had been turned off-no sputtering or gradual loss of engine power.' He executed a forced landing to a field, where the airplane came to rest upright. Postaccident examination of the engine revealed that the upper retaining screw for the crankshaft idler gear had separated. The lower retaining screw remained intact; however, it exhibited excessive wear and the bolt hole for this screw was severely elongated. Metallurgical examination revealed that the upper retaining screw fractured in high stress, low cycle fatigue. The examination further revealed that the upper screw most likely fractured after the lower screw had come loose.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the loss of engine power due to the crankshaft idler gear's loose lower retaining screw, which resulted in the fatigue failure of the crankshaft idler gear's upper retaining screw.

Findings

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

Findings

1. (C) MISCELLANEOUS,BOLT/NUT/FASTENER/CLAMP/SPRING - LOOSE
 2. (C) MISCELLANEOUS,BOLT/NUT/FASTENER/CLAMP/SPRING - FATIGUE
 3. ACCESSORY DRIVE ASSY,DRIVE GEAR - FAILURE
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Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

4. TERRAIN CONDITION - OPEN FIELD

Pilot Information

Certificate:	Commercial	Age:	47
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	659 hours (Total, all aircraft), 405 hours (Total, this make and model), 628 hours (Pilot In Command, all aircraft), 33 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N8710W
Model/Series:	PA-28-235 PA-28-235	Engines:	1 Reciprocating
Operator:	TERRY D. WOMACK	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	None	Engine Model/Series:	O-540-B4B5
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:	SGT, 224 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None / 0 ft agl	Wind Speed/Gusts, Direction:	14 knots / 21 knots, 190°
Temperature:	29° C	Visibility	7 Miles
Precipitation and Obscuration:			
Departure Point:	TEXARKANA, AR (TXK)	Destination:	TUNICA, MS (M97)

Airport Information

Airport:	ALMYRA (M73)	Runway Surface Type:	
Runway Used:	0	Runway Surface Condition:	
Runway Length/Width:			

Wreckage and Impact Information

Crew Injuries:	1 Serious	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): JASON A RAGOGNA Adopted Date: 07/10/2001

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/>.

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