



National Transportation Safety Board Aviation Accident Final Report

Location:	FRIENDSWOOD, TX	Accident Number:	FTW87DRA01
Date & Time:	03/02/1987, 1650 CST	Registration:	N815DB
Aircraft:	STRISSEL PITTS S1S	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

THE PROP SEPARATED DURING FLT AND THE PLT WAS FORCED TO LAND THE ACFT ON ROUGH TERRAIN. INVESTIGATION REVEALED THAT THE PROP HAD SEPARATED AS A RESULT OF A PREVIOUSLY EXISTING CRACK IN THE ENG CRANKSHAFT. THE ENG HAD BEEN REBUILT FROM COMPONENTS SALVAGED FROM AN ENG INVOLVED IN A PREVIOUS WRECK AND INSTALLED BY A NON-CERTIFICATED MECHANIC.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) PROPELLER SYSTEM/ACCESSORIES - SEPARATION
 2. (C) ENGINE ASSEMBLY,CRANKSHAFT - FAILURE,TOTAL
 3. (C) ENGINE ASSEMBLY,CRANKSHAFT - FATIGUE
 4. (C) MAINTENANCE,MAJOR REPAIR - INADEQUATE - UNQUALIFIED PERSON
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Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

5. TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

Pilot Information

Certificate:	Airline Transport; Commercial	Age:	31, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Front
Other Aircraft Rating(s):	Glider	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	07/16/1986
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	6439 hours (Total, all aircraft), 37 hours (Total, this make and model), 3458 hours (Pilot In Command, all aircraft), 35 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	STRISSEL	Registration:	N815DB
Model/Series:	PITTS S1S PITTS S1S	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	70422
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	08/19/1986, Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	352 Hours	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	O-360-A4M
Registered Owner:	JOHN S SHOCKELFORD, JR.	Rated Power:	180 hp
Operator:	JOHN S. SHACKELFORD	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	HOU, 50 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	1651 CST	Direction from Accident Site:	350°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	15 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	19° C / 6° C
Precipitation and Obscuration:			
Departure Point:	FRIENDSWOOD, TX (T02)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	0000	Type of Airspace:	Class G

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	DONALD O KNIGHT	Report Date:	05/16/1989
Additional Participating Persons:			
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 pubinquiry@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. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).