



National Transportation Safety Board Aviation Accident Final Report

Location:	SCOTTSDALE, AZ	Accident Number:	LAX87DUJ11
Date & Time:	09/01/1987, 0558 MST	Registration:	N236HA
Aircraft:	HILLER UH-12E	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 137: Agricultural		

Analysis

DURING AN AERIAL APPLICATION FLIGHT, THE PLT MADE A TURN-AROUND & WAS STARTING TO MAKE ANOTHER SWATH RUN WHEN HE HEARD A LOUD 'BANG' & THEN THE HELICOPTER COLLIDED WITH TERRAIN. AN INSPN OF THE MAIN ROTOR HEAD & PIN REVEALED THE HUB HAD FAILED FROM HI CYCLE FATIGUE. THE FATIGUE ORIGINATED FROM A POINT IN THE HUB PIN BORE WHERE INTERGRANULAR CORROSION HAD OCCURRED.

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: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) ROTOR SYSTEM,MAIN ROTOR HUB - CORRODED
2. (C) ROTOR SYSTEM,MAIN ROTOR HUB - FATIGUE

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

Pilot Information

Certificate:	Commercial	Age:	28, Male
Airplane Rating(s):	None	Seat Occupied:	Unknown
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	03/23/1987
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	3011 hours (Total, all aircraft), 3011 hours (Total, this make and model), 3011 hours (Pilot In Command, all aircraft), 287 hours (Last 90 days, all aircraft), 11 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HILLER	Registration:	N236HA
Model/Series:	UH-12E UH-12E	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Restricted	Serial Number:	HA3063
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	06/05/1987, 100 Hour	Certified Max Gross Wt.:	2750 lbs
Time Since Last Inspection:	97 Hours	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	VO-540-C2A
Registered Owner:	TIFFANY AG SERVICE INC	Rated Power:	305 hp
Operator:	SAN TAN DUSTERS INC.	Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	ZCDG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dawn
Observation Facility, Elevation:	AFB, 1000 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	0000 MST	Direction from Accident Site:	90°
Lowest Cloud Condition:	Thin Broken / 25000 ft agl	Visibility	20 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	27° C / 12° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	0555 MST	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Destroyed
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):	EARL NEWBERRY	Report Date:	03/31/1989
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/ .		

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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](#).