



Aviation Investigation Final Report

Location:	ARVIN, California	Accident Number:	LAX92LA349
Date & Time:	August 15, 1992, 06:15 Local	Registration:	N9753C
Aircraft:	HILLER UH12-E, SALOY CONVER	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 137: Agricultural		

Analysis

THE PILOT WAS CONDUCTING AN AERIAL APPLICATION FLIGHT. WHILE EXECUTING THE PROCEDURE TURNAROUND, THE MAIN ROTOR BLADE TENSION TORSION PIN FAILED DUE TO FATIGUE. THIS PART HAS A LIFE LIMIT OF 643 HOURS. THE FAILED PIN ACCRUED 641.5 HOURS. THE PILOT WAS ABLE TO EXECUTE AN AUTOROTATION, BUT WAS UNABLE TO FLARE WHICH RESULTED IN A HARD LANDING.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE FAILURE OF THE TENSION TORSION BAR PIN DUE TO FATIGUE. CONTRIBUTING TO THIS ACCIDENT WAS THAT IT WAS NOT POSSIBLE FOR THE PILOT TO FLARE THE HELICOPTER ON LANDING.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: MANEUVERING - TURN TO REVERSE DIRECTION

Findings

1. (C) ROTOR SYSTEM,MAIN ROTOR BLADE RETAINING PIN/BOLT - FRACTURED
2. (C) ROTOR SYSTEM,MAIN ROTOR BLADE RETAINING PIN/BOLT - FATIGUE

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

Findings

3. AUTOROTATION - PERFORMED - PILOT IN COMMAND

Occurrence #3: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

4. (F) FLARE - NOT POSSIBLE - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Commercial	Age:	38, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Center
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	June 29, 1992
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	7890 hours (Total, all aircraft), 3502 hours (Total, this make and model), 7721 hours (Pilot In Command, all aircraft), 238 hours (Last 90 days, all aircraft), 89 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HILLER	Registration:	N9753C
Model/Series:	UH12-E, SALOY CONVER UH12-E, SA	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	2340
Landing Gear Type:	Skid	Seats:	1
Date/Type of Last Inspection:	April 1, 1992 Annual	Certified Max Gross Wt.:	2800 lbs
Time Since Last Inspection:	323 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	6352 Hrs	Engine Manufacturer:	ALLISON
ELT:	Not installed	Engine Model/Series:	250-C20B
Registered Owner:	SAN JOAQUIN HELICOPTERS, INC.	Rated Power:	420 Horsepower
Operator:	SAN JOAQUIN HELICOPTERS, INC.	Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	CUFG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	35 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	27°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	06:09 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	35.250354,-118.909187(est)

Administrative Information

Investigator In Charge (IIC):	Llorente, A.
Additional Participating Persons:	ASI GREGORY MINARIK; FRESNO , CA
Original Publish Date:	July 29, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=27731

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).