



Aviation Investigation Final Report

Location:	WATSONVILLE, California	Accident Number:	LAX85LA400
Date & Time:	September 21, 1985, 11:00 Local	Registration:	N2874B
Aircraft:	BELL 47G-2	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

DURING AN AG FLT, AT ABT 5 FT AGL, THE PLT HEARD A LOUD BANG, THE ENG OVERSPED, & ALL PWR TO THE ROTOR BLADES WAS LOST. THE PLT ATTEMPTED TO IMMEDIATELY LAND IN THE UNDERLYING FIELD, BUT HAD INSUFFICIENT ALTITUDE/AIRSPEED TO AUTOROTATE. THE ACFT TOUCHED DOWN, BOUNCED, & THE MAIN ROTOR BLADES FLEXED DOWN & SEVERED THE TAIL BOOM. EXAM OF THE CLUTCH REVEALED THAT POOR CONTACT WAS BEING MADE BETWEEN THE SHOES & DRUM. EXAM OF THE FREE WHEELING UNIT REVEALED IT CONTAINED NUMEROUS ROLLERS WHICH WOULD NOT LOCK. IT IS UNKNOWN WHICH COMPONENTS'S FAILURE WAS PRIMARY.

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

Findings

1. (C) ROTOR DRIVE SYSTEM,CLUTCH ASSEMBLY - UNDETERMINED
2. (C) ROTOR DRIVE SYSTEM,FREEWHEELING UNIT(OTHER) - UNDETERMINED

Occurrence #2: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE

Occurrence #3: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #4: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

3. EMERGENCY PROCEDURE - NOT POSSIBLE - PILOT IN COMMAND
4. FLARE - NOT POSSIBLE - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	66, Male
Airplane Rating(s):	Single-engine land; Multi-engine land; Multi-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	July 29, 1985
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	19236 hours (Total, all aircraft), 6448 hours (Total, this make and model), 19054 hours (Pilot In Command, all aircraft), 213 hours (Last 90 days, all aircraft), 75 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N2874B
Model/Series:	47G-2 47G-2	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	1987
Landing Gear Type:		Seats:	3
Date/Type of Last Inspection:	September 13, 1985 100 hour	Certified Max Gross Wt.:	2649 lbs
Time Since Last Inspection:	21 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	8310 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	VO-435-A1D
Registered Owner:		Rated Power:	200 Horsepower
Operator:	HELICAIR AG, INC.	Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	

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	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	WATSONVILLE , CA	Type of Flight Plan Filed:	None
Destination:	WATSONVILLE , CA	Type of Clearance:	None
Departure Time:	10:59 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	Dirt
Airport Elevation:	0 ft msl	Runway Surface Condition:	Dry;Vegetation
Runway Used:	0	IFR Approach:	None
Runway Length/Width:	0 ft / 0 ft	VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	36.950042,-121.719055(est)

Administrative Information

Investigator In Charge (IIC):	Pollack, Wayne
Additional Participating Persons:	JAY HOWARD; SAN JOSE , CA
Original Publish Date:	
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=24843

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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](#).