



National Transportation Safety Board Aviation Accident Final Report

Location:	PALMDALE, CA	Accident Number:	LAX86LA203
Date & Time:	05/01/1986, 1910 PDT	Registration:	N4239J
Aircraft:	BELL 47G-2	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

THE HELICOPTER LANDED HARD IN THE DESERT WHILE ON A VFR PERSONAL FLT. THE PLT INDICATED THAT HE JUST DEPARTED A MOUNTIAN AREA FOR REFUELING. HE ALSO INDICATED HE WAS DISORIENTED AND THE COMPASS WAS INOPERABLE. HE DECIDED TO LAND AND CHECK THE FUEL QUANTITY. HE STATED HE MISJUDGED THE LANDING, THE TAIL HIT THE DESERT FLOOR AND THE MAIN ROTOR STRUCK AND SEVERED THE TAIL BOOM. APRX 1 QUART OF FUEL WAS DRAINED FROM THE ENTIRE FUEL SYSTEM. ACCORDING TO THE MANUFACTURERS OPERATORS MANUAL FOR THE BELL 47G, THE FUEL CAPACITY IS 43 GALLONS TOTAL WITH 41 GALLONS USABLE.

Probable Cause and Findings

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

Findings

Occurrence #1: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Findings

1. (F) FLUID,FUEL - LOW LEVEL
2. (F) PRECAUTIONARY LANDING - INTENTIONAL - PILOT IN COMMAND
3. (F) FLIGHT/NAV INSTRUMENTS,COMPASS - INOPERATIVE
4. (F) FUEL SUPPLY - INADEQUATE - PILOT IN COMMAND
5. (C) FUEL CONSUMPTION CALCULATIONS - IMPROPER - PILOT IN COMMAND
6. (F) BECAME LOST/DISORIENTED - INADVERTENT - PILOT IN COMMAND

Occurrence #2: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

7. (C) FLARE - IMPROPER - PILOT IN COMMAND
8. (F) DESIGN STRESS LIMITS OF AIRCRAFT - EXCEEDED - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Flight Instructor; Commercial; Private	Age:	25, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	06/03/1985
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	1943 hours (Total, all aircraft), 1538 hours (Total, this make and model), 1870 hours (Pilot In Command, all aircraft), 90 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N4239J
Model/Series:	47G-2 47G-2	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	1
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	04/17/1986, 100 Hour	Certified Max Gross Wt.:	2490 lbs
Time Since Last Inspection:	10 Hours	Engines:	1 Reciprocating
Airframe Total Time:	12211 Hours	Engine Manufacturer:	FRANKLIN
ELT:	Not installed	Engine Model/Series:	6VS-335-A
Registered Owner:	RIVERSIDE AIR SERVICE	Rated Power:	225 hp
Operator:	RIVERSIDE AIR SERVICE	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PMD, 0 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	1046 PDT	Direction from Accident Site:	360°
Lowest Cloud Condition:	Scattered / 16000 ft agl	Visibility	35 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	11 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	260°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:	PALMDALE, CA (PMD)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1630 PDT	Type of Airspace:	Class G

Airport Information

Airport:	PALMDALE (PMD)	Runway Surface Type:	Dirt
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Precautionary Landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	THOMAS H WILCOX	Report Date:	
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 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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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](#).