



Aviation Investigation Final Report

Location:	MONDAMIN, Iowa	Accident Number:	MKC82DA166
Date & Time:	September 5, 1982, 16:30 Local	Registration:	N13420
Aircraft:	SCORPION 133	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

AFTER A GROUND ADJUSTMENT TO THE COLLECTIVE PITCH ON HIS HOMEBUILT HELICOPTER, THE PILOT TOOKOFF TO PRACTICE HOVERING TAKEOFF AND LANDING. IN AN ATTEMPT TO HOVER CLOSE TO GROUND, HE RAISED THE COLLECTIVE AND THE AIRCRAFT SHOT UP ABOUT 30 FEET. IT THEN FELL OFF TO THE LEFT AND IMPACTED THE GROUND A LATER DISCUSSION WITH FACTORY REPRESENTATIVE DISCLOSED A DIFFERENCE BETWEEN VERBAL ADJUSTMENT INSTRUCTIONS AND THOSE ON THE PUBLISHED PLANS FOR BUILDING THE AIRCRAFT.

Probable Cause and Findings

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

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) ROTORCRAFT FLIGHT CONTROL, COLLECTIVE CONTROL - INCORRECT
2. (F) MAINTENANCE, ADJUSTMENT - IMPROPER - OTHER MAINTENANCE PERSONNEL
3. (C) CONDITION(S)/STEP(S) INSUFFICIENTLY DEFINED - PRODUCTION/DESIGN PERSONNEL
4. ROTOR RPM - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #2: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

Pilot Information

Certificate:	Private	Age:	35, Male
Airplane Rating(s):		Seat Occupied:	Unknown
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	August 28, 1981
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	73 hours (Total, all aircraft), 11 hours (Total, this make and model), 41 hours (Pilot In Command, all aircraft), 11 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	SCORPION	Registration:	N13420
Model/Series:	133 133	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:		Serial Number:	RW2958
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1250 lbs
Time Since Last Inspection:	10 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	10 Hrs	Engine Manufacturer:	ROTORWAY
ELT:	Not installed	Engine Model/Series:	RW145
Registered Owner:	GARY DEITERING	Rated Power:	145 Horsepower
Operator:	GARY DEITERING	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:	16:30 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	
Lowest Ceiling:	Unknown	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	75°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	MONDAMIN , IA	Type of Flight Plan Filed:	None
Destination:	MONDAMIN , IA	Type of Clearance:	None
Departure Time:	15:30 Local	Type of Airspace:	

Airport Information

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

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:	41.70082,-96.020973(est)

Administrative Information

Investigator In Charge (IIC):

Additional Participating Persons:

Original Publish Date: September 5, 1983

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=71746>

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](#).