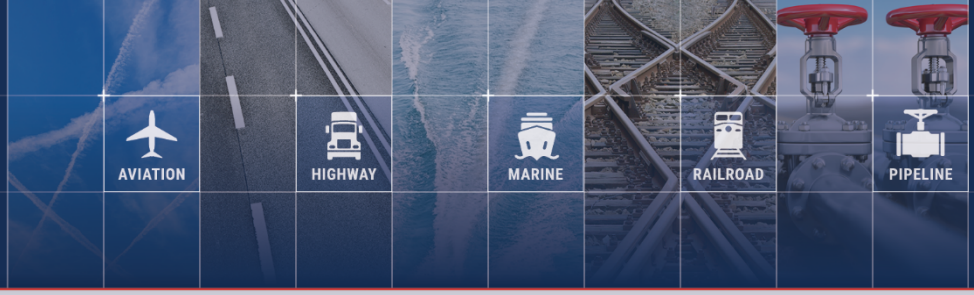

Aviation Investigation Final Report

Location:	GRIDLEY, California	**Accident Number:**	LAX00LA311
Date & Time:	August 26, 2000, 09:06 Local	**Registration:**	N7SZ
Aircraft:	Perrucci Randall J REVOLUTION MINI-500	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While maneuvering at 700 feet agl, the pilot of the amateur-built helicopter felt something "break" and the fore-and-aft portion of the cyclic flight control system became inoperative (disconnected). He lowered the collective control, reduced engine power, and made a run-on landing in an open field. During the landing the toe of one skid "dug in" and the helicopter came to rest on its side. Postaccident examination revealed that a push-pull tube in the cyclic control system fractured circumferentially in the wall at one end near where a through-bolt attached the rod end fitting to the tube.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The fracture and separation of a control rod in the cyclic flight control system.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: MANEUVERING

Findings
1. (C) ROTORCRAFT FLIGHT CONTROL,CYCLIC CONTROL ROD - FRACTURED
2. (C) ROTORCRAFT FLIGHT CONTROL,CYCLIC CONTROL ROD - SEPARATION
3. AUTOROTATION - PERFORMED - PILOT IN COMMAND

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings
4. TERRAIN CONDITION - CROP

Factual Information

On August 26, 2000, at 0906 hours Pacific daylight time, a Perrucci Revolution Mini-500 experimental helicopter, N7SZ, was substantially damaged during a forced landing near Gridley, California. The student pilot was not injured. Visual meteorological conditions prevailed and no flight plan was filed for the local area personal flight, which departed from the owner's property in Gridley about 0840. The amateur built helicopter was operated by the owner under 14 CFR Part 91.

The pilot reported that, while making a turn at 700 feet agl, he felt something break and the fore-and-aft portion of the cyclic flight control system became inoperative (disconnected). He lowered the collective control, reduced engine power, and made a run-on landing in an open field. During the landing the toe of one skid "dug in" and the helicopter came to rest on its side.

Postaccident examination revealed that a push-pull tube in the cyclic control system fractured circumferentially in the wall at one end near where a through-bolt attached the rod end fitting to the tube. The assembly was Revolution Helicopters part number 0165.

Pilot Information

Certificate:	Student	**Age:**	38,Male
Airplane Rating(s):	None	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**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:**	September 16, 1998
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	131 hours (Total, all aircraft), 87 hours (Total, this make and model), 97 hours (Pilot In Command, all aircraft), 34 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Perrucci Randall J	**Registration:**	N7SZ
Model/Series:	REVOLUTION MINI-500 REVOLUTION	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	0098
Landing Gear Type:	Skid	**Seats:**	1
Date/Type of Last Inspection:	August 22, 2000 Unknown	**Certified Max Gross Wt.:**	975 lbs
Time Since Last Inspection:	1 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	928 Hrs	**Engine Manufacturer:**	Rotax
ELT:	Not installed	**Engine Model/Series:**	582
Registered Owner:	RANDALL J. PERRUCCI	**Rated Power:**	80 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
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:	OVE ,192 ft msl	**Distance from Accident Site:**	8 Nautical Miles
Observation Time:	08:53 Local	**Direction from Accident Site:**	5°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	72°C / 48°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	, CA	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	08:40 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 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	39.350776,-121.759002(est)

Administrative Information

Investigator In Charge (IIC):	Parker, Richard
Additional Participating Persons:	BRIAN L ALLEN; SACRAMENTO , CA
Original Publish Date:	November 1, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=50126