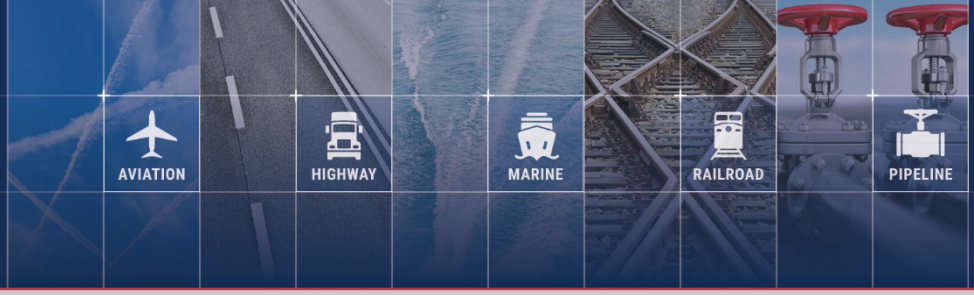

Aviation Investigation Final Report

Location:	Los Banos, California	**Accident Number:**	WPR10LA127
Date & Time:	February 2, 2010, 13:20 Local	**Registration:**	N36MV
Aircraft:	Hiller UH-12E	**Aircraft Damage:**	Substantial
Defining Event:	Powerplant sys/comp malf/fail	**Injuries:**	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot of the helicopter had just completed an aerial application flight and was returning to land. As he approached the landing area, he began to apply power, but the engine did not respond. He continued to twist the throttle, but it felt loose with no resistance and the engine speed did not change. He aborted the landing approach and performed a run-on landing in a field; during the approach the engine speed began to decrease and the helicopter landed hard, causing substantial damage to the tail boom and lower fuselage. Postaccident examination revealed that the throttle control attach fitting located in the aft section of the collective control had become separated. The nuts and bolts attaching the fitting were not located. The lack of witness marks on the throttle fitting indicates that either the attachment bolt failed or rapidly unscrewed from its associated nut. The disconnection resulted in a loss of engine control and subsequent partial loss of engine power. The last annual inspection occurred 11 months and 250 flight hours prior to the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A partial loss of engine power due to a failure of the throttle interconnect hardware, which resulted in a hard landing.

Findings

Aircraft	Power lever - Failure

Factual Information

History of Flight

Approach-VFR pattern final	Powerplant sys/comp malf/fail (Defining event)
Emergency descent	Collision with terr/obj (non-CFIT)

HISTORY OF FLIGHT

On February 2, 2010, about 1320 Pacific standard time, a Hiller UH-12E helicopter, N36MV, landed hard near Los Banos, California. S and S Helicopters was operating the helicopter under the provisions of Title 14 Code of Federal Regulations Part 137 as an aerial application flight. The certificated commercial pilot was not injured. The helicopter sustained substantial damage. The local flight departed from a field near Los Banos. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot reported that he had just completed an aerial application over a wheat field, and was returning to land. As he approached the landing area at an altitude of about 30 feet above ground level, he began to apply power, but the engine did not respond. He continued to twist the throttle, but it felt loose with no resistance, and the engine speed did not change. He aborted the landing approach, and turned the helicopter towards a larger open field. He circled the field about three times while attempting to diagnose the problem. He then elected to perform a run-on landing; during the landing approach, the engine speed began to decrease, and the helicopter landed hard.

During the landing sequence, the tailboom separated from the aft bulkhead, and the lower fuselage sustained crush damage.

Post accident examination revealed that the throttle control fitting, located at the aft end of the collective stick assembly, had become separated from the cam lever rod bearing.

According to the Hiller service manual applicable to this helicopter, the throttle control fitting is connected to the cam lever rod with an AN23-16A bolt, NAS43DD3-4 spacer, AN960PD10L washer, and a NAS679A3 nut. None of these fittings were located on the engine deck, and examination of the control arm mating surfaces revealed no gouges or fretting signatures.

According to maintenance logbook entries, the helicopter underwent an annual inspection on February 25, 2009, at an airframe total time of 6,815 flight hours. According to the FAA inspector who responded to the accident, the helicopter’s total flight time at the time of the accident was 7,064 hours.

Pilot Information

Certificate:	Commercial	**Age:**	54,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):	Airplane single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	November 5, 2009
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	November 24, 2009
Flight Time:	18500 hours (Total, all aircraft), 7000 hours (Total, this make and model), 18500 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hiller	**Registration:**	N36MV
Model/Series:	UH-12E	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Restricted (Special)	**Serial Number:**	5060
Landing Gear Type:	Skid	**Seats:**	3
Date/Type of Last Inspection:	February 25, 2009 Annual	**Certified Max Gross Wt.:**	2700 lbs
Time Since Last Inspection:	249 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	7064 Hrs at time of accident	**Engine Manufacturer:**	LYCOMING
ELT:	Not installed	**Engine Model/Series:**	VO-540 SERIES
Registered Owner:	JEFF STREETER MOTOR SPORTS INC	**Rated Power:**	310 Horsepower
Operator:	JEFF STREETER MOTOR SPORTS INC	**Operating Certificate(s) Held:**	
Operator Does Business As:	S and S Helicopters	**Operator Designator Code:**	JF5G

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	MCE,155 ft msl	**Distance from Accident Site:**	28 Nautical Miles
Observation Time:	13:01 Local	**Direction from Accident Site:**	55°
Lowest Cloud Condition:	Few / 700 ft AGL	**Visibility**	3 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.82 inches Hg	**Temperature/Dew Point:**	11°C / 9°C
Precipitation and Obscuration:	N/A - None - Mist		
Departure Point:	Los Banos, CA	**Type of Flight Plan Filed:**	None
Destination:	Los Banos, CA	**Type of Clearance:**	None
Departure Time:	13:00 Local	**Type of Airspace:**	

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:**	37.051109,-120.923889(est)

Administrative Information

Investigator In Charge (IIC):	Simpson, Eliott
Additional Participating Persons:	Gregg H Schmidt; Federal Aviation Administration FSDO; Fresno, CA
Original Publish Date:	October 21, 2010
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=75334