

Aviation Investigation Final Report

| Location: | TRUCKEE, Califor | nia | Accident Number: | LAX97LA179 |
|-------------------------|-------------------|---------------|------------------|-------------|
| Date & Time: | May 14, 1997, 11 | :59 Local | Registration: | N7082D |
| Aircraft: | Hiller | UH-12E | Aircraft Damage: | Substantial |
| Defining Event: | | | Injuries: | 1 Serious |
| Flight Conducted Under: | Part 133: Rotorcr | aft ext. load | | |

Analysis

The pilot reported that the purpose of the accident flight was to move a 200-foot long line to a new clearing area. After takeoff from the dirt strip, the pilot heard a change in the sound of the engine. He stated that he was turning back to make an emergency landing and attempted to release the long line; however, it became entangled around a tree and the helicopter impacted the ground. FAA inspectors examined the helicopter and the long line, but could not make a determination of when the long line became entangled in the tree; during takeoff or upon returning to land. Examination of the engine revealed continuity throughout, with no preexisting malfunctions noted.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power for undetermined reasons. A factor in the accident was the unsuccessful attempt to release the long line from the belly hook after it became entangled in a tree.

Findings

Occurrence #1: LOSS OF ENGINE POWER Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings 1. (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Findings

2. (C) EXTERNAL LOAD CABLE/HOOK - ENTANGLED

- 3. (F) OBJECT TREE(S)
- 4. (F) EMERGENCY PROCEDURE RESTRICTED PILOT IN COMMAND
- 5. (F) DIVERTED ATTENTION PILOT IN COMMAND

Factual Information

On May 14, 1997, about 1159 hours Pacific daylight time, a Hiller UH-12E, N7082D, crashed during an emergency landing 7 miles northeast of Truckee, California. The helicopter was substantially damaged, and the commercial instrument rated pilot was seriously injured. Visual meteorological conditions existed for the 14 CFR Part 133 external load operation, and no flight plan was filed. The flight was originating from a private dirt helipad in Truckee at the time for the purpose of moving a 200-foot long line to a work site.

The pilot stated that after physically "hooking up the long line to the belly hook, I climbed back in and started the aircraft." He stated that the primary mission for this flight was to drop off the long line at a new site and pick up the woodcutters. The pilot reported that the preflight and engine start appeared normal. After lifting to a hover, he repositioned the aircraft over the long line. He said that "As I transitioned to forward flight, I experienced a left yaw and decreasing aircraft noises." The pilot then picked out a place to make an emergency landing and then moved his attention back inside the aircraft, trying to switch his radio from FM to VHF to transmit on the Truckee Unicom. Prior to trying to switch the radio frequency "...the RPM rapidly increased causing the aircraft to yaw to the right and increase in forward speed." The pilot reported that corrective action was taken and he then attempted to release the long line; however, it became entangled around a tree and the helicopter impacted the ground.

FAA inspectors from the Reno, Nevada, Flight Standards District Office responded to the accident site and examined both the long line and the helicopter. According to their report, they could not make a determination of when the long line became entangled in the tree; during takeoff or upon returning to land.

The wreckage was removed to the operator's home base in White City, Oregon, where an engine inspection was accomplished. An FAA inspector from the Hillsboro, Oregon, Flight Standards District Office was present at the engine inspection. Engine continuity was established and no preexisting malfunctions were noted. See attached report.

Pilot Information

| Certificate: | Commercial; Military | Age: | 37,Male |
|---------------------------|---|-----------------------------------|------------------|
| Airplane Rating(s): | None | Seat Occupied: | Left |
| Other Aircraft Rating(s): | Helicopter | Restraint Used: | |
| Instrument Rating(s): | Helicopter | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 2 Valid Medicalno waivers/lim. | Last FAA Medical Exam: | January 23, 1997 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | |
| Flight Time: | 3878 hours (Total, all aircraft), 855 hours (Total, this make and model), 2934 hours (Pilot In Command, all aircraft), 169 hours (Last 90 days, all aircraft), 27 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

| Aircraft Make: | Hiller | Registration: | N7082D |
|----------------------------------|---|-----------------------------------|----------------|
| Model/Series: | UH-12E UH-12E | Aircraft Category: | Helicopter |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 5193 |
| Landing Gear Type: | Skid | Seats: | 3 |
| Date/Type of Last Inspection: | April 24, 1997 100 hour | Certified Max Gross Wt.: | 3100 lbs |
| Time Since Last Inspection: | 60 Hrs | Engines: | 1 Turbo shaft |
| Airframe Total Time: | 2802 Hrs | Engine Manufacturer: | Allison |
| ELT: | Installed, activated, did not aid in locating accident | Engine Model/Series: | 250-C20B |
| Registered Owner: | CROMAN CORPORATION | Rated Power: | 420 Horsepower |
| Operator: | | Operating Certificate(s) Held: | |
| Operator Does Business As: | | Operator Designator Code: | JYEL |

Meteorological Information and Flight Plan

| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
|----------------------------------|----------------------------------|---|------------------|
| Observation Facility, Elevation: | TRK ,5900 ft msl | Distance from Accident Site: | 7 Nautical Miles |
| Observation Time: | 12:50 Local | Direction from Accident Site: | 20° |
| Lowest Cloud Condition: | Scattered / 18000 ft AGL | Visibility | 30 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 8 knots / 18 knots | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 220° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30 inches Hg | Temperature/Dew Point: | 24°C / 3°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | None |
| Departure Time: | 11:55 Local | Type of Airspace: | Class G |

Airport Information

| Airport: | PRIVATE DIRT STRIP | Runway Surface Type: | Dirt |
|----------------------|--------------------|---------------------------|----------------|
| Airport Elevation: | 6350 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 0 | IFR Approach: | None |
| Runway Length/Width: | | VFR Approach/Landing: | Forced landing |

Wreckage and Impact Information

| Crew Injuries: | 1 Serious | Aircraft Damage: | Substantial |
|------------------------|-----------|-------------------------|----------------------------|
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 Serious | Latitude, Longitude: | 39.330444,-120.239707(est) |

Administrative Information

| Investigator In Charge (IIC): | Cornejo, Tealeye | |
|--------------------------------------|--|--|
| Additional Participating Persons: | ROBERT C WAGNER; RENO , NV | |
| Original Publish Date: | April 10, 1998 | |
| Last Revision Date: | | |
| Investigation Class: | <u>Class</u> | |
| Note: | | |
| Investigation Docket: | https://data.ntsb.gov/Docket?ProjectID=29787 | |

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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 <u>here</u>.