



National Transportation Safety Board Aviation Accident Final Report

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|--------------------------------|--|-------------------------|--------------------|
| Location: | Azusa, California | Accident Number: | WPR22LA125 |
| Date & Time: | March 19, 2022, 17:04 Local | Registration: | N950SG |
| Aircraft: | Eurocopter AS332L1 | Aircraft Damage: | Substantial |
| Defining Event: | Loss of visual reference | Injuries: | 4 Serious, 2 Minor |
| Flight Conducted Under: | Part 91: General aviation - Other work use | | |

Analysis

The pilot of the helicopter stated that, while maneuvering around the area looking for a suitable landing site, a dirt turnout alongside a road was selected. A tree was noted on the edge of the turnout. An approach was initiated to the site and expected brownout was encountered. About 5 ft above ground, the pilot heard the crewmember in the back of the helicopter call out “hold.” The pilot arrested the descent and came to a hover. Within seconds the asphalt roadway reference was obscured by the brownout and he lost visual reference. He announced, “lost visual” and started to climb, which was his last recollection before regaining consciousness.

The crewmember in the back of the helicopter reported that the helicopter approached the landing zone angled, to the south toward a tree. About 7 to 10 ft above the ground, he noticed that the helicopter was drifting forward, and he called out twice, “You are drifting forward, hold.” The helicopter continued to drift and subsequently, struck a tree and rolled onto its left side. The helicopter sustained substantial damage to the fuselage and main rotor system.

The pilot reported there were no mechanical malfunctions or failures with the helicopter that would have precluded normal operation.

Probable Cause and Findings

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

The pilot's failure to maintain clearance from a tree after encountering brownout conditions and a loss of visual reference during the approach to land.

Findings

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|----------------------|--------------------------------|
| Personnel issues | Monitoring environment - Pilot |
| Personnel issues | Aircraft control - Pilot |
| Personnel issues | Situational awareness - Pilot |
| Environmental issues | Tree(s) - Effect on operation |

Factual Information

History of Flight

| | |
|----------------------------|---|
| Maneuvering-hover | Loss of visual reference (Defining event) |
| Maneuvering-hover | Attempted remediation/recovery |
| Maneuvering-low-alt flying | Collision with terr/obj (non-CFIT) |

Pilot Information

| | | | |
|---------------------------|---|-----------------------------------|--------------------|
| Certificate: | Airline transport | Age: | 50, Male |
| Airplane Rating(s): | None | Seat Occupied: | Right |
| Other Aircraft Rating(s): | Helicopter | Restraint Used: | 4-point |
| Instrument Rating(s): | Helicopter | Second Pilot Present: | |
| Instructor Rating(s): | None | Toxicology Performed: | |
| Medical Certification: | Class 2 With waivers/limitations | Last FAA Medical Exam: | September 22, 2021 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | July 9, 2021 |
| Flight Time: | 5382 hours (Total, all aircraft), 1243 hours (Total, this make and model), 4691 hours (Pilot In Command, all aircraft), 88 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft) | | |

Pilot Information

| | | | |
|---------------------------|--|-----------------------------------|-------------------|
| Certificate: | Commercial | Age: | 46, Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | Helicopter | Restraint Used: | 4-point |
| Instrument Rating(s): | Helicopter | Second Pilot Present: | |
| Instructor Rating(s): | None | Toxicology Performed: | |
| Medical Certification: | Class 2 Without waivers/limitations | Last FAA Medical Exam: | September 8, 2021 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | January 26, 2022 |
| Flight Time: | 2686 hours (Total, all aircraft), 297.2 hours (Total, this make and model), 2235.1 hours (Pilot In Command, all aircraft), 72.4 hours (Last 90 days, all aircraft), 32 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft) | | |

Other flight crew Information

| | | | |
|---------------------------|------|-----------------------------------|---------|
| Certificate: | None | Age: | Male |
| Airplane Rating(s): | None | Seat Occupied: | Rear |
| Other Aircraft Rating(s): | None | Restraint Used: | 4-point |
| Instrument Rating(s): | None | Second Pilot Present: | |
| Instructor Rating(s): | None | Toxicology Performed: | |
| Medical Certification: | | Last FAA Medical Exam: | |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | | | |

Passenger Information

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|---------------------------|----|-----------------------------------|---------|
| Certificate: | | Age: | Male |
| Airplane Rating(s): | | Seat Occupied: | Rear |
| Other Aircraft Rating(s): | | Restraint Used: | 4-point |
| Instrument Rating(s): | | Second Pilot Present: | |
| Instructor Rating(s): | | Toxicology Performed: | |
| Medical Certification: | | Last FAA Medical Exam: | |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | | | |

Passenger Information

| | | | |
|---------------------------|----|-----------------------------------|---------|
| Certificate: | | Age: | |
| Airplane Rating(s): | | Seat Occupied: | Rear |
| Other Aircraft Rating(s): | | Restraint Used: | 4-point |
| Instrument Rating(s): | | Second Pilot Present: | |
| Instructor Rating(s): | | Toxicology Performed: | |
| Medical Certification: | | Last FAA Medical Exam: | |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | | | |

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| | | | |
|---------------------------|------|-----------------------------------|---------|
| Certificate: | None | Age: | |
| Airplane Rating(s): | None | Seat Occupied: | Rear |
| Other Aircraft Rating(s): | None | Restraint Used: | 4-point |
| Instrument Rating(s): | None | Second Pilot Present: | |
| Instructor Rating(s): | None | Toxicology Performed: | |
| Medical Certification: | | Last FAA Medical Exam: | |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | | | |

Aircraft and Owner/Operator Information

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|-------------------------------|------------------------|--------------------------------|---------------|
| Aircraft Make: | Eurocopter | Registration: | N950SG |
| Model/Series: | AS332L1 | Aircraft Category: | Helicopter |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 9007 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 8 |
| Date/Type of Last Inspection: | | Certified Max Gross Wt.: | 18960 lbs |
| Time Since Last Inspection: | | Engines: | 2 Turbo shaft |
| Airframe Total Time: | | Engine Manufacturer: | Safran |
| ELT: | Installed | Engine Model/Series: | Makila 1A1 |
| Registered Owner: | | Rated Power: | 1877 |
| Operator: | | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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|----------------------------------|-----------------------|---|-------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | | Distance from Accident Site: | |
| Observation Time: | | Direction from Accident Site: | |
| Lowest Cloud Condition: | | Visibility | 10 miles |
| Lowest Ceiling: | Broken / 12000 ft AGL | Visibility (RVR): | |
| Wind Speed/Gusts: | 12 knots / | Turbulence Type Forecast/Actual: | None / None |
| Wind Direction: | 180° | Turbulence Severity Forecast/Actual: | N/A / N/A |
| Altimeter Setting: | | Temperature/Dew Point: | |
| Precipitation and Obscuration: | | | |
| Departure Point: | Long Beach, CA (LGB) | Type of Flight Plan Filed: | None |
| Destination: | Yermo, CA | Type of Clearance: | None |
| Departure Time: | | Type of Airspace: | Class G |

Wreckage and Impact Information

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|---------------------|--------------------|-------------------------|---------------------------|
| Crew Injuries: | 3 Serious, 1 Minor | Aircraft Damage: | Substantial |
| Passenger Injuries: | 1 Serious, 1 Minor | Aircraft Fire: | None |
| Ground Injuries: | | Aircraft Explosion: | None |
| Total Injuries: | 4 Serious, 2 Minor | Latitude, Longitude: | 34.176519,-117.88304(est) |

Administrative Information

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|-----------------------------------|---|----------------------|---|
| Investigator In Charge (IIC): | Salazar, Fabian | | |
| Additional Participating Persons: | | | |
| Original Publish Date: | September 8, 2022 | Investigation Class: | 4 |
| Note: | The NTSB did not travel to the scene of this accident. | | |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=104802 | | |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).