



# Aviation Investigation Final Report

|                                |                                   |                         |             |
|--------------------------------|-----------------------------------|-------------------------|-------------|
| <b>Location:</b>               | TURNER, Oregon                    | <b>Accident Number:</b> | SEA88LA016  |
| <b>Date &amp; Time:</b>        | November 11, 1987, 17:00 Local    | <b>Registration:</b>    | N35HA       |
| <b>Aircraft:</b>               | HILLER FH-1100                    | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>         |                                   | <b>Injuries:</b>        | 1 None      |
| <b>Flight Conducted Under:</b> | Part 91: General aviation - Ferry |                         |             |

## Analysis

WHILE ON A SHORT CROSS COUNTRY FLIGHT THE PILOT ENCOUNTERED A RAIN STORM AND LOW CLOUDS. THE PILOT MADE A 180 DEGREE TURN AND THEN ELECTED TO MAKE A PRECAUTIONARY LANDING IN A FIELD. ALTHOUGH THE PILOT VISUALLY INSPECTED THE AREA PRIOR TO LANDING, HE DID NOT SEE RISING TERRAIN. DURING LANDING THE TAIL ROTOR STRUCK RISING TERRAIN CAUSING A LOSS OF TAIL ROTOR CONTROL. THE HELICOPTER THEN DESCENDED TO THE GROUND.

## Probable Cause and Findings

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

### Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER  
Phase of Operation: CRUISE

#### Findings

1. (F) WEATHER CONDITION - LOW CEILING
  2. (F) WEATHER CONDITION - RAIN
  3. (F) WEATHER EVALUATION - MISJUDGED - PILOT IN COMMAND
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Occurrence #2: DRAGGED WING, ROTOR, POD, FLOAT OR TAIL/SKID

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

4. (F) TERRAIN CONDITION - ROUGH/UNEVEN
5. (F) LIGHT CONDITION - DUSK
6. (C) UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - SELECTED - PILOT IN COMMAND
7. (F) VISUAL/AURAL PERCEPTION - PILOT IN COMMAND

## Factual Information

### Pilot Information

|                                  |  |  |                   |
|----------------------------------|--|--|-------------------|
| <b>Certificate:</b>              | Commercial   | <b>Age:</b>                              | 42, Male          |
| <b>Airplane Rating(s):</b>       | Single-engine land   | <b>Seat Occupied:</b>                    | Right             |
| <b>Other Aircraft Rating(s):</b> | Helicopter   | <b>Restraint Used:</b>                   |                   |
| <b>Instrument Rating(s):</b>     | Airplane   | <b>Second Pilot Present:</b>             | No                |
| <b>Instructor Rating(s):</b>     | None   | <b>Toxicology Performed:</b>             | Yes               |
| <b>Medical Certification:</b>    | Class 1 Valid Medical--no waivers/lim.   | <b>Last FAA Medical Exam:</b>            | February 27, 1987 |
| <b>Occupational Pilot:</b>       | Yes  | <b>Last Flight Review or Equivalent:</b> |                   |
| <b>Flight Time:</b>              | 4160 hours (Total, all aircraft), 108 hours (Total, this make and model), 3527 hours (Pilot In Command, all aircraft), 140 hours (Last 90 days, all aircraft), 2 hours (Last 24 hours, all aircraft) |  |                   |

### Aircraft and Owner/Operator Information

|                                      |                           |                                       |                          |
|--------------------------------------|---------------------------|---------------------------------------|--------------------------|
| <b>Aircraft Make:</b>                | HILLER                    | <b>Registration:</b>                  | N35HA                    |
| <b>Model/Series:</b>                 | FH-1100 FH-1100           | <b>Aircraft Category:</b>             | Helicopter               |
| <b>Year of Manufacture:</b>          |                           | <b>Amateur Built:</b>                 |                          |
| <b>Airworthiness Certificate:</b>    | Normal                    | <b>Serial Number:</b>                 | 35HA                     |
| <b>Landing Gear Type:</b>            | Skid                      | <b>Seats:</b>                         | 5                        |
| <b>Date/Type of Last Inspection:</b> | October 26, 1987 100 hour | <b>Certified Max Gross Wt.:</b>       | 2750 lbs                 |
| <b>Time Since Last Inspection:</b>   | 7 Hrs                     | <b>Engines:</b>                       | 1 Turbo shaft            |
| <b>Airframe Total Time:</b>          | 3000 Hrs                  | <b>Engine Manufacturer:</b>           | ALLISON                  |
| <b>ELT:</b>                          | Not installed             | <b>Engine Model/Series:</b>           | 250-C18                  |
| <b>Registered Owner:</b>             | MOUNTAIN AIR HELICOPTERS  | <b>Rated Power:</b>                   | 274 Horsepower           |
| <b>Operator:</b>                     |                           | <b>Operating Certificate(s) Held:</b> | On-demand air taxi (135) |
| <b>Operator Does Business As:</b>    |                           | <b>Operator Designator Code:</b>      |                          |

## Meteorological Information and Flight Plan

|   |                   |   |         |
|---|-------------------|---|---------|
| <b>Conditions at Accident Site:</b>     | Instrument (IMC)  | <b>Condition of Light:</b>                  | Dusk    |
| <b>Observation Facility, Elevation:</b> |                   | <b>Distance from Accident Site:</b>         |         |
| <b>Observation Time:</b>                |                   | <b>Direction from Accident Site:</b>        |         |
| <b>Lowest Cloud Condition:</b>          | Unknown           | <b>Visibility</b>                           | 2 miles |
| <b>Lowest Ceiling:</b>                  | Overcast          | <b>Visibility (RVR):</b>                    |         |
| <b>Wind Speed/Gusts:</b>                | /                 | <b>Turbulence Type Forecast/Actual:</b>     | /       |
| <b>Wind Direction:</b>                  | 0°                | <b>Turbulence Severity Forecast/Actual:</b> | /       |
| <b>Altimeter Setting:</b>               | 29 inches Hg      | <b>Temperature/Dew Point:</b>               |         |
| <b>Precipitation and Obscuration:</b>   | N/A - None - Fog  |   |         |
| <b>Departure Point:</b>                 | GATES , OR (6S4)  | <b>Type of Flight Plan Filed:</b>           | None    |
| <b>Destination:</b>                     | ALBANY , OR (S12) | <b>Type of Clearance:</b>                   | None    |
| <b>Departure Time:</b>                  | 16:30 Local       | <b>Type of Airspace:</b>                    | Class G |

## Airport Information

|                             |             |                                  |                       |
|-----------------------------|-------------|----------------------------------|-----------------------|
| <b>Airport:</b>             |             | <b>Runway Surface Type:</b>      |                       |
| <b>Airport Elevation:</b>   | 0 ft msl    | <b>Runway Surface Condition:</b> |                       |
| <b>Runway Used:</b>         | 0           | <b>IFR Approach:</b>             | None                  |
| <b>Runway Length/Width:</b> | 0 ft / 0 ft | <b>VFR Approach/Landing:</b>     | Precautionary landing |

## Wreckage and Impact Information

|                            |        |                             |                            |
|----------------------------|--------|-----------------------------|----------------------------|
| <b>Crew Injuries:</b>      | 1 None | <b>Aircraft Damage:</b>     | Substantial                |
| <b>Passenger Injuries:</b> |        | <b>Aircraft Fire:</b>       | None                       |
| <b>Ground Injuries:</b>    | N/A    | <b>Aircraft Explosion:</b>  | None                       |
| <b>Total Injuries:</b>     | 1 None | <b>Latitude, Longitude:</b> | 44.620216,-123.129783(est) |

## Administrative Information

|  |   |
|--|---|
| <b>Investigator In Charge (IIC):</b>     | Carrera, Candace  |
| <b>Additional Participating Persons:</b> | LOU SANDERS; HILLSBORO , OR   |
| <b>Original Publish Date:</b>            | December 27, 1988   |
| <b>Last Revision Date:</b>               |   |
| <b>Investigation Class:</b>              | <a href="#">Class</a>   |
| <b>Note:</b>                             |   |
| <b>Investigation Docket:</b>             | <a href="https://data.nts.gov/Docket?ProjectID=40757">https://data.nts.gov/Docket?ProjectID=40757</a> |

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