

# **Aviation Investigation Final Report**

| Location:               | LA SALLE, Texas      |        | Accident Number: | FTW88DRA05  |
|-------------------------|----------------------|--------|------------------|-------------|
| Date & Time:            | April 4, 1988, 10:30 | Local  | Registration:    | N4029D      |
| Aircraft:               | HILLER               | UH-12E | Aircraft Damage: | Substantial |
| Defining Event:         |                      |        | Injuries:        | 1 None      |
| Flight Conducted Under: | Part 137: Agricultur | al     |                  |             |

#### **Analysis**

ACFT WAS SUBSTANTIALLY DAMAGED DURING AN EMERGENCY AUTOROTATION FOLLOWING AN ENGINE FAILURE WHILE THE ACFT WAS COMPLETING AN AERIAL APPLICATION MANEUVER. ACFT TOUCHED DOWN TAIL LOW AND THE MAIN ROTOR BLADES FLEXED DOWN AND CUT OFF THE TAIL BOOM. INVESTIGATION REVEALED WATER IN THE CARB BOWL, THE ACFT FUEL TANK AND THE REFUELING VEHICLE.

#### **Probable Cause and Findings**

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

**Findings** 

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings 1. (C) AIRCRAFT PREFLIGHT - IMPROPER - PILOT IN COMMAND 2. (C) FLUID,FUEL - WATER 3. (C) REFUELING - IMPROPER - COMPANY MAINTENANCE PERSONNEL

Occurrence #2: HARD LANDING Phase of Operation: LANDING - FLARE/TOUCHDOWN Findings 4. AUTOROTATION - PERFORMED 5. (F) ALTITUDE - INADEQUATE

# **Factual Information**

#### **Pilot Information**

| Certificate:              | Commercial; Flight instructor   | Age:                              | 59,Male           |
|---------------------------|---|-----------------------------------|-------------------|
| Airplane Rating(s):       | Single-engine land; Multi-engine<br>land  | Seat Occupied:                    | Right             |
| Other Aircraft Rating(s): | Helicopter  | Restraint Used:                   |                   |
| Instrument Rating(s):     | Airplane; Helicopter  | Second Pilot Present:             | No                |
| Instructor Rating(s):     | Airplane multi-engine; Airplane<br>single-engine; Helicopter  | Toxicology Performed:             | No                |
| Medical Certification:    | Class 2 Valid Medical-w/<br>waivers/lim   | Last FAA Medical Exam:            | September 1, 1987 |
| Occupational Pilot:       | Yes   | Last Flight Review or Equivalent: |                   |
| Flight Time:              | 25400 hours (Total, all aircraft), 3000 hours (Total, this make and model), 25000 hours (Pilot In<br>Command, all aircraft), 78 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft),<br>4 hours (Last 24 hours, all aircraft) |                                   |                   |

### Aircraft and Owner/Operator Information

| Aircraft Make:                   | HILLER                 | Registration:                     | N4029D          |
|----------------------------------|------------------------|-----------------------------------|-----------------|
| Model/Series:                    | UH-12E UH-12E          | Aircraft Category:                | Helicopter      |
| Year of Manufacture:             |                        | Amateur Built:                    |                 |
| Airworthiness Certificate:       | Restricted (Special)   | Serial Number:                    | 5098            |
| Landing Gear Type:               | High skid              | Seats:                            | 2               |
| Date/Type of Last<br>Inspection: | August 30, 1987 Annual | Certified Max Gross Wt.:          | 3100 lbs        |
| Time Since Last Inspection:      | 48 Hrs                 | Engines:                          | 1 Reciprocating |
| Airframe Total Time:             | 1560 Hrs               | Engine Manufacturer:              | LYCOMING        |
| ELT:                             | Not installed          | Engine Model/Series:              | VO-540-C-2A     |
| Registered Owner:                | GLENN BUD HERRING      | Rated Power:                      | 305 Horsepower  |
| Operator:                        |                        | Operating Certificate(s)<br>Held: |                 |
| Operator Does Business As:       | BUD'S HELICOPTERS      | Operator Designator Code:         | TMEG            |

## Meteorological Information and Flight Plan

| 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:          | Unknown                          | Visibility                              | 10 miles |
| Lowest Ceiling:                  | Overcast / 700 ft AGL            | Visibility (RVR):                       |          |
| Wind Speed/Gusts:                | 3 knots /                        | Turbulence Type<br>Forecast/Actual:     | /        |
| Wind Direction:                  | 130°                             | Turbulence Severity<br>Forecast/Actual: | /        |
| Altimeter Setting:               | 29 inches Hg                     | Temperature/Dew Point:                  | 20°C     |
| Precipitation and Obscuration:   | No Obscuration; No Precipitation |   |          |
| Departure Point:                 |                                  | Type of Flight Plan Filed:              | None     |
| Destination:                     |                                  | Type of Clearance:                      | None     |
| Departure Time:                  | 10:30 Local                      | Type of Airspace:                       | Class G  |

#### **Airport Information**

| Airport:             |   | Runway Surface Type:             |                |
|----------------------|---|----------------------------------|----------------|
| Airport Elevation:   |   | <b>Runway Surface Condition:</b> |                |
| 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<br>Injuries: |        | Aircraft Fire:          | None                      |
| Ground Injuries:       | N/A    | Aircraft Explosion:     | None                      |
| Total Injuries:        | 1 None | Latitude,<br>Longitude: | 28.760526,-96.620414(est) |

#### **Administrative Information**

| Investigator In Charge (IIC):        | Stahl, Jimmy                                 |
|--------------------------------------|--|
| Additional Participating<br>Persons: | MARTIN WINDECKER;                            |
| Original Publish Date:               | April 25, 1989                               |
| Last Revision Date:                  |  |
| Investigation Class:                 | <u>Class</u>                                 |
| Note:                                |  |
| Investigation Docket:                | https://data.ntsb.gov/Docket?ProjectID=22474 |

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