

**NATIONAL TRANSPORTATION SAFETY BOARD  
PILOT/OPERATOR AIRCRAFT ACCIDENT REPORT**  
This form To Be Used For Reporting Civil Aircraft Accidents  
Involving Commercial and General Aviation Aircraft

|  |                     |   |                     |  |                              |  |
|--|---------------------|---|---------------------|--|------------------------------|--|
| <b>Location</b>  |                     |   |                     |  |                              |  |
| Nearest City/Place, State, Zip Code<br><b>KETCHIKAN, ALAKSA, 99901</b>   |                     | Date of Accident<br><b>13 JULY 1996</b>                         |                     | Local Time<br>(24 HOUR CLOCK)<br><b>1325</b>   | Zone<br><b>AK</b>            | Elevation At Accident Site<br><b>1300</b> Feet MSL<br>____ Feet MSL  |
| If The Accident Occurred On Approach, Takeoff or Within 3 Miles of An Airport, Complete The Following Information                |                     |   |                     |  |                              |  |
| <b>Proximity To Airport</b>  |                     |   |                     |  |                              |  |
| 1. <input type="checkbox"/> On Approach  |                     | 3. <input type="checkbox"/> Within 1/2 Mile                     |                     | 5. <input type="checkbox"/> Within 1 Mile  |                              | 7. <input type="checkbox"/> Within 3 Miles   |
| 2. <input type="checkbox"/> Within 1/4 Mile  |                     | 4. <input type="checkbox"/> Within 3/4 Mile                     |                     | 6. <input type="checkbox"/> Within 2 Miles   |                              | 8. <input checked="" type="checkbox"/> Beyond 3 Miles  |
| Airport Name<br><b>NOT APPLICABLE</b>  |                     | Airport Ident   |                     | Runway/Landing Surface Conditions:   |                              |  |
|  |                     |   |                     | 1. <input type="checkbox"/> Direction: 3. <input type="checkbox"/> Width: 5. <input type="checkbox"/> Condition:<br>2. <input type="checkbox"/> Length: 4. <input type="checkbox"/> Surface: |                              |  |
| <b>Phase Of Operation:</b>   |                     |   |                     |  |                              |  |
| 1. <input type="checkbox"/> Standing   |                     | 3. <input type="checkbox"/> Takeoff                             |                     | 5. <input type="checkbox"/> Cruise   |                              | 7. <input type="checkbox"/> Approach   |
| 2. <input type="checkbox"/> Taxi   |                     | 4. <input type="checkbox"/> Climb                               |                     | 6. <input type="checkbox"/> Descent  |                              | 8. <input type="checkbox"/> Landing  |
|  |                     |   |                     | 9. <input checked="" type="checkbox"/> Hover/Maneuver  |                              | 10. <input type="checkbox"/> Altitude Of In-Flight Occurrence _____ Feet MSL                                   |
| <b>Aircraft Information</b>  |                     |   |                     |  |                              |  |
| Registration Mark<br><b>N541SB</b>   |                     | Aircraft Manufacturer<br><b>SIKORSKY<br/>SILVER BAY LOGGING</b> |                     | Aircraft Type/Model<br><b>CH-54A</b>   |                              | Cert Max Gross WT<br><b>42,000 lbs</b>   |
| Serial Number<br><b>68-18433</b>   |                     |   |                     |  |                              |  |
| <b>Type Of Aircraft</b>  |                     | <b>Type Of Airworthiness Certificate</b>                        |                     |  |                              | <b>Amateur Built</b>   |
| 1. <input type="checkbox"/> Airplane   |                     | 5. <input type="checkbox"/> Blimp/Dirigible                     |                     |  |                              | 1. <input type="checkbox"/> Yes  |
| 2. <input checked="" type="checkbox"/> Helicopter  |                     | 6. <input type="checkbox"/> Ultralight                          |                     |  |                              | 2. <input checked="" type="checkbox"/> No  |
| 3. <input type="checkbox"/> Glider   |                     | 7. <input type="checkbox"/> Gyroplane                           |                     |  |                              |  |
| 4. <input type="checkbox"/> Balloon  |                     | 8. <input type="checkbox"/> Specify _____                       |                     |  |                              |  |
| 1. <input type="checkbox"/> Normal   |                     | 5. <input checked="" type="checkbox"/> Restricted               |                     |  |                              |  |
| 2. <input type="checkbox"/> Utility  |                     | 6. <input type="checkbox"/> Limited                             |                     |  |                              |  |
| 3. <input type="checkbox"/> Acrobatic  |                     | 7. <input type="checkbox"/> Experimental                        |                     |  |                              |  |
| 4. <input type="checkbox"/> Transport  |                     | 8. <input type="checkbox"/> Specify _____                       |                     |  |                              |  |
| <b>Landing Gear</b>  |                     |   |                     |  |                              | <b>No. Of Seats</b>  |
| 1. <input checked="" type="checkbox"/> Tricycle—Fixed  |                     |   |                     |  |                              | Flight/Cabin   |
| 2. <input type="checkbox"/> Tricycle—Retractable   |                     |   |                     |  |                              | Crew _____   |
| 3. <input type="checkbox"/> Tailwheel—Fixed  |                     |   |                     |  |                              | Pax _____  |
| 4. <input type="checkbox"/> Tailwheel—Retractable  |                     |   |                     |  |                              |  |
| 5. <input type="checkbox"/> Tailwheel—Retractable Mains  |                     |   |                     |  |                              |  |
| 6. <input type="checkbox"/> Amphibian  |                     |   |                     |  |                              |  |
| 7. <input type="checkbox"/> Skid   |                     |   |                     |  |                              |  |
| 8. <input type="checkbox"/> Limited  |                     |   |                     |  |                              |  |
| 9. <input type="checkbox"/> Specify _____  |                     |   |                     |  |                              |  |
| <b>Stall Warning System Installed</b>  |                     | <b>IFR Equipped</b>   |                     | <b>Engine Type</b>   |                              |  |
| 1. <input type="checkbox"/> Yes  |                     | 1. <input type="checkbox"/> Yes                                 |                     | 1. <input type="checkbox"/> Reciprocating—Carburetor   |                              |  |
| 2. <input checked="" type="checkbox"/> No  |                     | 2. <input checked="" type="checkbox"/> No                       |                     | 2. <input type="checkbox"/> Reciprocating—Fuel Injected  |                              |  |
|  |                     |   |                     | 3. <input type="checkbox"/> Turbo Prop   |                              |  |
|  |                     |   |                     | 4. <input type="checkbox"/> Turbo Jet  |                              |  |
|  |                     |   |                     | 5. <input type="checkbox"/> Turbo Fan  |                              |  |
|  |                     |   |                     | 6. <input checked="" type="checkbox"/> Turbo Shaft   |                              |  |
| <b>Engine Manufacturer</b>   |                     | <b>Engine Model/Series</b>                                      |                     | <b>Engine Rated Power</b>  |                              | <b>Type Of Fire Extinguishing System Used</b>  |
| <b>PRATT &amp; WHITNEY</b>   |                     | <b>T73-P-1<br/>(JFTD12A-4A)</b>                                 |                     | 1. <b>4500</b> Horsepower  |                              | 1. <input type="checkbox"/> None   |
|  |                     |   |                     | 2. _____ Lbs Thrust  |                              | 2. <input type="checkbox"/> Specify <b>NONE</b>  |
| <b>Engine(s)</b>   | <b>Date of Mfg.</b> | <b>Mfg. Serial No.</b>  | <b>Total Time</b>   |  | <b>Time Since Inspection</b> | <b>Time Since Overhaul</b>   |
| Engine No. 1   | <b>SEP 1967</b>     | <b>P672581</b>  | <b>2206.9</b> Hours |  | <b>670.3</b> Hours           | <b>1299.9</b> Hours  |
| Engine No. 2   | <b>AUG 1967</b>     | <b>P672633</b>  | <b>2571.3</b> Hours |  | <b>670.3</b> Hours           | <b>2385.3</b> Hours  |
| Engine No. 3   |                     |   | Hours               |  | Hours                        | Hours  |
| Engine No. 4   |                     |   | Hours               |  | Hours                        | Hours  |
| <b>Type Of Maintenance Program</b>   |                     | <b>Type Of Last Inspection</b>                                  |                     | <b>Date Last Inspection Performed</b>  |                              |  |
| 1. <input type="checkbox"/> Annual   |                     | 1. <input type="checkbox"/> Annual                              |                     | <b>10 JULY 1996</b> (M/D/Y)  |                              |  |
| 2. <input type="checkbox"/> Manufacturer's Inspection Program  |                     | 2. <input type="checkbox"/> 100 Hours                           |                     | Time Since Last Inspection   |                              |  |
| 3. <input checked="" type="checkbox"/> Other Approved Inspection Program(AAIP)   |                     | 3. <input checked="" type="checkbox"/> AAIP                     |                     | <b>13.2</b> Hours  |                              |  |
| 4. <input checked="" type="checkbox"/> Continuous Airworthiness  |                     | 4. <input checked="" type="checkbox"/> Continuous Airworthiness |                     | Airframe Total Time  |                              |  |
| 5. <input type="checkbox"/> Specify _____  |                     |   |                     | <b>4362.3</b> Hours  |                              |  |
| <b>Emergency Locator Transmitter (ELT)</b>   |                     | <b>ELT Manufacturer</b><br><b>ARTEX</b>                         |                     | <b>Model/Series</b><br><b>ELT 110-4</b>  |                              | <b>Serial Number</b><br><b>8523</b>  |
| <b>Switch</b><br>1. <input type="checkbox"/> On 2. <input type="checkbox"/> Off 3. <input checked="" type="checkbox"/> Armed     |                     |   |                     | <b>Operated</b><br>1. <input type="checkbox"/> Yes 2. <input checked="" type="checkbox"/> No <b>DESTROYED</b>  |                              | <b>Aided In Accident Location</b><br>1. <input type="checkbox"/> Yes 2. <input checked="" type="checkbox"/> No |
| <b>Registered Aircraft Owner</b><br><b>SILVER BAY LOGGING, INC.</b>  |                     |   |                     | <b>Address</b><br><b>CUBE COVE #2<br/>JUNEAU, AK 99850-0360</b>  |                              |  |
| <b>Operator Of Aircraft</b><br>1. <input checked="" type="checkbox"/> Same As Registered Owner<br>2. Name _____<br>3. DBS: _____ |                     |   |                     | <b>Address</b><br>1. <input checked="" type="checkbox"/> Same As Registered Owner<br>2. _____  |                              |  |

|   |  |   |   |  |   |   |   |  |                   |  |                         |
|---|--|---|---|--|---|---|---|--|-------------------|--|-------------------------|
| <b>Owner / Operator Information (cont.)</b>   |  |   |   |  |   |   |   |  |                   |  |                         |
| Operator (Certificate Number)<br><b>NZBL 462U</b>   |  |   | Operator Designator (4 Letter Designator)   |  |   |   |   |  |                   |  |                         |
| <b>Purpose Of Flight And Type Of Operation</b>  |  |   |   |  |   |   |   |  |                   |  |                         |
| <b>Regulation Flight Conductor Under</b><br>1. <input type="checkbox"/> FAR91 (only)    4. <input type="checkbox"/> FAR 121    7. <input checked="" type="checkbox"/> FAR 133<br>2. <input type="checkbox"/> FAR91D    5. <input type="checkbox"/> FAR 125    8. <input type="checkbox"/> FAR 135<br>3. <input type="checkbox"/> FAR 103    6. <input type="checkbox"/> FAR 129    9. <input type="checkbox"/> FAR 137  |  |   |   |  | <b>Operator Authority</b><br><b>FAR121</b><br>1. <input type="checkbox"/> Domestic<br>2. <input type="checkbox"/> Flag<br>3. <input type="checkbox"/> Supplemental<br><br><b>FAR 135</b><br>4. <input type="checkbox"/> On Demand<br>5. <input type="checkbox"/> Commuter |   |   | <b>FAR 133</b><br>6. <input checked="" type="checkbox"/> Rotorcraft<br>External Load<br><br><b>FAR125</b><br>7. <input type="checkbox"/> Large Aircraft<br><br><b>FAR 129</b><br>8. <input type="checkbox"/> Foreign |                   | <b>FAR 121, 125, 127, 129, 135 Revenue Operations</b><br>1. <input type="checkbox"/> Scheduled<br>2. <input type="checkbox"/> Non Scheduled<br>3. <input type="checkbox"/> Domestic<br>4. <input type="checkbox"/> International<br>5. <input type="checkbox"/> Passenger<br>6. <input type="checkbox"/> Cargo<br>7. Specify _____ |                         |
| <b>Purpose of Flight</b><br>1. <input type="checkbox"/> Personal    6. <input type="checkbox"/> Aerial Observation<br>2. <input type="checkbox"/> Business    7. <input checked="" type="checkbox"/> Other Work Use<br>3. <input type="checkbox"/> Educational    8. <input type="checkbox"/> Public Use<br>4. <input type="checkbox"/> Executive/Corporate    9. <input type="checkbox"/> Ferry<br>5. <input type="checkbox"/> Aerial Application    10. <input type="checkbox"/> Positioning        |  |   |   |  |   |   |   |  |                   |  |                         |
| <b>Pilot Information</b>  |  |   |   |  |   |   |   |  |                   |  |                         |
| Pilot Name<br><b>GARY CRAWFORD PILGRIM</b>  |  |   | Pilot Certificate No.<br>[REDACTED]   |  | Address<br><b>SPOKANE, WA 99206</b>   |   |   | Nationality<br><b>USA</b>  |                   |  |                         |
| <b>Certificate (s)</b><br>1. <input type="checkbox"/> Student    3. <input checked="" type="checkbox"/> Commercial    5. <input checked="" type="checkbox"/> Flight Instructor    7. <input type="checkbox"/> Military    9. <input type="checkbox"/> None<br>2. <input checked="" type="checkbox"/> Private    4. <input type="checkbox"/> Airline Transport    6. <input type="checkbox"/> Flight Engineer    8. <input type="checkbox"/> Foreign    10. Specify _____                              |  |   |   |  |   |   |   |  |                   |  |                         |
| <b>Rating (s)</b><br>1. <input type="checkbox"/> None    6. <input checked="" type="checkbox"/> Helicopter<br>2. <input checked="" type="checkbox"/> Single Engine Land    7. <input type="checkbox"/> Glider<br>3. <input type="checkbox"/> Single Engine Sea    8. <input type="checkbox"/> Free Balloon<br>4. <input checked="" type="checkbox"/> Multiengine Land    9. <input type="checkbox"/> Airship<br>5. <input type="checkbox"/> Multiengine Sea    10. <input type="checkbox"/> Gyroplane |  |   | <b>Instrument Rating (s)</b><br>1. <input type="checkbox"/> None<br>2. <input checked="" type="checkbox"/> Airplane<br>3. <input type="checkbox"/> Helicopter |  |   | <b>Instructor Rating (s)</b><br>1. <input type="checkbox"/> None    6. <input type="checkbox"/> Instrument Airplane<br>2. <input type="checkbox"/> Airplane S.E.    7. <input type="checkbox"/> Instrument Helicopter<br>3. <input type="checkbox"/> Airplane M.E.    8. <input type="checkbox"/> Ground Instructor<br>4. <input checked="" type="checkbox"/> Helicopter    9. <input type="checkbox"/> Specify _____<br>5. <input type="checkbox"/> Glider |   |  |                   |  |                         |
| <b>Type Ratings/Student Endorsements</b><br><br><b>BV107, SK61, SK64</b>  |  |   | <b>Date Of Biennial Flight Review or Equivalent (M/D/Y)</b><br>Not Available  |  |   | <b>BFR Aircraft</b><br>1. Make <u>Unknown</u><br>2. Model _____   |   |  |                   |  |                         |
| <b>Medical Certificate</b><br>1. <input type="checkbox"/> None    3. <input checked="" type="checkbox"/> Class 2<br>2. <input type="checkbox"/> Class 1    4. <input type="checkbox"/> Class 3  |  | <b>Date Of Last Medical (M/D/Y)</b><br><br><b>03/04/96</b>  |   | <b>Limitations</b><br>NONE<br><br><b>Waivers</b><br>NONE   |   |   | <b>Date Of Birth (M/D/Y)</b><br>[REDACTED] 62 |  |                   |  |                         |
| <b>Degree Of Injury</b><br>1. <input type="checkbox"/> None<br>2. <input type="checkbox"/> Minor<br>3. <input checked="" type="checkbox"/> Serious<br>4. <input type="checkbox"/> Fatal   |  | <b>Seat Occupied</b><br>1. <input checked="" type="checkbox"/> Left    4. <input type="checkbox"/> Front<br>2. <input type="checkbox"/> Right    5. <input type="checkbox"/> Rear<br>3. <input type="checkbox"/> Center |   | <b>Person At Controls At Time Of Accident</b><br>1. <input checked="" type="checkbox"/> Pilot In Control    4. <input type="checkbox"/> Non-Pilot<br>2. <input type="checkbox"/> Second Pilot    5. <input type="checkbox"/> No One<br>3. <input type="checkbox"/> Both Pilots |   |   |   | <b>Seat Belt Available</b><br>1. <input checked="" type="checkbox"/> Yes<br>2. <input type="checkbox"/> No   |                   |  |                         |
| <b>Seat Belt Used</b><br>1. <input checked="" type="checkbox"/> Yes<br>2. <input type="checkbox"/> No   |  | <b>Shoulder Harness Available</b><br>1. <input checked="" type="checkbox"/> Yes<br>2. <input type="checkbox"/> No   |   | <b>Shoulder Harness Used</b><br>1. <input type="checkbox"/> Yes<br>2. <input checked="" type="checkbox"/> No   |   | <b>Source Of Pilot Flight Time Information</b><br>1. <input checked="" type="checkbox"/> Pilot Logbook    4. <input type="checkbox"/> Company<br>2. <input type="checkbox"/> Operators Estimate    5. <input type="checkbox"/> Specify _____<br>3. <input type="checkbox"/> FAA Records   |   |  |                   |  |                         |
| <b>Flight Time</b>  |  | <b>All A/C</b>  | <b>This Make &amp; Model</b>  | <b>Airplane Single Engine</b>  | <b>Airplane Multiengine</b>   | <b>Night</b>  | <b>Instrument</b>                             |  | <b>Rotorcraft</b> | <b>Glider</b>  | <b>Lighter Than Air</b> |
|   |  |   |   |  |   |   | <b>Actual</b>                                 | <b>Simulated</b>   |                   |  |                         |
| Total Time  |  | 7985  | 500   | 450  | 50  | N/A   |   |  | 5060              |  |                         |
| Pilot In Command (PIC)  |  | 6190  | 400   | 450  | 25  | N/A   |   |  | 3410              |  |                         |
| Instructor  |  | 700   | 0   | 0  | 0   | N/A   |   |  | 200               |  |                         |
| This Make & Model   |  | [REDACTED]  |   |  |   |   |   |  | [REDACTED]        |  |                         |
| Last 90 Days  |  | 125   | 125   | 0  | 0   |   |   |  | 125               |  |                         |
| Last 30 Days  |  | 60  | 60  | 0  | 0   |   |   |  | 60                |  |                         |
| Last 24 Hours   |  | 3   | 3   |  |   |   |   |  | 3                 |  |                         |
| <b>Second Pilot Information</b>   |  |   |   |  |   |   |   |  |                   |  |                         |
| <b>Second Pilot Responsibilities At The Time Of Accident</b><br>1. <input checked="" type="checkbox"/> Co-Pilot    2. <input type="checkbox"/> Dual Student    3. <input type="checkbox"/> Safety Pilot    4. <input type="checkbox"/> Check Pilot    5. <input type="checkbox"/> None (Pilot-Rated Passenger)  |  |   |   |  |   |   |   |  |                   |  |                         |
| Pilot Name<br><b>MICHAEL TODD LOCKMAN</b>   |  |   | Pilot Certificate No.<br>[REDACTED]   |  | Address<br><b>CLARK FORK, IDAHO 83811</b>   |   |   | Nationality<br><b>USA</b>  |                   |  |                         |
| <b>Certificate (s)</b><br>1. <input type="checkbox"/> Student    3. <input checked="" type="checkbox"/> Commercial    5. <input type="checkbox"/> Flight Instructor    7. <input type="checkbox"/> Military    9. None<br>2. <input type="checkbox"/> Private    4. <input type="checkbox"/> Airline Transport    6. <input type="checkbox"/> Flight Engineer    8. <input type="checkbox"/> Foreign    10. Specify _____   |  |   |   |  |   |   |   |  |                   |  |                         |

| Second Pilot Information (cont.)  |                |   |   |  |                |   |                  |   |  |  |             |
|---|----------------|---|---|--|----------------|---|------------------|---|--|--|-------------|
| <b>Rating (s)</b>   |                |   |   | <b>Instrument Rating (s)</b>   |                |   |                  | <b>Instructor Rating (s)</b>                                    |  |  |             |
| 1. <input type="checkbox"/> None  |                | 6. <input checked="" type="checkbox"/> Helicopter                                     |   | 1. <input checked="" type="checkbox"/> None                                      |                | 1. <input checked="" type="checkbox"/> None   |                  | 6. <input type="checkbox"/> Instrument Airplane                 |  |  |             |
| 2. <input type="checkbox"/> Single Engine Land  |                | 7. <input type="checkbox"/> Glider  |   | 2. <input type="checkbox"/> Airplane   |                | 2. <input type="checkbox"/> Airplane S.E.   |                  | 7. <input type="checkbox"/> Instrument Helicopter               |  |  |             |
| 3. <input type="checkbox"/> Single Engine Sea   |                | 8. <input type="checkbox"/> Free Balloon  |   | 3. <input type="checkbox"/> Helicopter   |                | 3. <input type="checkbox"/> Airplane M.E.   |                  | 8. <input type="checkbox"/> Ground Instructor                   |  |  |             |
| 4. <input type="checkbox"/> Multiengine Land  |                | 9. <input type="checkbox"/> Airship   |   |  |                | 4. <input type="checkbox"/> Helicopter  |                  | 9. <input type="checkbox"/> Specify _____                       |  |  |             |
| 5. <input type="checkbox"/> Multiengine Sea   |                | 10. <input type="checkbox"/> Gyroplane  |   |  |                | 5. <input type="checkbox"/> Glider  |                  |   |  |  |             |
| <b>Type Ratings/Student Endorsements</b>  |                |   |   | <b>Date Of Biennial Flight Review or Equivalent (M/D/Y)</b><br>Not Available     |                |   |                  | <b>BFR Aircraft</b><br>1. Make <u>Unknown</u><br>2. Model _____ |  |  |             |
| <b>Medical Certificate</b>  |                | <b>Date Of Last Medical (M/D/Y)</b>   |   | <b>Limitations</b><br>NONE   |                |   |                  | <b>Date Of Birth (M/D/Y)</b>                                    |  |  |             |
| 1. <input type="checkbox"/> None<br>2. <input type="checkbox"/> Class 1   |                | 3. <input checked="" type="checkbox"/> Class 2<br>4. <input type="checkbox"/> Class 3 |   | Waivers<br>NONE  |                |   |                  | /68   |  |  |             |
| <b>Degree Of Injury</b>   |                | <b>Seat Occupied</b>  |   |  |                |   |                  | <b>Seat Belt Available</b>                                      |  |  |             |
| 1. <input type="checkbox"/> None<br>2. <input type="checkbox"/> Minor   |                | 3. <input type="checkbox"/> Serious<br>4. <input checked="" type="checkbox"/> Fatal   |   | 1. <input type="checkbox"/> Left<br>2. <input checked="" type="checkbox"/> Right |                | 3. <input type="checkbox"/> Center<br>4. <input type="checkbox"/> Front   |                  | 5. <input type="checkbox"/> Rear                                |  | 1. <input checked="" type="checkbox"/> Yes<br>2. <input type="checkbox"/> No |             |
| <b>Seat Belt Used</b>   |                | <b>Shoulder Harness Available</b>   |   | <b>Shoulder Harness Used</b>   |                |   |                  |   |  |  |             |
| 1. <input checked="" type="checkbox"/> Yes<br>2. <input type="checkbox"/> No  |                | 1. <input checked="" type="checkbox"/> Yes<br>2. <input type="checkbox"/> No          |   | 1. <input checked="" type="checkbox"/> Yes<br>2. <input type="checkbox"/> No     |                | 1. <input checked="" type="checkbox"/> Pilot Logbook<br>2. <input type="checkbox"/> Operators Estimate<br>3. <input type="checkbox"/> FAA Records<br>4. <input type="checkbox"/> Company<br>5. <input type="checkbox"/> Specify _____ |                  |   |  |  |             |
| <b>Flight Time</b>  | <b>All A/C</b> | <b>This Make &amp; Model</b>  | <b>Airplane Single Engine</b>   | <b>Airplane Multiengine</b>  | <b>Night</b>   | <b>Instrument</b>   |                  | <b>Rotorcraft</b>   | <b>Glider</b>                          | <b>Lighter Than Air</b>  |             |
|   |                |   |   |  |                | <b>Actual</b>   | <b>Simulated</b> |   |  |  |             |
| Total Time  | 850            | 100   |   |  |                |   |                  | 850   |  |  |             |
| Pilot In Command (PIC)  | 400            | 0   |   |  |                |   |                  | 400   |  |  |             |
| Instructor  | 0              | 0   |   |  |                |   |                  | 0   |  |  |             |
| This Make & Model   |                |   |   |  |                |   |                  |   |  |  |             |
| Last 90 Days  |                |   |   |  |                |   |                  |   |  |  |             |
| Last 30 Days  |                |   |   |  |                |   |                  |   |  |  |             |
| Last 24 Hours   |                |   |   |  |                |   |                  |   |  |  |             |
| <b>Other Personnel</b>  |                |   |   |  |                |   |                  |   |  |  |             |
| <b>Name</b>   | <b>Seat</b>    | <b>Address (City &amp; State)</b>   | <b>Crew</b>   | <b>Non-Revenue</b>   | <b>Revenue</b> | <b>Non-Occupant</b>   | <b>FAA</b>       | <b>Fatal</b>  | <b>Serious</b>                         | <b>Minor</b>   | <b>None</b> |
| 1. NONE   |                |   |   |  |                |   |                  |   |  |  |             |
| 2.  |                |   |   |  |                |   |                  |   |  |  |             |
| 3.  |                |   |   |  |                |   |                  |   |  |  |             |
| 4.  |                |   |   |  |                |   |                  |   |  |  |             |
| 5.  |                |   |   |  |                |   |                  |   |  |  |             |
| 6.  |                |   |   |  |                |   |                  |   |  |  |             |
| <b>Flight Itinerary Information</b>   |                |   |   |  |                |   |                  |   |  |  |             |
| <b>Last Departure Point</b>   |                | <b>Time Of Departure</b>  |   | <b>Destination</b>   |                | <b>Flight Plan Filed</b>  |                  |   |  |  |             |
| 1. Airport ID <u>SHELTER COVE</u>   |                | 1. Time <u>1300</u>   |   | 1. Airport ID <u>SHELTER COVE</u>  |                | 1. <input checked="" type="checkbox"/> None   |                  | 4. <input type="checkbox"/> VFR/IFR                             |  |  |             |
| 2. City/Place <u>NEAR KETCHIKAN</u>   |                |   |   | 2. City/Place <u>NEAR KETCHIKAN</u>  |                | 2. <input type="checkbox"/> VFR   |                  | 5. <input type="checkbox"/> Company (VFR)                       |  |  |             |
| 3. State <u>ALASKA</u>  |                | 2. Time Zone <u>AK</u>  |   | 3. State <u>ALASKA</u>   |                | 3. <input type="checkbox"/> IFR   |                  | 6. <input type="checkbox"/> Military (VFR)                      |  |  |             |
| <b>If Weather Was Involved, State If Weather Briefing Was Obtained or If Weather Reports Were Checked And How It Was Accomplished</b> |                |   |   |  |                |   |                  |   |  |  |             |
| NOT INVOLVED  |                |   |   |  |                |   |                  |   |  |  |             |
| <b>Fuel On Board At Last Takeoff</b>  |                |   |   | <b>Fuel Type</b>   |                |   |                  |   |  |  |             |
| 537.3 Gallons   |                |   |   | 1. <input type="checkbox"/> 80/87  |                |   |                  |   |  |  |             |
| or  |                |   |   | 4. <input type="checkbox"/> 115/145  |                |   |                  |   |  |  |             |
| 3600 Pounds   |                |   |   | 2. <input type="checkbox"/> 100 Low Lead   |                |   |                  |   |  |  |             |
|   |                |   |   | 5. <input checked="" type="checkbox"/> Jet A                                     |                |   |                  |   |  |  |             |
|   |                |   |   | 3. <input type="checkbox"/> 100/130  |                |   |                  |   |  |  |             |
|   |                |   |   | 6. <input type="checkbox"/> Automotive   |                |   |                  |   |  |  |             |
| <b>Other Services, If Any, Prior to Departure</b>   |                |   |   |  |                |   |                  |   |  |  |             |
| NONE  |                |   |   |  |                |   |                  |   |  |  |             |
| <b>Weather Information At The Accident Site</b>   |                |   |   |  |                |   |                  |   |  |  |             |
| <b>Source Of Weather Information (Pilot/Operator, Weather Observation)</b>  |                |   | <b>Light Condition</b>  |  |                | <b>Visibility</b>   |                  |   | <b>Temp (°F)</b>                       |  |             |
| PILOT OBSERVATION   |                |   | 1. <input type="checkbox"/> Dawn<br>2. <input checked="" type="checkbox"/> Daylight |  |                | 3. <input type="checkbox"/> Dusk<br>4. <input type="checkbox"/> Bright Night  |                  |   | 5. <input type="checkbox"/> Dark Night |  |             |
|   |                |   |   |  |                | 15 Miles  |                  |   | 60                                     |  |             |

| <b>Weather Information At The Accident Site (cont.)</b>   |                                       |   |   |   |            |  |  |                                       |
|---|---------------------------------------|---|---|---|------------|--|--|---------------------------------------|
| <b>Dew Point</b><br><br>(°F)  | <b>Altimeter Setting</b><br><br>"Hg   | <b>Sky/Lowest Cloud Condition</b><br>1. <input type="checkbox"/> Clear<br>2. <input type="checkbox"/> Scattered _____ Feet AGL<br>3. <input type="checkbox"/> Broken _____ Feet AGL<br>4. <input type="checkbox"/> Overcast _____ Feet AGL<br>5. <input type="checkbox"/> Partial Obscuration<br>6. <input type="checkbox"/> Obscured |   |   |            |  |  |                                       |
| <b>Wind Information</b><br>1. Direction _____<br>2. Velocity _____ Kts<br>3. Gusts _____ Kts  |                                       | <b>Restriction To Visibility</b>  | <b>Type Precipitation</b>   | <b>Intensity Of Precipitation</b><br>1. <input type="checkbox"/> Light<br>2. <input type="checkbox"/> Moderate<br>3. <input type="checkbox"/> Heavy<br>4. Specify _____ |            |  |  |                                       |
| <b>Turbulence (Multiple Entry)</b><br>1. <input type="checkbox"/> None      2. <input type="checkbox"/> Light      3. <input type="checkbox"/> Moderate      4. <input type="checkbox"/> Severe      5. <input type="checkbox"/> Extreme      6. <input type="checkbox"/> Clean Air      7. <input type="checkbox"/> In Clouds  |                                       |   |   |   |            |  |  |                                       |
| <b>Damage To Aircraft And Other Property</b>  |                                       |   |   |   |            |  |  |                                       |
| <b>Degree Of Aircraft Damage</b><br>1. <input type="checkbox"/> None      2. <input type="checkbox"/> Minor      3. <input type="checkbox"/> Substantial      4. <input checked="" type="checkbox"/> Destroyed  |                                       |   | <b>Fire</b><br>1. <input type="checkbox"/> Yes      3. <input type="checkbox"/> In-Flight<br>2. <input checked="" type="checkbox"/> No      4. <input type="checkbox"/> On Ground   |   |            |  |  |                                       |
| <b>Description Of Damage To Aircraft And Other Property</b><br><br><b>SEVERED TAIL BOOM &amp; MAIN ROTOR BLADES. COCKPIT ROLLED UNDER FORWARD AIRFRAME. BROKE OFF RIGHT MAIN LANDING GEAR. CRASHED INTO LOGGING CLEARCUT AREA.</b>  |                                       |   |   |   |            |  |  |                                       |
| <b>Mechanical Malfunction Failure</b>   |                                       |   |   |   |            |  |  |                                       |
| 1. <input type="checkbox"/> No<br>2. <input checked="" type="checkbox"/> Yes      List The Name Of The Part, Manufacturer, Part No., Serial No. And Describe The Failure<br><br><b>#6 TAIL ROTOR DRIVE SHAFT. TOTAL TIME NOT KNOWN.</b><br><b>PART NUMBER: 6435-60202-044</b><br><b>FAILURE OCCURED IN AREA OF #5 TAIL DRIVE SHAFT BEARING, WHICH SUPPORTS FORWARD END OF #6 SHAFT. #5 BEARING &amp; HOUSING ASSY NOT LOCATED AT THIS TIME.</b> |                                       |   | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Total Time</th> </tr> <tr> <td style="width: 60%; vertical-align: top;"> <b>#5 BEARING</b><br/> <b>P/N SB1111-105</b><br/> <b>S/N B44901687</b><br/> <b>494.3 Hours</b> </td> <td style="width: 40%; vertical-align: top;"> <b>At Overhaul</b><br/><br/>           _____ Hours         </td> </tr> </table> |   | Total Time |  | <b>#5 BEARING</b><br><b>P/N SB1111-105</b><br><b>S/N B44901687</b><br><b>494.3 Hours</b> | <b>At Overhaul</b><br><br>_____ Hours |
| Total Time  |                                       |   |   |   |            |  |  |                                       |
| <b>#5 BEARING</b><br><b>P/N SB1111-105</b><br><b>S/N B44901687</b><br><b>494.3 Hours</b>  | <b>At Overhaul</b><br><br>_____ Hours |   |   |   |            |  |  |                                       |
| <b>Collision Accident</b>   |                                       |   |   |   |            |  |  |                                       |
| If Collision Accident Occurred, Complete The Information For Other Aircraft   |                                       |   |   |   |            |  |  |                                       |
| <b>Registration Mark</b><br><br><b>NOT APPLICABLE</b>   | <b>Aircraft Manufacturer</b>          | <b>Aircraft Type/Model</b>  | <b>Degree Of Aircraft Damage</b><br>1. <input type="checkbox"/> Destroyed      3. <input type="checkbox"/> Minor<br>2. <input type="checkbox"/> Substantial      4. <input type="checkbox"/> None   |   |            |  |  |                                       |
| <b>Registered Aircraft Owner</b>  |                                       | <b>Address</b>  |   |   |            |  |  |                                       |
| <b>Pilot Name</b>   |                                       | <b>Address</b>  |   | <b>Pilot Certificate No.</b>  |            |  |  |                                       |
| <b>Evacuation Of Aircraft</b>   |                                       |   |   |   |            |  |  |                                       |
| <b>Assistance Received</b><br>1. <input checked="" type="checkbox"/> Outside Person (s)      3. <input type="checkbox"/> Slide      5. <input type="checkbox"/> Ladder<br>2. <input type="checkbox"/> Auxiliary Lighting      4. <input type="checkbox"/> Rope      6. <input type="checkbox"/> Specify _____   |                                       |   |   |   |            |  |  |                                       |
| <b>Method Of Exit (State Approximate Number Of Persons Using Each Of The Following)</b><br>1. Main Door _____      2. Auxiliary Door _____      3. Emergency Exit _____ <b>THROWN FROM WRECKAGE</b>   |                                       |   |   |   |            |  |  |                                       |
| <b>Recommendation (How Could This Accident Have Been Prevented)</b><br>Operator/Owner Safety Recommendation (Optional Entry)<br><br><b>AT THIS POINT THE CAUSE OF THE FAILURE HAS NOT BEEN ASCERTAINED.</b>   |                                       |   |   |   |            |  |  |                                       |

| Additional Flight Crew Members   |                     |                        |                           |
|--|---------------------|------------------------|---------------------------|
| For Each Additional Flight Crew Member, Exclusive Of Cabin Attendants Complete The Following Information   |                     |                        |                           |
| Name<br><b>NONE</b>  | FAA Certificate No. | Address _____<br>_____ | Title                     |
| <b>Certificate(s)</b><br><div style="display: flex; justify-content: space-between;"> <div> 1. <input type="checkbox"/> Student<br/> 2. <input type="checkbox"/> Private </div> <div> 3. <input type="checkbox"/> Commercial<br/> 4. <input type="checkbox"/> Airline Transport </div> <div> 5. <input type="checkbox"/> Flight Instructor<br/> 6. <input type="checkbox"/> Flight Engineer </div> <div> 7. <input type="checkbox"/> Foreign<br/> 8. Specify _____ </div> </div> |                     |                        |                           |
| Ratings/Endorsements   |                     | Total Flight Time      | Flight Time This Accident |
| Name   | FAA Certificate No. | Address _____<br>_____ | Title                     |
| <b>Certificate(s)</b><br><div style="display: flex; justify-content: space-between;"> <div> 1. <input type="checkbox"/> Student<br/> 2. <input type="checkbox"/> Private </div> <div> 3. <input type="checkbox"/> Commercial<br/> 4. <input type="checkbox"/> Airline Transport </div> <div> 5. <input type="checkbox"/> Flight Instructor<br/> 6. <input type="checkbox"/> Flight Engineer </div> <div> 7. <input type="checkbox"/> Foreign<br/> 8. Specify _____ </div> </div> |                     |                        |                           |
| Ratings/Endorsements   |                     | Total Flight Time      | Flight Time This Accident |
| Name   | FAA Certificate No. | Address _____<br>_____ | Title                     |
| <b>Certificate(s)</b><br><div style="display: flex; justify-content: space-between;"> <div> 1. <input type="checkbox"/> Student<br/> 2. <input type="checkbox"/> Private </div> <div> 3. <input type="checkbox"/> Commercial<br/> 4. <input type="checkbox"/> Airline Transport </div> <div> 5. <input type="checkbox"/> Flight Instructor<br/> 6. <input type="checkbox"/> Flight Engineer </div> <div> 7. <input type="checkbox"/> Foreign<br/> 8. Specify _____ </div> </div> |                     |                        |                           |
| Ratings/Endorsements   |                     | Total Flight Time      | Flight Time This Accident |

### Narrative History Of Flight

Describe What Occurred In Chronological Order, The Circumstances Leading To The Accident And The Nature Of The Accident. Describe The Terrain And Include A Sketch Of Wreckage Distribution If Pertinent. Attach Extra Sheets If Needed. State Point Of Departure, Time Of Departure, Intended Destination And Services Obtained.

On July 13, 1996 at approximately 13:00 hours, the CH54A departed the fuel barge at Shelter Cove, Alaska where operations were based. The helicopter commenced logging(external load) operations with a 200 ft. long line moving logs from the clear-cut area at the head of the valley to the landing site approximately one mile away. While engaged in lifting the seventh load, the lift was aborted and the two log load (weighing about 16,800 #'s) was released at the lower hook. There were four loggers (hooking loads) on the ground in the area around the helicopter. One worker under the helicopter had to take cover. The next closest individual reported hearing a noise and observed the tail rotor had stopped turning.

The load being lifted was about 40 ft. above the ground and up slope from the lower cutting line of the unit. Having lost the tail rotor authority, the aircraft started to rotate out of control. The main rotor blades struck a 170 ft. tall spruce tree and broke off the upper 20 ft. The long line and hook were jettisoned just prior to impact. The aircraft impacted a 30° slope with the nose pointing up hill. The impact destroyed the cockpit breaking it to the left and forcing it back along the fuselage. The tail boom snapped off at the transition point and the right main gear broke off. Both engines were running on impact and as the aircraft settled to the right, the six main rotor blades sheared off prior to engine shutdown. The aircraft was impaled on a stump on the aft airframe but no fuel leakage occurred. The #2 engine inlet case failed and a small fire developed in that area. It was extinguished with aircraft fire extinguishers by the ground crew. The ground crew radioed for immediate assistance and began extraction of the pilot and co-pilot from the wreckage. First Aid/CPR was applied until the victims could be transported to the med-evac helicopter for transport to the Ketchikan Hospital.

#####

I Hereby Certify That The Above Information Is Complete And Accurate To The Best Of My Knowledge

Date Of This Report

8/6/96

Signature Of Pilot/Operator

Not available

Signature Of Person Filing Report Other Than Pilot/Operator

1. Signature

2. Type Or Print Name Errol D. Champion

3. Title General Manager, Aviation Division

For NTSB Use Only

NTSB Accident No.

ANC96FA098

Reviewed By NTSB Office Located At

NWF-A

Name Of Investigator

ERICKSON

Date Report Received

8/9/96