



Aviation Investigation Factual Report

Location:	Tomball, Texas	Accident Number:	DFW06FA021
Date & Time:	November 6, 2005, 07:55 Local	Registration:	N4171Z
Aircraft:	Piper PA-34-220T	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Factual Information

HISTORY OF FLIGHT

On November 6, 2005, at 0755 central standard time, a twin-engine Piper PA-34-220T airplane, N4171Z, was destroyed upon impact with terrain following a loss of control after calling for a missed approach on the localizer approach (LOC) to Runway 17R at the David Wayne Hooks Memorial Airport (DWH), near Tomball, Texas. The instrument rated commercial pilot and his passenger were fatally injured. A passenger car was struck during the impact sequence and the driver sustained minor injuries. The airplane was owned and operated by the pilot. Instrument meteorological conditions (IMC) prevailed and an instrument flight rules (IFR) flight plan was filed for the Title 14 Code of Federal Regulations Part 91 personal flight. The flight originated from the Gillespie County Airport (T82) near Fredericksburg, Texas, approximately 1 hour and 12 minutes earlier.

The airplane impacted terrain on airport property on a heading of 345 degrees with the left wingtip, then the main fuselage, before colliding with a power pole. The airplane then stuck the berm to an adjacent public road and impacted a passing vehicle. The airplane continued for an additional 260 feet before coming to rest in a dense line of vegetation parallel to the public road.

In a written statement, an instrument rated pilot, employed by United Flight Systems described his observation as he was standing on the airport ramp. He reported that he "heard the airplane power-up as if going missed." He indicated that it was the usual full power, out of synch sound at first power up. However, it grabbed his attention almost immediately because the Doppler shift sounded wrong. He added that the usual missed approach sound was trailing down the runway and away from him, instead in this case "it appeared as if was coming directly towards him." The witness added that "he knew it was a dangerous situation, so he dropped the tow bar he was holding and waited for the situation to clarify in the event he had to run for cover." He further stated that "as the sound came closer, he heard the engines begin over speeding." The witness indicated that "it was the same sound one hears while doing power-on stalls when the prop blades stop biting the air and developing thrust." The witness added that the sound was still coming directly toward him. He remembers wondering if this was the "run for your life" stage. As he was about to do just that, there was a sudden shift in the sound so I knew the plane was close but not going to hit him. He looked up and out of the overcast appeared the Seneca about 300 feet above him. As the airplane broke out of the clouds, it was "wing down close to vertical and nose down." He stated that the airplane "broke-out pointed a little south of east, left wing almost straight down, turning hard to the left, and slipping." The witness used the term "dead-man spiral," because it was taught to him while he was an instrument student. He added that "it appeared to be a classic example of what he was taught." The witness further stated that the airplane "transitioned from it's initially

observed attitude to less than a 45-degree bank" before he lost sight of the airplane about 20 feet above impact and to his north. The witness stated that he continued to watch the airplane to determine where to respond. He reported that he heard the airplane hit just beyond the adjacent hangars and saw debris go at least 40 feet into the air, including a vapor cloud. The witness then turned for his car, grabbed a large fire bottle from the hangar, and proceeded to the accident site.

The driver of the vehicle involved in the accident reported that she was driving south on Stuebner Airline Drive when she noticed out of the right corner of her eye a small aircraft. She stated that she normally saw aircraft along this road as it is located on the west border of the road. The driver recalled the weather that morning was overcast with a low ceiling of clouds. She reported that she did not remember any haze or fog as she saw the plane quite clearly. In a written statement she stated "I noted that the plane was not over where I thought the runway should be, but rather the plane was more over the hangars just to the southwest of my car. I began to wonder if the airplane was going to make an emergency landing on the road because at this point I did not perceive that the plane was in danger of crashing. The nose of the plane appeared parallel to the ground if not modestly tilting toward the sky."

The driver further stated that "the airplane did not appear to be flying normally at this point; from what I remember, it seemed to be trying to pull-up with the nose going up and the tail heading more toward the ground. Then the nose began to go toward the ground as the wings of the plane were going up and down." At this point the driver veered over to the northbound lane of the road in an attempt to slow the car down. The driver then stated that it was "my perception that the airplane was below the level of the power lines at the last moment that I remember, and the last thing that I remember prior to the crash, the airplane was still in the air, but the nose was heading toward the ground (likely the ditch) on the west side of the road."

An additional witness, located approximately 150 yards to the south of the resting place of the main wreckage, reported that he first heard the sounds of an aircraft engines and thought it was coming from a twin-engine airplane that was taking off. The witness then stated that the engine noise was getting louder and sounded as if the airplane was getting closer to his location. He then observed the airplane break out of the cloud layer about 300 to 400 feet above him with "the left wing pointing down and appeared to be yawing to the left." He added that the airplane began to level its wings but was descending at a high rate of speed. The witness then stated that the airplane "began to pull up but it was too low." The witness lost sight of the airplane at about 10 to 15 feet above the ground. He heard the impact sound, jumped in his truck and drove to the accident site to offer assistance.

INJURIES TO PERSONS

The pilot and his passenger sustained fatal injuries due to the impact forces involved during the crash sequence. The female driver of a privately owned vehicle sustained minor injuries.

OTHER DAMAGE

There was minor damage to the upper fiberglass fairing of a parked semi-tractor. An electrical wooden utility pole was sheared about two feet above its base and a privately owned passenger vehicle was destroyed in the crash sequence.

PERSONNEL INFORMATION

Review of information on file with the FAA Airman's Certification Division, Oklahoma City, Oklahoma, revealed that the 55-year old pilot was issued a commercial pilot certificate, with ratings for airplane single engine land and instrument airplane. The pilot held a third-class medical certificate issued on September 15, 2005, with the limitation, "Must wear corrective lenses and possess glasses for near and interim vision." The pilot reported his total flight time was 1,783 hours on his FAA Form 8170.1, Airmen Certificate and/or Rating Application for commercial airplane multiengine rating dated October 18, 2005. Review of the pilot's logbook revealed the last recorded entry was on October 29, 2005. The pilot had logged 1,795.8 hours, with 350 hours of actual instrument at that time of which 41.1 hours and 3.9 hours actual instrument time were in the PA-34-220T. The pilot logbook indicated that 13.3 of those hours were as pilot in command with zero hours logged under actual instrument time.

AIRCRAFT INFORMATION

The 1998 model airplane, serial number 34490654, was certificated for single pilot operation, with seating for six occupants. All aircraft components were original equipment on the aircraft since new and showed a total time on the Hobbs meter as 472.2 hours.

A review of the airframe and engine logbooks finds the aircraft had received its last annual inspection on November 11, 2004. The static system check, altimeter calibration, and the transponder checks were also completed in conjunction with the last annual inspection.

An airframe "spot check", engine oil change, and compression check were performed on October 5, 2005, at 427 hours by Elliot Aviation in Moline, IL. At that time there were no outstanding discrepancies noted.

METEOROLOGICAL INFORMATION

At 0753 local time, DWH reported weather conditions as 300 foot overcast with fog, winds calm, visibility 3 statute miles, temperature 22 degrees Celsius, dew point 22 degrees Celsius, and a barometric pressure at 30.04 inches of Mercury. At 0757 local time, approximately 2 minutes after the accident, a special weather observation was taken reporting conditions as 300 foot overcast with fog, winds 190 degrees at 3 knots, visibility 1 3/4 statute miles, temperature 23 degrees Celsius, dew point 22 degrees Celsius, and a barometric pressure at 30.04 inches of Mercury. The airport landing minimums for the localizer approach (LOC) to runway 17R at David Wayne Hooks for Category A and B aircraft are listed as 500 foot ceiling and 1 mile visibility.

AIDS TO NAVIGATION

There was no evidence found that a flight plan had been programmed in the on board GPS system. There was also no evidence to establish whether the autopilot system was used at anytime during the accident flight.

COMMUNICATIONS

The pilot contacted San Angelo flight service station (AFSS) at 0603 central standard time to obtain a weather briefing and file a flight plan. A standard weather briefing was provided and the pilot filed an IFR flight plan requesting direct routing from Gillespie County Airport (T82) to David Wayne Hooks Memorial Airport (DWH) at an altitude of 5,000 feet. Weather reported in the briefing included "sky conditions generally below a thousand along the entire route," ranging from 100 to 700 foot overcast. Destination weather current at the time of the briefing was winds 190 degrees at 5 knots, 7 miles visibility, clear below 12,000 feet, temperature 22 degrees Celsius, dew point 21 degrees Celsius. The pilot asked specifically about ceilings at his destination. The briefer responded "that's what they are saying, but I kind of find it hard to believe that everyone around them is one to three hundred overcast and they're clear below twelve thousand." The flight plan was filed and the telephone conversation ended at 0610.

After departing from T-82, the pilot contacted Houston Center at approximately 0643. He reported climbing through 2,700 feet to a cruising altitude of 5,000 feet. The IFR flight was handed-off to Houston Approach Control at approximately 0745 and the pilot contacted David Wayne Hooks Tower at 0750.

07:50:00 (N4171Z) Hooks Tower Seneca four one seven one zulu is with you on the localizer.

(Tower) Seneca four one seven one zulu Hooks Tower, runway one seven right, cleared to land. Ceiling now three hundred overcast and three miles.

(N4171Z) three hundred overcast and three miles, seven one zulu, thank you

07:54:04 (Tower) Seneca seven one zulu low altitude alert...ah...check altitude.

07:54:09 (N4171Z) We're going to climb back up and go missed approach.

07:54:50 (N4171Z) I got the tower. Can I go ahead and land?

07:54:54 (Tower) Yea, you're cleared to land sir.

07:55:40 (Tower) Seneca seven one zulu Hooks.

07:55:52 (Tower) Seneca seven one zulu Hooks Tower.
07:56:11 (Tower) Seneca seven one zulu Hooks Tower.
07:56:28 (Tower) Seneca seven one zulu Hooks Tower.

There was no reported additional radio contact with N4171Z.

AIRPORT INFORMATION

The localizer approach to runway 17R, a 7,009-foot long, by 100-foot wide asphalt runway, depicts a final approach heading of 168 degrees, a minimum descent altitude of 500 feet, and visibility of 1 mile. Missed approach instructions are to climb to 1,000 feet then make a right turn, direct to the David Hooks (DHW) non-directional beacon (NDB) and hold at 1,800 feet. The airport elevation is 152 feet MSL and the control tower is located approximately mid-field on the west side of the runway. The top of the control tower is reported at 233 feet msl. Radar data and GPS data indicated that the airplane descended to an altitude of 314 feet msl at approximately the time that the pilot reported seeing the tower and asked if he was still cleared to land. Recorded radar data showed the airplane began an ascent to about 800 feet and turned right to a heading of 185 degrees. The pilot then began a left turn to approximately 105 degrees. The aircraft's altitude varied between 800 feet and 400 feet. The last recorded radar information was received at 07:55:15 with no altitude readout, a heading of 105 degrees, and airspeed of 138 mph. The entire time sequence from the low altitude radar reading of 300 feet MSL and the last recorded track was 56 seconds.

WRECKAGE AND IMPACT INFORMATION

Ground scars at the initial impact point appeared consistent with the aircraft striking the ground in a near level configuration. Propeller blade strikes were noted in the ground as well as depressions consistent in size and placement to the fuselage stringers along the bottom of the cabin area. A semi tractor parked on the ramp near the initial impact point had a cut in a fiberglass fairing just behind the cab. The noted damage was consistent with the first impact to have been with the truck before hitting the ground then striking the telephone pole, road berm and the automobile. The debris line heading from the initial impact point was measured on a magnetic heading of 345 degrees. The initial impact point was located with a global positioning satellite receiver and found to be at north 30 degrees 03.987 minutes west and 095 degrees 32.899 minutest. The telephone pole was found to be located at north 30 degrees 04.000 minutes and west 095 degrees 32.903 minutes. The automobile which was stuck was found at north 35 degrees 04.012 minutes and west 095 degrees 32.894 minutes. The largest remaining part of the fuselage was the instrument panel/forward bulkhead. It was found to be located at north 30 degrees 04.012 minutes and west 095 degrees 32.894 minutes.

The left wing was found separated from the fuselage at the wing root. The wing was also separated outboard of the nacelle. The wing displayed an upward bend and the upper wing

skin was buckled. The wing was found along the roadway lodged in the bushes that lined the road. The wing showed a compression impact near the tip and the wingtip was separated. The fuel tank was ruptured and the fuel cap was in place and secure. The heated stall vane was in place and impact damaged.

The aileron was in place and secured at all hinge points. The balance weight was in place. The aileron control rod and bellcrank were impact damaged, but in place. Both control cables were found secured to the bellcrank but were separated near the wing root. Both separations were broomstrawed consistent with impact overload.

The flap was impact damaged and separated. The flap was separated and fragmented. The flap actuator was separated from the flap torque tube and fuselage. The actuator was recovered from the debris path and found to be in the fully extended position. This position is consistent with the flaps being in the retracted position at the time of initial ground impact.

Ground scars and actuator positions were consistent with the landing gear in the retracted position at the time of the impact.

The right wing was separated from the fuselage at the wing root. The wing was also separated outboard of the nacelle. The wing displayed an upward bend and the upper wing skin was buckled. The wing was found along the roadway lodged in the bushes that lined the road. The fuel tank was ruptured and the fuel cap was in place and secured. The wingtip was separated and found along the debris path.

The aileron was separated and recovered along the debris path. The balance weight was secure in the outboard portion of the aileron. The bellcrank was loose and had been pulled inboard. Both control cables were secure to the bellcrank. One cable was separated about 3 feet inboard of the bellcrank and the other was separated inboard of the turnbuckle. Both separations were broomstrawed consistent with impact overload.

The horizontal stabilator was separated from the fuselage and found in two pieces along the debris path. The right side of the stabilator included both hinges with hinge and stop bolts secure was found in a tree and displayed a large impact depression in the leading edge. The left side of the stabilator was found along the debris path just past the telephone pole. Both sections had the trim tab still in position and secure. The balance tube was separated and was found near the vertical stabilizer and rudder. The balance weight was secure on the tube and one control cable was attached to the tube. The second control cable attach point was broken loose from the tube. The attach point was recovered and the cable was found secure. Both cables were separated in the aft fuselage area. Both separations appeared consistent with impact damage. The pitch trim drum was not noted during the examination.

The vertical stabilizer was separated from the fuselage and was found along the debris path with the rudder still in place. Both parts displayed impact damage and the top section of the rudder, with the balance weight still in place, was bent back over the lower portion of the

rudder. All hinge bolts were in place and secure. The rudder control cables were in place and secure to the rudder torque tube sector assembly. The right side cable was separated about 4 inches forward of the sector and the left side cable was separated about 6 feet forward of the sector. Both cable separations were broomstrawed consistent with impact overload. The rudder trim drum was found to have about a 1 inch inner shaft extension. This position is consistent with a neutral yaw setting.

The fuselage was fragmented upon impact. The largest identifiable part was the instrument panel and forward fuselage bulkhead assembly. Most of the instruments and radios were intact and displayed negligible damage.

The center wing spar carry through section was separated in one piece and found along the debris path. All six seats were separated from their mounts. Both of the front seat lap belts were unbuckled. The right front shoulder harness was attached to the outboard (male portion) of the lap belt. The left front shoulder belt was loose and not fastened.

The stabilator cables were secure to the control column 'T' bar assembly. The aileron cables were secure to the control chains. All cables were separated in the cabin area. All separations were broomstrawed consistent with impact overload.

The annunciator light bar was recovered from the instrument panel and examined. Each light bulb was individually removed and examined with a 10X jeweler's loop for continuity and stretching. All bulbs were found intact with no stretching except one of the two bulbs in the Pitot Heat Off/Inop warning light. The filament was broken but no stretching was noted.

Both engines were examined at Air Salvage of Dallas and no discrepancies were noted. Both engines were shipped to Teledyne Continental Motors for a detailed examination and teardown inspection.

The left propeller was separated from the engine. The spinner was found impact damaged but still in place on the hub. The propeller hub was intact and all three blades were in place. The blades were marked as 'A', 'B' and 'C' for identification. Blade 'A' was found bent aft about 35-40 degrees along the outboard 2/3 span and near the root. The blade was twisted toward low pitch and displayed leading edge paint erosion as well as nicks, dents, and chordwise scratches near the tip. Blade 'B' was found loose in the hub, bent aft in excess of 90 degrees and twisted toward low pitch. The blade had leading edge abrasions and scratches as well as a piece missing from the trailing edge near the tip. Blade 'C' was found bent aft about 15-20 degrees along the outboard 1/3 of the blade. The blade was loose in the hub and twisted toward low pitch.

The right propeller was found separated from the engine and the hub was fragmented. The propeller dome was found along the debris path near the initial impact point. All three blades were recovered and displayed substantial impact damage. The blades were marked as 'A', 'B' and 'C' for identification. Blade 'A' was found loose in the hub, bent aft about 10-15 degrees

and twisted toward low pitch. The blade had leading edge nicks, cuts and abrasion. The trailing edge was bent and dented. Blade 'B' was found separated from the hub bent aft about 15-20 degrees and twisted toward low pitch. The blade had leading edge dents and nicks. The deice boot was shredded. Blade 'C' remained attached to the hub but was twisted toward low pitch. The blade had leading and trailing edge nicks, cuts, and scratches as well as leading edge abrasion.

MEDICAL AND PATHOLOGICAL INFORMATION

The Joseph A. Jachimczyk Forensic Center, Harris County, Texas, conducted a postmortem examination of the pilot on November 7, 2005. The reported cause of death was "multiple blunt impact traumas with extensive fractures and visceral injuries." Postmortem toxicology of specimens from the pilot was performed by the Forensic Toxicology Research Section, Federal Aviation Administration, Oklahoma City, Oklahoma. The results were negative for carbon monoxide, cyanide, and ethanol.

SURVIVAL ASPECTS

The impact forces and breakup of the airframe during the crash sequence made this a non-survivable accident due to complete compromise of living space in the aircraft.

TEST AND RESEARCH

Teledyne Continental Motors (TCM) conducted a disassembly and inspection of both engines during the week of April 24, 2006 with investigators from the NTSB and New Piper aircraft present.

The left engine TSI0-360-RB, serial number 321447, did not reveal any abnormalities that could have prevented normal operation and production of rated horsepower.

The right engine LTSI0-360-RB, serial number 321701, did not reveal any abnormalities that would have prevented normal operation and production of rated horsepower.

The equipment detailed below was examined at Honeywell in Olathe, Kansas. An FAA Inspector from the Kansas City FSDO hand carried the components to the Honeywell facilities and provided oversight for the examination of the following components:

1. KX 155A VHF Nav/Comm Transceiver, P/N 069-01032-0101, S/N 4093, Mods 1, 2, 3, 4 (#1 nav/comm). All functions were normal and within specification
2. KX 155A VHF Nav/Comm Transceiver, P/N 069-01032-0101, S/N 3516 (#2 nav/comm). All functions were normal; however, transmitter power was found to be approximately 5 watts. Typical power output is 10 watts.

3. KC 192 Flight Computer, P/N 065-00042-0015, S/N 1517, Mod 18. The unit passed all functional tests.

4. KLN 90B GPS, P/N 066-04031-1122, S/N 26774; Americas Nav Database, P/N 071-01523-0302. The unit had the Americas Nav Database cartridge installed the power switch was in the "on" position. No visible damage was present. When power was applied the unit commenced and passed self-test.

5. KN 72 VOR/LOC Converter, 066-4009-00, S/N 15453, Mods 1, 2, 3. The VOR converter met specifications. The localizer centering was within specification; however, the localizer deflection was out of tolerance. The alarm signal voltage was also out of tolerance.

6. KI 204 VOR/LOC/CONV & G.S. Indicator, P/N 066-3034-02, S/N 52864, Mods 1, 3, 4. The indicator received damage to the covers. The OBS knob/shaft/compass card were missing, and the bezel/glass assembly was missing. The localizer and glideslope needles were in contact with each other and were slightly adjusted to eliminate the interference. The covers were removed to inspect for any internal damage and none was detected. The unit was connected to a test harness and subjected to limited functional tests. A 2.0 microvolt glideslope receiver signal yielded a half glideslope flag and a navigable glideslope indication. The glideslope test was satisfactory. The following was noted during the VOR/LOC functional tests: needle deflection was inoperative, flag operation was satisfactory, and rotating the OBS resolver affects To/From flag indication. No further testing was possible.

7. KG 102A Directional Gyro, P/N 060-0015-00, S/N 41935, Mods 1, 2, 3, 4, 5, 6, 7, 8. The assembly passed all functional tests; however, the gyro failed the precession test over the high limit of 4 degrees with as much as 30 degrees drift.

8. KA 51B Slaving Accessory, P/N 071-1242-01, S/N 26954. Dirt and debris contamination was present and minor damage to outer shell. Both switches failed functional tests. Meter movement, compensation, and backlighting functions were acceptable.

9. KI 256 Flight Command Indicator, P/N 070-0017-00, S/N 22018, Mods 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. The unit had internal damage due to impact and no reliable results were able to be concluded from functional testing.

10. KI 525A Pictorial Nav Indicator, P/N 066-3046-07, S/N 86774, Mods 7, 8, 9, 10, 11. The indicator received substantial damage and no reliable results were obtainable through testing.

11. Skymap IIIC GPS, S/N YR 4356, Mod 2 with Americas database card. The logged data storage was retrieved and various maps were generated that represent the final flight.

The Digital Display Monitoring Panel (DDMP) was sent to Flightline Systems (formerly Horizon Aerospace) in Victor, New York, for examination and readout of stored exceedance data. The

DDMP Configuration is as follows: DDMP Model: 7700-T1, Part Number: 159250-2, Serial Number: 0231, Date of Manufacture: 7/98, Top Level Assembly Rev: B, Software Version: 6.0. There was no stored data retrieved from the day of the accident flight. The last exceedences recorded were 3 instances of a high vacuum reading on November 4, 2005 (7, HI VAC 11/04/05, 21:30:43, 00:00:02 Dur, 5.4 Peak;; 6, HI VAC 11/04/05, 21:30:01, 00:00:01 Dur, 5.4 Peak; 5, HI VAC 11/04/05, 21:26:05, 00:00:14 Dur, 5.4 Peak),

Federal Aviation Administration (FAA) Order 7110.65, "Air Traffic Control," contains guidance to controllers on the issuance of safety alerts. Paragraph 2-1-6 states:

2-1-6. SAFETY ALERT

Issue a safety alert to an aircraft if you are aware the aircraft is in a position/altitude which, in your judgment, places it in unsafe proximity to terrain, obstructions, or other aircraft. Once the pilot informs you action is being taken to resolve the situation, you may discontinue the issuance of further alerts. Do not assume that because someone else has responsibility for the aircraft that the unsafe situation has been observed and the safety alert issued; inform the appropriate controller.

If a TRACON has given control of an aircraft to one of its remote towers, and the tower has aural and visual MSAW alert capability, the TRACON does not have to inform the tower controller if an alert is observed for that aircraft when it is within the remote tower's aural alarm area.

NOTE-

1. The issuance of a safety alert is a first priority (see para 2-1-2, Duty Priority) once the controller observes and recognizes a situation of unsafe aircraft proximity to terrain, obstacles, or other aircraft. Conditions, such as workload, traffic volume, the quality/limitations of the radar system, and the available lead time to react are factors in determining whether it is reasonable for the controller to observe and recognize such situations. While a controller cannot see immediately the development of every situation where a safety alert must be issued, the controller must remain vigilant for such situations and issue a safety alert when the situation is recognized.

2. Recognition of situations of unsafe proximity may result from MSAW/E-MSAW/LAAS, automatic altitude readouts, Conflict/Mode C Intruder Alert, observations on a PAR scope, or pilot reports.

3. Once the alert is issued, it is solely the pilot's prerogative to determine what course of action, if any, will be taken.

a. Terrain/Obstruction Alert. Immediately issue/initiate an alert to an aircraft if you are aware the aircraft is at an altitude which, in your judgment, places it in unsafe proximity to terrain/obstructions. Issue the alert as follows:

PHRASEOLOGY-

LOW ALTITUDE ALERT (call sign), CHECK YOUR ALTITUDE IMMEDIATELY.

THE (as appropriate) MEA/MVA/MOCA/MIA IN YOUR AREA IS (altitude),

or if an aircraft is past the final approach fix (nonprecision approach), or the outer marker, or the fix used in lieu of the outer marker (precision approach), and, if known, issue THE (as appropriate) MDA/DHIS (altitude).

CFR 14 Chapter 1, Part 91 subpart B states Instrument Flight Rules beginning at paragraph 91.175 titled Takeoff and landing under IFR:

(b) Authorized DH or MDA. For the purpose of this section, when the approach procedure being used provides for and requires the use of a DH or MDA, the authorized DH or MDA is the highest of the following:

(1) The DH or MDA prescribed by the approach procedure.

(2) The DH or MDA prescribed for the pilot in command.

(3) The DH or MDA for which the aircraft is equipped.

(c) Operation below DH or MDA. Except as provided in paragraph (l) of this section, where a DH or MDA is applicable, no pilot may operate an aircraft, except a military aircraft of the United States, at any airport below the authorized MDA or continue an approach below the authorized DH unless--

(1) The aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal maneuvers, and for operations conducted under part 121 or part 135 unless that descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing;

(2) The flight visibility is not less than the visibility prescribed in the standard instrument approach being used; and

(3) Except for a Category II or Category III approach where any necessary visual reference requirements are specified by the Administrator, at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

(i) The approach light system, except that the pilot may not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.

(ii) The threshold.

(iii) The threshold markings.

(iv) The threshold lights.

(v) The runway end identifier lights.

(vi) The visual approach slope indicator.

(vii) The touchdown zone or touchdown zone markings.

(viii) The touchdown zone lights.

(ix) The runway or runway markings.

(x) The runway lights.

(d) Landing. No pilot operating an aircraft, except a military aircraft of the United States, may land that aircraft when--

(1) For operations conducted under paragraph (l) of this section, the requirements of (l)(4) of this section are not met; or

(2) For all other part 91 operations and parts 121, 125, 129, and 135 operations, the flight visibility is less than the visibility prescribed in the standard instrument approach procedure

being used.

(e) Missed approach procedures. Each pilot operating an aircraft, except a military aircraft of the United States, shall immediately execute an appropriate missed approach procedure when either of the following conditions exist:

(1) Whenever operating an aircraft pursuant to paragraph (c) or (l) of this section and the requirements of that paragraph are not met at either of the following times:

(i) When the aircraft is being operated below MDA; or

(ii) Upon arrival at the missed approach point, including a DH where a DH is specified and its use is required, and at any time after that until touchdown.

(2) Whenever an identifiable part of the airport is not distinctly visible to the pilot during a circling maneuver at or above MDA, unless the inability to see an identifiable part of the airport results only from a normal bank of the aircraft during the circling approach.

ADDITIONAL INFORMATION

On November 8, 2005, the wreckage was recovered to Air Salvage of Dallas (ASOD), near Lancaster, Texas, for further examination. The wreckage was subsequently released in its entirety to Air salvage of Dallas on April 28, 2006. The NTSB did not retained any portion of the aircraft, aircraft maintenance records or pilot records.

Pilot Information

Certificate:	Commercial	Age:	55, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	September 1, 2005
Occupational Pilot:	No	Last Flight Review or Equivalent:	October 1, 2005
Flight Time:	1796 hours (Total, all aircraft), 43 hours (Total, this make and model), 1713 hours (Pilot In Command, all aircraft), 66 hours (Last 90 days, all aircraft), 43 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N4171Z
Model/Series:	PA-34-220T	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	3449065
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	October 1, 2005 100 hour	Certified Max Gross Wt.:	4750 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	472.2 Hrs at time of accident	Engine Manufacturer:	Teledyne Continental
ELT:	Installed, not activated	Engine Model/Series:	TSI0360RB1B
Registered Owner:	Robert J. Little	Rated Power:	220 Horsepower
Operator:	V & R Enterprises, LLC	Operating Certificate(s) Held:	None
Operator Does Business As:	Personal	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:	DHW, 152 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	07:57 Local	Direction from Accident Site:	345°
Lowest Cloud Condition:	Clear	Visibility	1.75 miles
Lowest Ceiling:	Overcast / 300 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/ None	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	22°C / 22°C
Precipitation and Obscuration:			
Departure Point:	Fredericksburg, TX (T82)	Type of Flight Plan Filed:	IFR
Destination:	Tomball, TX (DHW)	Type of Clearance:	IFR
Departure Time:	06:45 Local	Type of Airspace:	

Airport Information

Airport:	David Wayne Hooks DWH	Runway Surface Type:	Asphalt
Airport Elevation:	152 ft msl	Runway Surface Condition:	Dry
Runway Used:	17R	IFR Approach:	Localizer only
Runway Length/Width:	7009 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	None
Ground Injuries:	1 Minor	Aircraft Explosion:	None
Total Injuries:	2 Fatal, 1 Minor	Latitude, Longitude:	30.066944,-95.548057

Administrative Information

Investigator In Charge (IIC):	Gamble, William
Additional Participating Persons:	Thomas J Latson; Housto, Texas
Report Date:	December 28, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=62778

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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 [here](#).