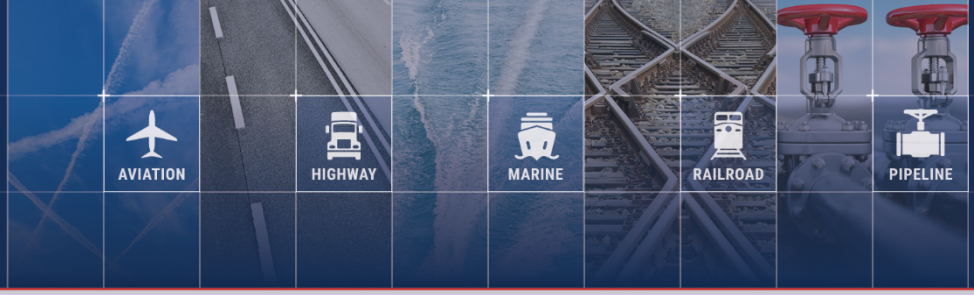

Aviation Investigation Factual Report

Location:	Minden, Louisiana	**Accident Number:**	FTW02FA113
Date & Time:	April 6, 2002, 15:33 Local	**Registration:**	N6VY
Aircraft:	Beech D-45	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Factual Information

HISTORY OF FLIGHT

On April 6, 2002, approximately 1533 central standard time, a Beech D-45 single-engine airplane, N6VY, impacted heavily wooded terrain following a loss of control during a go-around at the Minden-Webster Airport (F24), near Minden, Louisiana. The airplane was owned and operated by the private pilot under 14 Code of Federal Regulations Part 91. Both the private pilot, who occupied the front seat, and the pilot rated passenger, who occupied the aft seat, were fatally injured. The airplane was substantially damaged. Visual meteorological conditions prevailed for the local flight for which a flight plan was not filed. The personal flight departed F24 approximately 30 minutes prior to the accident.

Witnesses, local authorities, and acquaintances reported that both pilots were in the process of moving to Minden. The private pilot (front seat) had recently accepted a position with a local hospital, and the pilot rated passenger (aft seat) had a part time position as the airport manager for the City of Minden. The airplane had been in a hangar at the airport for several days, during which time the pilots had become acquainted and discussed flying the airplane.

The airplane was observed departing from runway 01, and subsequently departed the traffic pattern. The was observed by some of the witnesses at the airport performing a series of maneuvers at approximately 2,000 to 3,000 feet above the airport.

The airplane was then observed entering the traffic pattern, and performed a series of touch and goes on runway 01. Some of the witnesses observed that the pilot was having problems with correcting for the prevailing right crosswind. During their fourth approach, the aft seat pilot radioed to the Unicom operator and requested that she "come out and watch his landing." During the fourth approach, the airplane was observed drifting to the west of centerline with the flaps fully extended. Witnesses reported that the airplane stalled, and full power was heard being applied. The nose of the airplane was reported to pitch-up, as the airplane rolled into a 90-degree bank to the left. Subsequently, the airplane assumed a nose low attitude and descended uncontrolled to the ground. Witnesses reported hearing the sound of engine noise until ground impact.

PERSONNEL INFORMATION

The private pilot held the airplane single-engine land rating issued on November 13, 1982. According to the logbook, reviewed by the NTSB investigator-in-charge (IIC), the private pilot's accumulated flight time from December 29, 1985, through February 23, 2001, was 1,012.3 hours in the accident airplane. On July 26, 2000, the FAA medical examiner issued the private pilot a third class medical certificate with the limitation: Holder shall wear correcting glasses

while exercising the privileges of his airman certificate.

The pilot rated passenger held the FAA commercial pilot certificate with the airplane single-engine land and instrument ratings. He held private pilot privileges for the multiengine land airplane. On June 5, 2001, he was issued the flight instructor certificate with the airplane single engine rating. On April 2, 2001, the pilot was issued a first class medical certificate without limitations. The pilot rated passenger's accumulated flight time was 321.5 hours with zero time in the accident airplane.

AIRCRAFT INFORMATION

The 1955 Beech D45 (military T-34B), serial number BG-221 (military 140887) airplane was equipped with the Continental O-470-4 reciprocating engine (serial number 116057) rated at 225 horsepower with a Beech model 278-102 two bladed propeller (serial number 1496) installed.

Maintenance records indicated a total airframe time of 11,142.3 hours verified from military records dated August 1964, and the annual inspection performed on July 10, 1980. The airplane (N3565G) was issued the FAA airworthiness certificate on July 11, 1980. Registration (N6VY) to the current owner was dated November 22, 1983.

On December 12, 1996, the engine was removed from N6VY for a major overhaul and reinstalled at 0.00 time. On September 1, 2001, the last annual inspection was performed at the accumulated airframe time of 12,251.3 hours and an engine time of 118.6 since major overhaul (SMOH).

According to the City of Minden aviation fueling records, the airplane was refueled with 29.4 gallons of aviation fuel on March 15, 2002.

METEOROLOGICAL INFORMATION

At 1456, the weather observation facility at Shreveport (SHV), Louisiana, approximately 29 nautical miles northeast of the accident site, reported the wind 130 degrees at 8 knots, ceiling 13,000 scattered, 16,000 broken, visibility 10 statute miles, and the altimeter setting 30.16 inches Mercury.

Witnesses and local authorities reported the wind at the accident site was from the east at 10 knots gusting to 20 knots.

AERODROME INFORMATION

The airport (F24), located approximately 2 miles northwest of Minden, is owned and operated by the City of Minden, Minden, Louisiana. F24, is a non-towered airport with runway 01/19. Runway 01/19 is an asphalt runway, 5,001 feet long and 75 feet wide. Runway 01 elevation is

278 feet, and the runway 01 has obstructions (45-foot trees, 8:1 slope to clear) 300 feet left of the runway centerline.

WRECKAGE AND IMPACT INFORMATION

The Global Positioning System (GPS) location of the accident site was 32 degrees 38.59 minutes North; 093 degrees 17.90 minutes West. The airplane was found in a nose low attitude (approximately 80 degrees) on a measured magnetic heading of heading of 130 degrees in the wooded area 967 feet west of the centerline of runway 01, 1,521 feet from the departure end of runway 01, and 930 feet from the left edge of runway 01. The ground crater measured approximately 5 feet wide and 2 1/2 feet deep. The landing gear was found in the extended position, and the flaps were retracted. Both cockpits and instrument panels were destroyed. The leading edge of the left wing, and the inboard leading edge of the right wing were crushed toward the wing spars. The integrity of the fuel system was compromised. Flight control continuity was confirmed for the elevators and rudder. The propeller was found separated from the engine. One propeller blade was straight, and one propeller blade had nicks along the outboard trailing edge. The airplane was recovered to a hangar at the airport (F24) for further examination.

The fuel gascolator was examined and no debris was found on the fuel screen. The stall warning system was tested at the wing and found operational. According to the aircraft representative, the aileron tab was found 2 degrees tab up (aileron down), the elevator tab 2 degrees tab down (elevator up), and the rudder 1 degree tab left (nose right). The front and rear engine throttle controls were found full forward, and the propeller control position mid-range. The aileron flight control assembly components (forward and aft torque tube support bracket, aileron bellcrank arm actuator, and the aft flight control stick tube were found fractured in the flight control system and were retained by the Board for further examination.

The engine crankshaft was rotated and continuity was confirmed to all the cylinders and to the accessory gears at the rear of the engine. Hand compression and valve action was noted on all the cylinders. The oil pump rotated. The generator rotated. The oil sump and screen were examined and no debris was found on the oil screen.

The Bendix model RS-5BD-1 throttle body/metering unit (part number 25243534, serial number 3897) had the fuel injector separated from the unit. The throttle valve was attached and in the idle position. The fuel valve and mixture control were free to move. The Bendix model LS6LN-28, part number 10-52350-20, serial number 9090511 (right), serial number 9051263 (left) magnetos exhibited impact damage, and the left magneto was found separated from the engine. The fuel pump (part number RG908H1, serial number B-8496) rotated, and no internal damage was found during disassembly of the unit. The Woodward propeller governor (part number 210060, serial number 506812) was found free to rotate. Disassembly of the unit did not reveal any internal damage. Both magnetos, the throttle body/metering unit, injector lines, and flow divider were retained by the Board for further examination.

MEDICAL AND PATHOLOGICAL INFORMATION

Both autopsies were performed by the Mississippi State Medical Examiner's Office, near Brandon, Mississippi. The medical examiner took specimens from both pilots, including blood, brain, gastric, heart, kidney, liver, lung, muscle, spleen, and vitreous.

The following pertinent information was extracted by NTSB Medical Officer from the report of autopsy performed on the private pilot: The autopsy report concludes "... the decedent was noted to have succumbed secondary massive craniocerebral trauma suffered in an airplane crash. Evidence of significant underlying disease is not appreciated. ..."

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The FAA Civil Aeromedical Institute's (CAMI) Forensic Toxicology and Accident Research center examined the specimens taken by the medical examiner. The CAMI toxicological findings for the commercial pilot showed no indication of alcohol or performance-impairing drugs at the time of the accident.

The CAMI toxicological findings for the private pilot were positive for the following drugs: 0.393 (ug/ml, ug/g) diazepam detected in blood; 2.081 (ug/ml, ug/g) diazepam detected in liver; 1.036 (ug/ml, ug/g) nordiazepam detected in blood; 5.542 (ug/ml, ug/g) nordiazepam detected in liver; 0.142 (ug/ml, ug/g) oxazepam detected in blood; 0.084 (ug/ml, ug/g) temazepam detected in blood. The CAMI non quantified findings for the private pilot was positive for propanolol detected in the blood and liver.

According to Dr. Baisden (FAA Acting Southwest Regional Flight Surgeon) the use of diazepam (Valium, an anti-anxiety agent) or temazepam (restoril, a sedative-hypnotic), are disqualifying medications if taken on a regular basis. If these medications are used only occasionally, there is a 72-hour waiting period before the pilot would be allowed to fly. Review of past applications show this pilot failed to report these medications to the FAA. Propanolol (inderal), which was prescribed for essential tremors of the head and neck, was reported on the airman’s last physical examination.

The following pertinent medial information was extracted by the NTSB medical Officer from the medial records maintained on the private pilot occupying the front seat by the FAA Civil Aeromedical Institute Aeromedical Certification Division:

2/23/95 - Application for Airman Medical Certificate indicates "no" under item 17. "Do you currently use any medications" and "no" under items 18.1. "neurologic disorders" and 18m. "mental disorders."

2/29/96 - Application for Airman Medical Certificate indicates "yes" under item 17. "Do you currently use any mediation" and list "Clonipen [sic] 0.5 mg, Inderal 120 mg." The application indicates "no" under items 18.1. "neurological disorders" and 18.m. "mental disorders." "Notes" indicate "Benign essential tremor-treated with Inderal [propanolol] and Klonopin [clonazepam].

8/28/96 - A letter from the FAA Southwest Regional Flight Surgeon to the pilot states "information provided this office indicates a reasonable basis for re-examining your ability to meet the medical standards...this office has been advised that you were recently involved in an aircraft accident at which time you appeared to be experiencing medical problems. ... Review of you airman medical file reveals you have a history of benign essential tremor requiring the use of medications, Inderal and Klonopin. To assist us in our evaluation of your case, it will be necessary that ... you provide this office with a current report from your treating physician as pertains to your history of benign essential tremor. You are reminded that your operation of aircraft as pilot in command after receipt of this letter may constitute a violation of Federal Aviation Regulation 61.53."

9/10/96 - A letter from the FAA Southwest Regional Fight Surgeon to the pilot states "we have received your letter dated September 2, 1996, and will temporarily hold your medical file in pending status until all the information previously requested is received. Enclosed are several written statements from individuals who reported your behavior following the aircraft incident of August 19, 1996. As you will notice, witnesses report that you appeared to be impaired, with shaking, with slurring speech, and at one point you fell off the wing of the aircraft after returning to the cockpit. ..."

9/23/96 - A letter from the pilot's neurologist to the FAA Southwest Regional Flight Surgeon notes that the pilot had been treated "for familial tremor (aka benign essential tremor) since 1991" and that he has "a head tremor, without no [sic] detectable tremor of the extremities. The tremor is not disabling and is well-controlled by mediations. He is currently taking Propanolol ER, 120 milligrams, 3-5 orally per day, as well as Clonazepam, 0.5 milligrams, 1-4 orally per day. The amount of medication varies daily with the severity of symptoms, situations, etc. he has had no significant side effects from these medications. His condition is stable, with no change in medications or dosages thereof within the last two years."

10/30/96 - A letter from the FAA Aeromedical Certification Division to the pilot noted in part "We have recently received information from the regional office which indicates a reasonable basis to believe that you may not meet the medical standards ... you are requested to have your attending physicians, treating hospitals, or other agencies forward to this office a complete report of your medical condition requiring the use of disqualifying medication (clonazepam) and results of a current, detailed neurological evaluation and a current cardiovascular evaluation in accordance with the enclosed specifications to include results of a current 24-hour Holter monitor test. ... We cannot consider you qualified to use your medical certificate at this time. ..."

7/26/00 - Application for Airman Medical Certificate indicates "yes" under item 17.a. "Do you

currently use any medication" and list only "Lipitor 10 mg per day." The application indicates "no" under items 18.1. "Neurological disorders" and 18.m. "mental disorders." "Notes" indicate "Essential tremor of head and neck. Has not used Clonipen [sic] or propanolol in over six months." "Other test given" notes "not issued due to fasting glucose 145."

7/31.00 - A letter to the FAA from the pilot's AME notes in regard to the pilot that "on 7/26/00 I issued a Class III, then I asked him to surrender it, which he did the following week. This was because lab drawn on the initial visit was reported later and included FBS 145."

12/29/00 - A letter from the FAA Aeromedical Certification Division to the pilot noted in part "we have reviewed your application for medical certification and note a history of head and neck tremor. Before we can determine your eligibility for medical certification, we require, for our review, copies of all medical records from the hospitals, consultants, medical boards, and attending physician regarding your head and neck tremor ... Also please submit a current neurological and cardiovascular evaluation in accordance with the enclosed specifications, to include a current twenty-four hour Holter monitor, as previously requested in our letter of October 30, 1996. In addition, due to your possible diabetes, please submit a report from your treating physician to include ..."

The following pertinent medical information was extracted by NTSB Medical Officer from the medical records obtained under subpoena from the private pilot's neurologist:

3/22/91 - Initial evaluation note from the neurologists indicates "Head tremor for 2-3 years - gradually worse. Worse with anxiety. ... Handwriting ... has degenerated some. Exam is normal except obvious head tremor and +/- slight bilateral hand tremor. Slight voice tremor. Impression: Essential tremor. Inderol 20 MG three times a day increase to 40 then 60 three times a day."

4/8/97 - A follow-up note from the neurologist indicates "Essential tremor. The FAA did not renew his medical certificate ... and may not approve his use of Klonopin. Tremor is unchanged subjectively. No side effects ... stable. ..."

8/20/97 - A follow-up note from the neurologist indicates "Essential tremor. Tremor is stable. ..."

4/28/98 - A follow-up note from the neurologist indicates "he continues clonazepam 0.5 mg, two to three times a day. He ... does have some drowsiness from it. ...Impression: Essential tremor. Symptoms partially controlled. ..."

7/14/99 - A follow-up note from the neurologists indicates "he takes Valium, 10 mg, 40-60 mg/day on three times a day or four times a day schedule, propanolol 120 mg, 6-8/day. ...He has some drowsiness from medications. ... Assessment: Essential tremor. As expected this has been slowly progressive. ... He has had minimal side effects from propanolol and valium [diazepam], especially considering the doses he is taking.

8/24/00 - A follow-up note from the neurologists indicates 'medications: Valium 10 mg, 30-40 mg/day (less than last year; discontinued propanolol); Neurontin, 300 mg each morning (occasionally takes second dose later in day). His tremor seems to be adequately controlled without propanolol. ... Daytime sleepiness has decreased at a lower Valium dose. ..."

9/27/01 - A follow-up note from the neurologists indicates that "reportedly. 'the tremor does not seem to be getting worse."

3/5/02 - A referral letter from the pilot's neurologist to a neurologist in the pilot's new residence area indicated that the pilot's "current medication regimen for essential tremor is: diazepam 20 mg daily or twice daily; propanolol LA 120 mg every morning; and Neurontin 600 mg per day or twice daily. This regimen apparently works relatively well for him. We tried Diamox (caused paresthesias) and clonazepam previously. ..."

TEST AND RESEARCH

On May 2, 2002, both magnetos were examined, under the supervision of the NTSB, at Select Aircraft Services, Lancaster, Texas. The magnetos were placed on a test stand, both magnetos sparked at all terminals, and no discrepancies were found that would have precluded operation of the magnetos prior to the impact..

On May 16, 2002, the throttle body/metering unit and injector lines were examined, under the supervision of the NTSB, at Precision Airmotive Corporation, Everett, Washington. The flow divider showed visually equal flow from all 6 ports at 4.5 psi inlet pressure. No discrepancies were founds that would preclude operation of the units prior to the impact.

On May 23, 2002, Material Analysis, INc., conducted a metallurgical inspection of the aileron control torque tube assembly from aircraft N6VY. Materials Analysis metallurgist concuded that the fracture separation of the aileron bellcrank arm actuator from the torque tube "resulted from single event, overstress fracture." The bellcrank arms to the forward and aft flight control sticks exhibited "evidence of single-event fracture failures resulting from overload forces." The forward and aft torque tube support brackets "exhibited evidence of single-event, overload stress fracture consistent with forces generated at the time of ground impact." Fracture of the submitted flight control stick tube "resulted from ductile overload separation consistent with ground impact forces."

The NTSB meatllurgist reviewed the The Materials Analysis, Inc., report "Analysis of Flight Control Brackets from Beech Model T-34B, R/N N6VY". The NTSB metallurgist and concurs with the conclusion that the "fractures were typical overstress from impact forces. "

ADDITIONAL INFORMATION

The airplane was released to the Estate.

Pilot Information

Certificate:	Private	**Age:**	63,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Invalid Medical for flight	**Last FAA Medical Exam:**	July 26, 2000
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1012 hours (Total, all aircraft), 1012 hours (Total, this make and model), 901 hours (Pilot In Command, all aircraft)		

Pilot Information

Certificate:	Commercial; Flight instructor; Private	**Age:**	22,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Rear
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane single-engine	**Toxicology Performed:**	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	April 2, 2001
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	June 5, 2001
Flight Time:	322 hours (Total, all aircraft), 0 hours (Total, this make and model), 284 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N6VY
Model/Series:	D-45	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal; Utility	**Serial Number:**	BG221
Landing Gear Type:	Retractable - Tricycle	**Seats:**	2
Date/Type of Last Inspection:	September 1, 2001 Annual	**Certified Max Gross Wt.:**	3000 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	12251.3 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	E-0-470-4
Registered Owner:	Stanley D. Pinder	**Rated Power:**	225 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

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:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots / 20 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	90°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	19°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Minden, LA (F24)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	Traffic advisory
Departure Time:	15:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	MINDEN-WEBSTER F24	**Runway Surface Type:**	Asphalt
Airport Elevation:	278 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	01	**IFR Approach:**	None
Runway Length/Width:	5001 ft / 75 ft	**VFR Approach/Landing:**	Go around

Wreckage and Impact Information

Crew Injuries:	2 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	32.643054,-93.298332

Administrative Information

Investigator In Charge (IIC):	Roach, Joyce
Additional Participating Persons:	Jim Bowling; FAA FSDO; Baton Rouge, LA John Kent; Teledyne Continental Motors; Mobile, AL Eddie Webber; Raytheon Aircraft Company; Wichita, KS Raymond J Claxton; Materials Analysis, Inc.; Dallas, TX
Report Date:	November 13, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=54469