Aviation Investigation Final Report

Location:	EAGLE, Colorado	**Accident Number:**	FTW97FA042
Date & Time:	November 17, 1996, 15:05 Local	**Registration:**	N251B
Aircraft:	Piper AEROSTAR 601P	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	5 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The noninstrument-rated pilot filed an IFR flight plan, but did not request nor was given a weather briefing. Shortly after taking off into low instrument meteorological conditions, he reported he was returning to the airport, but did not give a reason why. He never declared an emergency. The last transmission was when the pilot said he had 'the problem resolved,' and was continuing on to his destination. Various witnesses said the engines were 'revvying' and 'unsynchronized,' and that the propellers were being 'cycled.' One witness said brownish-black smoke trailed from the right engine. The airplane struck one ridge, then catapulted approximately 1,000 feet before striking another ridge. There was postimpact fire. Both propellers bore high rotational damage. Disassembly of the engines, propellers, turbochargers, and various components failed to disclose what may have prompted the pilot to want to return to the airport. Internal components of the right engine, however, were black and, according to a Textron Lycoming representative, were indicative of 'an excessively rich mixture.' A psychiatrist had recently treated the pilot for depression, attention deficit and bipolar disorders. The pilot also had a history of alcohol and drug abuse. Postmortem toxicology protocol disclose the presence of Fluoxetine (an antidepressant), Norfluoxetine (its metabolite), and Hydrocodone (the most commonly prescribed opiate).

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot initiating flight into known adverse weather conditions without proper certification. Factors were the meteorological conditions that existed --- low ceiling, low visibility, and falling snow --- and his use of contraindicated drugs.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - INTENTIONAL - PILOT IN COMMAND
2. (C) LACK OF CERTIFICATION - PILOT IN COMMAND
3. (F) OTHER PSYCHOLOGICAL CONDITION - PILOT IN COMMAND
4. (F) IMPAIRMENT(DRUGS) - PILOT IN COMMAND
5. (F) WEATHER CONDITION - LOW CEILING
6. (F) WEATHER CONDITION - OBSCURATION
7. (F) WEATHER CONDITION - SNOW

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Factual Information

HISTORY OF FLIGHT

On November 17, 1996, at 1505 mountain standard time, a Piper Aerostar 601P, N251B, was destroyed when it collided with terrain while maneuvering near Eagle, Colorado. The private, non-instrument rated pilot and four passengers were fatally injured. Instrument meteorological conditions prevailed, and an instrument flight rules (IFR) flight plan had been filed for the personal flight conducted under Title 14 CFR (Code of Federal Regulations) Part 91. The flight originated from Eagle, Colorado, at 1455.

According to the Denver Automated Flight Service Station (AFSS), a man who identified himself as the pilot of N251B telephoned the facility at 1418 and filed an IFR flight plan. He indicated the airplane was "/R" [RNAV (area navigation) and transponder equipped, with altitude encoding capability]. True airspeed was given as 220 knots, and he proposed to depart at 2145Z (1445 mst). Initial cruising altitude was to be 17,000 feet. The route of flight from EGE (Eagle, Colorado), direct RLG (Kremmling, Colorado), direct BJC (Jefferson County Airport, Broomfield, Colorado), direct SNY (Sidney, Nebraska), direct ONL (O'Neill, Nebraska), direct FSD (Sioux Falls, South Dakota), direct FCM (Flying Cloud Airport, Minneapolis, Minnesota). The pilot estimated his time en route would be 3 hours, 15 minutes, and listed 5 hours of fuel on board. [According to Vail/Beaver Creek Jet Center, Inc., the airplane was serviced with 146.7 gallons of 100/130 octane aviation grade fuel on November 17. This filled all tanks to capacity. According to the Piper Aerostar 601P PILOT'S OPERATING HANDBOOK, total fuel capacity is 173.5 gallons, of which 165.5 gallons are useable.] The pilot did not request, nor was he given, a weather briefing. Denver AFSS said they had no record of the pilot receiving a weather briefing prior to or after this contact.

The captain and first officer of a corporate jet, who had planned to depart Eagle, off-loaded their passengers because weather conditions were below Part 135 takeoff minimums. They saw the pilot of N251B preparing to depart, and they engaged in a conversation with him. He told the captain he was "confident he was going to be okay because he had his hand held GPS (Global Positioning System) and was from that area and he could tell where he was by feel." The first officer said he tried to discourage the pilot from departing, "but he was committed." As they were returning to their hotel, the corporate jet crew observed the Aerostar fly overhead. The captain said the airplane seemed to be over Interstate Highway 70, westbound, in a right turn and climbing over the mountains. The first officer said the airplane was "apparently attempting to return to the airport."

According to the transcript of radio communications, the pilot was cleared to taxi to runway 07 at 1446. At 1448, the pilot was issued his IFR clearance "to the Kremmling Vortac (Very High Frequency Omnidirectional Radio Range-Tactical Air Navigation), no delay expected, via the

published IFR departure procedure. Climb and maintain one four thousand (feet), and expect your filed altitude (at) one zero minutes after departure. Squawk zero six two seven. Contact Denver (air route traffic control) center (on frequency) one two eight point six five leaving one zero thousand feet." The pilot was cleared for takeoff at 1453. The tower controller said that as the airplane was making its takeoff roll, he glanced down at his weather monitor and noted the meteorology report. It is included in this report under "Meteorological Information."

At 1458, the pilot called the control tower and said he was "coming back in for runway two five." The controller said he would turn the strobe and runway lights up to full brightness. When he had done so, the controller asked the pilot if he had the airport in sight. He said he did not. At 1459, the controller asked the pilot if he "needed any assistance." The pilot said no, and he never declared an emergency. The controller asked the pilot for his position. The pilot replied, "Well, we're currently over the east end of the field. I think we're getting the problem resolved. Hang on a minute." At 1501 the pilot reported, "Five One Bravo's okay, we've got the problem resolved. Thanks." At 1505 the controller asked the pilot for his position. There was no reply to this or subsequent radio transmissions.

There were several witnesses who reported seeing or hearing a multiengine airplane, but only six submitted written statements. Witness 1 was at the west end of town when he heard a small twin engine aircraft. He said the engines "sounded good." The airplane was about 200 feet high, flying in an easterly direction, then it turned and headed west just (south) of the town. A few minutes later the airplane returned, heading east. The witness said he heard "the props being cycled...I thought he was icing up." The witness said the airplane then came back, heading west, then it turned north: "All the time he was cycling the props. I knew he was icing and trying to sling the ice off."

Witness 2 said she heard a twin engine airplane flying eastbound and the engines were "working (laboring) hard, trying to turn south." The sounds eventually diminished towards the west.

Witness 3, a supervisor with the Eagle County Sheriff's Office, heard "a very loud, sputtering engine roar," then she saw a small twin engine airplane come over condominium rooftops from the south. She said the right engine was trailing a steady stream of brownish-black smoke. The airplane "banked sharply west, dropping in altitude," then "it sharply turned south" towards Brush Creek. While she was in one of the condominiums, she heard the airplane pass overhead again. When she went outside, the airplane was making a third pass about 500 feet. This time she did not see smoke and the engine "seemed to be running smoother, but weak sounding." The airplane turned west, then south. The last time she saw the airplane, it was flying in an easterly direction about 1,000 feet, and it "sounded weak."

Witness 4, located southeast of town, heard "the unsynchronized sound of airplane engines revving up and down." He said the airplane was headed in an easterly direction about 1,000 feet. Soon, it came back heading west. Shortly thereafter, it came back heading east again. The engines were "still not sounding good. He last saw the airplane heading in a southwesterly

direction, "the engines sounded better" and the airplane "was still very low."

Witness 5 was in her home just east of the airport when she heard a departing airplane traveling east. There was "a loud pop, bang" that rattled the windows, then she heard "a high pitched whining noise for about a minute, then seemed to sound normal." About 5 minutes later she heard the airplane return, heading west. She said it sounded like the airplane circled her house, then headed east.

Witness 6, a pilot, was standing outside his home in Vail, about 35 miles west of Eagle. He heard (but did not see) a low flying airplane. He said the engines "sounded good." The weather was "very bad...it was snowing moderately," the ceiling "was no more than about 500-400 feet agl (above ground level)," and "the clouds seemed to engulf us."

According to the Eagle County Sheriff's report (96-8447), an off duty deputy reported seeing "a twin engine aircraft flying (eastbound) at about 500 feet. It sounded like it was having engine problems." He said the engine(s) were "revving very high" and then would "sputter." The airplane made "a high banking turn" to the north and lost altitude as it turned. Shortly thereafter, the airplane reappeared from the west, traveling east, approximately 1,000 feet and "it appeared there were no problems."

At 1508, another off duty sheriff's deputy reported seeing an airplane go behind a ridge in the Bellyache area and did not reappear.

The tower controller called Denver Air Route Traffic Control Center (ARTCC) and was advised the pilot had made no contact with that facility. After trying unsuccessfully to contact N251B, the tower controller notified the Eagle County Sheriff's Office at 1515 of a possible downed airplane. Emergency locator transmitter (ELT) signals were received and the Civil Air Patrol (CAP), assisted by the Eagle County Sheriff's Office and the Air National Guard (ANG), launched a ground and aerial search. The wreckage was located early the following morning by an ANG helicopter at a location of 39 degrees, 38 minutes, 93.6 seconds north latitude and 106 degrees, 45 minutes, 71.3 seconds west longitude.

PERSONNEL INFORMATION

The pilot's flight logbook was retrieved from Altitudes, Inc., a flight training facility at Centennial Airport in Englewood, Colorado, where the pilot had left it on November 7. According to the logbook, the pilot started taking flying lessons on September 30, 1995, in a Cessna 172 at Eagle, Colorado. On November 15, he began flying a Beech F33A, and he purchased it soon thereafter. The pilot took his recommendation ride on November 25 in the Beech F33A, and successfully passed his private pilot check ride on December 5, flying the Cessna 172.

When the pilot received his private pilot's license, he had logged the following flight times: single engine, 105.8; Cessna 172, 71.0; Beech F33A, 34.8; cross country, 34.2; day, 92.0; night,

13.8; simulated instruments, 0.6; dual received, 49.2; pilot in command, 56.6; total flight time, 105.8.

After the pilot obtained his private pilot's license, he flew the Beech F33A almost exclusively. On January 25 and 26, 1996, he took two lessons for a multiengine rating, flying a Piper PA-23-235 with Altitudes, Inc. Later that day, the 26th, he flew a Beech B55 for the first time. The following day, he took his multiengine recommendation ride, followed by the multiengine check ride, in the Beech B55.

One month elapsed between the time the pilot obtained his private pilot's license and when he received his multiengine rating. During that time period --- December 5, 1995 to January 27, 1996 --- the pilot flew 189.4 hours and logged the following total flight times: single engine, 288.5; multiengine, 6.7; Cessna 172, 71.0; Beech F33A, 217.5; Piper PA-23-235, 2.9; Beech 55, 3.8; cross country, 177.8; day, 239.3; night, 55.9; simulated instruments, 2.6; dual, 85.6; pilot in command, 246.0; total flight time, 295.2.

About the time he obtained his multiengine rating, the pilot traded his Beech F33A for the Beech 55 and flew it almost exclusively. Between entries made on October 6 and November 4, there was a complete blank page. As of November 6, 1996 (the last entry in the logbook), the pilot had accumulated the following flight times: single engine, 321.4; multiengine, 441.1; Cessna 172, 72.9; Beech F33A, 246.4; Piper PA-23-235, 2.9; Beech 55, 440.4; Piper PA-28R-201T, 2.1; Enstrom 280, 3.5; cross country, 592.3; day, 560.7; night, 196.1; simulated instrument, 8.1; AST-300, 4.6; actual instruments, 32.3; dual, 126.2; pilot in command, 713.3; total flight time, 765.0.

According to the president of Altitudes, Inc. (the company that trained the pilot for his multiengine rating), the pilot came into his office on November 4 and said he wanted to purchase a Piper Aerostar, but his insurance company required that he have an instrument rating. He was told the company would be happy to enroll him in the instrument pilot training course. The pilot said that was not what he wanted, but that he had sufficient instrument hours to be recommended for the check ride. After examining his logbook, the company determined that, aside from the 2.6 hours of simulated instruments recorded, the pilot had logged 32.3 hours of actual instruments. None of actual instrument time had been signed by a certified instrument flight instructor nor had it been entered into the "dual received" column. All of it had been logged as "pilot in command" time. The president said the pilot told him his instructor had "probably forgotten" to sign the entries, and that he would obtain the proper endorsements.

Meanwhile, the company gave the pilot two evaluation checks in an AST 300 flight simulator. The instructor said the pilot "needed a lot of work." The pilot received a rental checkout in the Piper PA-28R-201T on November 6, then asked if he could rent the airplane and fly to Eagle that evening. The president refused, telling the pilot the company did not allow single engine flight across the mountains at night. The president pointed out that darkness was approaching and it was becoming quite windy. "If it was windy down here, imagine what it

would be like over the mountains," the president told investigators. The president's refusal angered the pilot. The next day, the pilot was given a third simulator check. He left and never returned, leaving his logbook at Altitudes, Inc. According to the Federal Aviation Administration (FAA) and corroborated by his logbook, the pilot was not instrument rated.

The pilot purchased the Beech F33A, Beech 55, and Piper Aerostar 601P from a United Air Lines captain. The captain said he brokered used airplanes on the side. The captain said he flew with the pilot in the Aerostar on November 6 for about one hour. Upon returning to Centennial Airport, the pilot said he wanted to trade his Beech 55 for the Piper Aerostar. He gave him his personal check for $50,000 to cover the difference in price, and said he wanted to take immediate delivery. The captain refused, telling him it "just wasn't good business" to release the airplane until the check had cleared the bank. He also pointed out that the pilot had not obtained insurance on the airplane. The captain said his refusal to surrender the airplane also angered the pilot.

On November 10, the captain flew the Aerostar to Eagle where he met the pilot, and they flew to Grand Junction, Colorado. The pilot removed personal belongings from the Beech 55, then they departed for Minneapolis (Flying Cloud Airport), Minnesota. En route, the pilot suggested that they land at Rapid City and the captain could visit his mother. The pilot would then continue to Minneapolis. Asked if he felt comfortable with the airplane, the pilot said he was. The captain disembarked at Rapid City but instead of spending the night with his mother, he returned to Denver. The next day, he received a telephone call from the pilot who told him his trip to Minneapolis had been uneventful and that he planned to fly the Aerostar every day. The pilot said his GPS receiver had become inoperative, and asked that the captain send him via overnight mail his hand-held GPS receiver. The captain complied. That was the last contact the captain had with the pilot.

An attempt was made to estimate the pilot's Aerostar flight time. Using fuel receipts obtained at Eagle and Grand Junction, Colorado; Sioux Falls, South Dakota, and Eden Prairie, Minnesota; assuming fuel consumption rates of 32 gallons per hour (gph) maximum and 28 gph minimum, and adding those flights the captain made with the pilot, it was estimated the pilot had flown N251B a minimum of 13.3 hours and a maximum of 20.6 hours.

AIRCRAFT INFORMATION

The airplane maintenance records were recovered from the aft baggage compartment. According to these documents, the airplane underwent an annual inspection on April 25, 1996. At that time, the tachometer registered 1,715 hours and the Hobbs meter registered 1,473 hours. The engines, fuel control units, and magnetos were overhauled on this same date. Overhauled turbochargers were installed. Each engine is equipped with two turbochargers. The left turbocharger on the right engine had recorded 0 hours since overhaul, and the right turbocharger on the right engine had recorded 186 hours since overhaul. The left propeller was overhauled on July 8, and the right propeller was overhauled on July 1, 1993. Both propellers received 100-hour inspections when the airplane underwent the annual inspection.

All Airworthiness Directives had been accomplished. Other than a heated pitot tube, the airplane was not de-ice/anti-ice equipped.

METEOROLOGICAL INFORMATION

Weather observed and recorded as N251B began its takeoff roll was as follows: EGE SA 2155 (1455 mdt): Indefinite ceiling 400 feet obscured, 1 mile visibility, light snow, light mist. Temperature 28 degrees F., dew point 25 degrees F. Wind calm. Altimeter setting 30.07 inches of mercury.

The following official METARs (aviation routine weather report) were recorded at Eagle Airport: EGE 2215 (1515 mdt): Wind, 050 degrees at 3 knots. Visibility 3 statute miles. Scattered clouds 500 feet, ceiling 1,100 feet overcast. Temperature, -2 degrees Celsius; dew point, -4 degrees Celsius. Altimeter setting 30.06 inches of mercury.

WRECKAGE AND IMPACT INFORMATION

The first evidence of ground impact was on a wooded ridge at the 7,681 foot level. The airplane then catapulted approximately 1,000 feet across a draw and collided with another ridge and burned. The two impact points were aligned on a magnetic heading of 230 degrees. The cabin area was aligned on a magnetic heading of 220 degrees.

Due to the rough sloping terrain, all distances were estimated. At the first point of impact, the severed tops of several small trees were strewn alongside a large ground disruption. On the left side of this scar were several chop marks perpendicular to the wreckage path. The left wing tip was also located next to the scar. No damaged vegetation was noted to the right of the ground scar. Portions of the fiberglass radome and fuselage mounted antennae were found within the ground scar. About 30 feet beyond and to the right of the scar was a large boulder bearing chop type marks. Small pieces of wreckage, personal belongings, and the three separated left propeller blades were strewn between the two ridges. The intact right propeller assembly was located 300 feet downhill and to the right of wreckage centerline. The cockpit and cabin area burned after impact.

At the second point of impact a large tree, 12 inches in diameter, was severed 20 feet above the ground. About 20 feet from the tree was the severed empennage and baggage compartment. It had separated just aft of the pressure bulkhead. It had not burned. Inside the baggage compartment were the airplane maintenance records. The severed tail cone lay 10 feet from the empennage. About 50 feet from the tail cone were the remains of the cabin, resting on top of the left wing. No other portions of the airplane bore thermal damage. Thirty feet beyond the cabin were the right wing and engine. Flap jackscrews were in the retract position. The landing gear was also retracted. Control continuity was established from the various severed control ends to the respective control surfaces. Both halves of the cabin door were recovered. The door handle was in the latched position, the bayonet pins were extended,

and the indicator was in the safe region.

Serial numbers indicate the intact propeller assembly was from the right side; the three separated propeller blades came from the left propeller assembly. All six blades were twisted and curled, and bore leading edge gouges and 90 degree scratch marks on the cambered surfaces.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy (#96-160) was performed by Dr. Robert Kurtzman at Community Hospital, Grand Junction, Colorado. Toxicology protocol was performed by FAA's Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma. According to CAMI's report (#9600320001), Fluoxetine was detected in the liver (0.007 ug/mL, ug/g) and kidney. Norfluoxetine was detected in the liver (0.109 ug/mL, ug/g) and kidney (0.024 ug/mL, ug/g). Hydrocodone was detected in the liver (0.496 ug/mL, ug/g) and liver. According to a CAMI doctor, Fluoxetine is a "new generation of antidepressant drug" and Norfluoxetine is its metabolite. Hydrocodone is "the most commonly prescribed opiate" and is usually prescribed for pain. If abused, it can be addictive. NTSB's staff physician had no opinion as to what effect these drugs would have on the pilot because they were detected in liver and kidney tissue fluids, not blood. He did say that Fluoxetine could cause central nervous system side effects, and Hydrocodone could cause drowsiness and reaction time could diminish. Both drugs, he said, are contraindicated for flying.

Medical records were subpoenaed from the pilot's psychiatrist. A review of those records provided the following pertinent information. The pilot was seen 15 times between February 1995 and March 1996. On his initial visit, he related a history of mood instability; concentration, work, and marital difficulties; adolescent conduct disorder, drug and alcohol abuse; and two suicide attempts after the dissolution of his first marriage. The pilot was initially treated with Wellbutrin (bupropion) for diagnoses of depression and attention deficit and hyperactivity disorder. The pilot suggested that the treatment be changed to Dexedrine (dextroamphetamine) and the psychiatrist agreed. The dosage was reduced by the psychiatrist because of concerns that the pilot was addicted to the drug. In July 1995, the psychiatrist prescribed Prozac (fluoxetine) for depressive symptoms which the pilot attributed to his failing marriage, failing business, and significant debt. In December 1995, two months after the pilot began taking flying lessons, the psychiatrist began to suspect that the pilot had a bipolar disorder, reduced the dosage of dextroamphetamine even further, and suggested a mood stabilizer. In February, the psychiatrist described the pilot as "clearly hypomanic," and suggested he begin Lithium, withdraw from the amphetamines, and discontinue flying. On the pilot's last visit, the psychiatrist again recommended Lithium, and refused to prescribe additional amphetamines. The pilot stated that he would consult another psychiatrist.

According to the pilot's application for an FAA Class Airman Medical Certificate, dated October 14, 1995, he answered "No" to the following questions: "(m) Mental disorders of any sort; depression, anxiety, etc.; (n) Substance dependence or failed a drug test ever; or substance

abuse or use of illegal substance in the last 5 years; (o) Alcohol dependence or abuse; (p) Suicide attempt."

TESTS AND RESEARCH

Based on the airplane empty weight (taken from the Airplane Flight Manual), occupant weights (derived from the FAA medical certificate, autopsy reports, drivers' licenses, and estimates), and the weight of personal belongings (weighed by the Eagle County Sheriff's Office), computations indicate the airplane was within weight and balance limitations at the time of takeoff and at the time of the accident.

According to FAA's Denver Air Route Traffic Control Center (ARTCC) in Longmont, Colorado, radar picked up an aircraft's transponder code of 0627. The following are the times, positions, and altitudes of the target:

1504:36	39 degrees 39' 07" N	8,900 feet	106 degrees 47' 21" W
1504:48	39 degrees 38' 58" N	NO ALTITUDE	106 degrees 46' 51" W
1505:24	39 degrees 38' 43" N	8,700 feet	106 degrees 45' 24" W

The wreckage was located less than 1/2-mile from the last radar return at an elevation of 7,681 feet.

The wreckage was recovered and transported to Beegles Aircraft Service, Inc., in Greeley, Colorado, where, during the week of November 25, it was examined further. After removing the face plate of intact cockpit instruments, it was found that the airspeed indicator registered 110 knots; the turn coordinator indicated an approximately left standard rate turn with a full left ball; the radar altimeter showed 150 feet; the clock was stopped at 2:51:57; the lubber line on the horizontal situation indicator was over 274 degrees, and the course deviation indicator was three dots right of center. One altimeter was set to 30.03 inches of mercury and indicated 10,800 feet.

Both vacuum pumps were disassembled. All vanes were intact, and both cases bore scoring signatures.

Both engines were disassembled and were found to be unremarkable. Nothing was found that would render either engine incapable of producing power. The left engine piston domes, cylinders, and spark plugs appeared normal. The right engine piston domes, cylinders, and spark plugs, however, were black. According to the Textron Lycoming representative, this was indicative that the engine had been running at an excessively rich mixture.

Both propellers were disassembled. According to the Hartzell Propeller report, "both propellers were rotating and absorbing power at the time of impact" and the "impact blade angles were

consistent with a cruise power and cruise airspeed condition."

The right engine fuel servo was flow checked at Precision Airmotive in Everett, Washington, under the supervision of an NTSB air safety investigator from the Seattle, Washington, office. According to Precision Airmotive's report, the flow test showed the unit was operating normally.

The controller from the right engine's two turbochargers were at AlliedSignal in Torrance, California. According to AlliedSignal's report, the right engine's controller was "found to be fully operational." The left engine's controller was "found to be bypassing fluid continuously...the secondary poppet seat had been displaced downward." When the poppet was replaced with a new unit, the controller functioned normally. It was AlliedSignal's opinion that this condition would have precluded proper operation. "A displaced poppet would have allowed oil to bypass, (causing) the wastegate butterfly valves to be driven full open by spring pressure. This...would produce a very obvious power split between the engines, as the two turbochargers on the left side would have been providing very little boost." The report stated that the displacement appeared to be due to impact forces.

A friend of the pilot told investigators that on November 14, he flew with the pilot round trip to Des Moines, Iowa. He noted that one of the instruments had failed and he asked the pilot if he could fly safely with the inoperative instrument. The pilot said he could. Ask to describe what the instrument looked like, he said it had a miniature airplane on the instrument face. The flight director and turn coordinator both depict miniature airplanes. Upon return to Minneapolis, the pilot asked a repair station to make the necessary repairs. Before they had the opportunity to examine the instrument, the pilot and his passengers had departed for Eagle. Impact and thermal damage to the flight director and turn coordinator precluded ascertaining whether there had been a preexisting failure.

After arriving at Eagle, the pilot told his flight instructor that on the trip from Minneapolis, he had collided with a flock of birds. Examination of the wings, engine nacelles, air scoops and filters disclosed no evidence of blood, feathers, or any other indication of a bird strike.

ADDITIONAL INFORMATION

The wreckage was released to the owner's representative on November 18, 1996.

Parties to the investigation included the Federal Aviation Administration, Textron Lycoming (powerplants), AlliedSignal Aerospace (turbochargers), and Hartzell Propellers.

Pilot Information

Certificate:	Private	**Age:**	36,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	October 14, 1995
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	752 hours (Total, all aircraft), 16 hours (Total, this make and model), 725 hours (Pilot In Command, all aircraft), 193 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N251B
Model/Series:	AEROSTAR 601P AEROSTAR 6	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	61P-8063422
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	April 25, 1996 Annual	**Certified Max Gross Wt.:**	6000 lbs
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, aided in locating accident	**Engine Model/Series:**	IO-540-S1A5
Registered Owner:	DAVID S. LADOW	**Rated Power:**	290 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	EGE ,6535 ft msl	**Distance from Accident Site:**	6 Nautical Miles
Observation Time:	14:55 Local	**Direction from Accident Site:**	265°
Lowest Cloud Condition:		**Visibility**	1 miles
Lowest Ceiling:	Overcast / 400 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	-2°C / -4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	, CO (EGE)	**Type of Flight Plan Filed:**	IFR
Destination:	MINNEAPOLIS , MN (FCM)	**Type of Clearance:**	IFR
Departure Time:	00:00 Local	**Type of Airspace:**	Class E

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	
Runway Length/Width:		**VFR Approach/Landing:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	4 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	On-ground
Total Injuries:	5 Fatal	**Latitude, Longitude:**	39.649387,-106.820518(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	RICHARD E BENNETT; DENVER , CO
Original Publish Date:	February 2, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=20013