Aviation Investigation Final Report

Location:	Vermontville, Michigan	**Accident Number:**	CHI04LA129
Date & Time:	May 31, 2004, 14:00 Local	**Registration:**	N707SH
Aircraft:	Hall Lancair IV-P	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	3 Fatal
Flight Conducted Under:	Part 91: General aviation		

Analysis

The airplane flew into a thunderstorm during cruise flight and subsequently entered a flat spin until impact with terrain. The airplane had been given a heading to avoid the adverse weather by Lansing approach control. During transfer of control between Lansing approach and Cleveland center, the Cleveland controller was advised that the aircraft had been given a heading to avoid the adverse weather. After the handoff, the Cleveland controller instructed the pilot to proceed direct to an en-route fix when able, but did not provide any information about radar-observed weather ahead of the aircraft. The Chicago center controller who next handled the airplane was briefed that the airplane was proceeding direct to the en-route fix and had not requested any weather deviations. About seven minutes after the handoff between Cleveland and Chicago centers, the pilot transmitted, "Center this is uh 707SH what do you show us in up here?" Aircraft and weather radar data showed the accident airplane flew into an area of level six precipitation (extreme weather) prior to a rapid loss of altitude. Several witnesses reported first hearing the sound of a revving aircraft engine before seeing the airplane descending rapidly in a spiraling descent. A pilot-rated witness reported that the airplane was in a "flat spin" before impacting the terrain. Before the pilot departed on the accident flight, he was given a weather briefing that indicated his route of flight would take him into areas of thunderstorms, moderate turbulence, and icing. According to available pilot flight records, the pilot did not have a current biennial flight review and was not instrument current, as required by federal aviation regulations. No pre-impact anomalies were found with the airplane during the post-accident inspection.

"THIS CASE WAS MODIFIED 11/16/2006."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of Air Route Traffic Control Center controllers to provide adverse weather avoidance assistance as required by FAA directives, which led to the airplane's encounter with a thunderstorm and subsequent loss of control. Contributing to the accident was the pilot's decision to conduct flight into an area of known thunderstorms.

"THIS CASE WAS MODIFIED 11/16/2006."

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: CRUISE

Findings
1. (F) WEATHER CONDITION - THUNDERSTORM
2. (F) FLIGHT INTO KNOWN ADVERSE WEATHER - ATTEMPTED - PILOT IN COMMAND
3. (C) IN FLIGHT WEATHER AVOIDANCE ASSISTANCE - NOT PERFORMED - ATC PERSONNEL(ARTCC)

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: CRUISE

Findings
4. (C) AIRCRAFT CONTROL - NOT POSSIBLE - PILOT IN COMMAND
5. STALL/SPIN - ENCOUNTERED - PILOT IN COMMAND
6. LACK OF RECENT INSTRUMENT TIME - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
7. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On May 31, 2004, at 1400 eastern daylight time, an amateur-built Hall Lancair IV-P, N707SH, piloted by a private pilot, was destroyed during an in-flight collision with terrain following a loss of control during cruise flight near Vermontville, Michigan. Instrument meteorological conditions (IMC) with thunderstorms were present at the time of the accident. The business flight was operating under the provisions of 14 Code of Federal Regulations (CFR) Part 91 on an instrument flight rules (IFR) flight plan. The pilot and two passengers were fatally injured. The flight departed Willow Run Airport (YIP), Ypsilanti, Michigan, at 1330, and was en route to Billings Logan International Airport (BIL), Billings, Montana.

At 1213, the pilot of N707SH contacted Lansing (LAN) Automated Flight Service Station requesting a weather briefing for a flight from YIP, to Portland International Airport (PDX), Portland, Oregon, with an en route stop to be determined. The briefer advised the pilot to expect thunderstorm and rain shower activity in Michigan, moderate turbulence below 9,000 feet msl, and icing conditions between 7,000 and 14,000 feet msl. The briefer also described an area of thunderstorms extending from south of Milwaukee (MKE) through the Chicago metropolitan area and extending almost to the Iowa border. The briefer did not specify the source of the thunderstorm information, although it coincided with the area covered by SIGMET 43C (valid from 1155 to 1355). This SIGMET reported a developing area of thunderstorms moving from the west at 30 knots, with tops reaching 28,000 feet msl. The briefer advised the pilot to contact Flight Watch or flight service after departure for assistance in avoiding this adverse weather. The briefer then continued to provide weather information from the eastern Michigan area toward PDX and BIL, as well as winds aloft for the pilot's requested cruise altitude of 10,000 feet msl.

When asked where he planned to stop en route to PDX, the pilot replied, "Why don't we plan on Billings." The briefer advised that there were numerous notices to airmen in effect for BIL airport and its associated approach procedures. The pilot then filed an IFR flight plan from YIP to BIL via MKE, requesting a 10,000 feet msl cruise altitude.

N707SH departed YIP at 1330 en route to BIL. The cleared route of flight was YIP direct EARVN intersection, direct MKE, direct to BIL, cruising at 10,000 feet msl. The aircraft was initially in contact with Detroit departure control, and was subsequently handled by LAN approach control, Cleveland Air Route Traffic Control Center (ZOB), and finally Chicago Air Route Traffic Control Center (ZAU).

The pilot contacted LAN approach at 1341 while climbing to 10,000 feet msl. At 1344, the LAN approach controller asked if the aircraft was equipped with weather radar. The pilot

responded that it was not, and the controller advised the pilot of weather ahead that might affect the aircraft's flight. The pilot requested vectors around the weather.

At 1345, the LAN controller asked Grand Rapids approach control (GRR) to see if they could provide further information on the extent and intensity of the precipitation. GRR approach control was equipped with an ASR-9 radar antenna that depicted six-level weather information in addition to its basic air traffic control display capabilities. LAN approach control was equipped with an ASR-7 radar antenna that had limited weather capabilities. The GRR controller was unable to assist at that moment due to workload, but said that he would call back. The LAN controller then issued N707SH a 270-degree heading to avoid the weather depicted on the controllers display.

During this period, the aircraft climbed above its assigned altitude of 10,000 feet msl twice, at one instance reaching 10,800 feet msl. At 1349, the pilot requested to climb to 11,000 feet msl because it was "pretty bumpy" in the clouds. The LAN controller told the pilot to expect 12,000 feet msl, but to remain at 10,000 feet msl pending coordination with ZOB.

At 1350, the LAN controller completed an automated handoff to the ZOB Jackson sector. The LAN controller advised the ZOB Jackson controller that N707SH was on a 270-degree heading to avoid weather, and relayed the pilot's request for 12,000 feet msl. At 1351, the ZOB Jackson controller cleared N707SH to climb to 12,000 feet msl and instructed the pilot to proceed direct MKE when able, but did not provide any information about radar-observed weather ahead of the aircraft.

Aircraft radar track data was obtained from the GRR approach control facility. The plotted data showed the accident aircraft turned from the previously assigned 270-degree heading about 20-30 degrees right to a direct course toward MKE.

At 1351:41, the ZOB Jackson sector controller advised the ZAU Sparta sector controller that N707SH was proceeding direct to MKE and had not requested any weather deviations. The ZOB Jackson controller also told the ZAU Sparta controller that ZAU Sparta sector had control for any weather deviations and that the pilot had been having trouble holding altitude while at 10,000 feet msl. At 1354:06, the ZAU Sparta controller checked to see if N707SH was on frequency and asked the pilot to verify his altitude. The pilot stated that he was at 11,900 feet msl. At 1354:55 the ZAU Sparta controller told the pilot to report reaching 12,000 feet msl, which the pilot complied with at 1355:02.

At 1358:34, the pilot of N707SH transmitted, "Center this is uh 707SH what do you show us in up here?" The ZAU Sparta controller twice asked the pilot to repeat his message, with no immediate response. Aircraft radar track data was plotted on a weather radar chart that depicted areas of precipitation and their corresponding intensities. The plotted data showed the accident airplane flying into an area of level six precipitation at 12,000 feet msl, prior to a rapid loss of altitude. Level six precipitation returns are characterized as "Extreme" by the National Weather Service and are the highest intensity classification.

At 1359:09, the pilot transmitted, "707SH SOS I've got something wrong with the flight controls." At 1359:16, the ZAU Sparta controller responded, "707SH go ahead let me know what you need." At 1359:19, the sound of an open microphone was heard on the frequency for 12 seconds. At 1359:40, the pilot said, "Chicago center 707SH we are (going in I) can't maintain altitude. At 1359:53, the ZAU Sparta controller responded, "707SH roger there's no aircraft between you and the airport (unintelligible) for Grand Rapids. Grand Rapids is approximately twelve o'clock about 15 miles." There were no further contacts with N707SH.

At 1400:04, the ZAU Sparta radar associate controller contacted GRR approach to coordinate emergency information on N707SH. He informed GRR that the aircraft had been at 12,000 feet msl but appeared to have departed that altitude. At 1400:47, the ZAU Sparta radar associate told GRR, "... twenty to twenty five southwest of LAN looks like we've gone to a primary only it looks like he's right in the middle of that cell." The GRR controller was unable to assist ZAU Sparta sector in locating N707SH, but at 1402:02 he did report that he could see a weather cell at the location provided by ZAU Sparta sector for the aircraft.

The ZAU Sparta controllers contacted LAN approach, ZOB, and GRR approach and asked other aircraft in the area for assistance in locating or reestablishing contact with N707SH. At 1414:54, GRR approach advised the ZAU Sparta controller that the Eaton County police were investigating a report of an aircraft accident near Vermontville, Michigan. The wreckage site was subsequently located by the police and confirmed to be the accident airplane.

Transcripts of the voice communications and plots of the aircraft radar track data are included with the docket material associated with this factual report.

Several witnesses reported first hearing the sound of a revving aircraft engine before seeing the airplane descending rapidly in a spiraling descent, according to an Eaton County Sheriff Case Report. The report indicated that a pilot-rated witness observed the airplane in a "flat spin" before impacting the terrain.

The responding Deputy Sheriff reported that, "At the time the [accident] call was going out I was approximately a mile and a half away in Vermontville. At that time it had just started raining very heavily in Vermontville. It had been scattered clouds and then started raining heavily about the time the [accident] call went out."

PERSONNEL INFORMATION

The pilot held a private pilot certificate with single-engine land and instrument airplane ratings. Federal Aviation Administration (FAA) records indicate his last airman medical examination was completed on December 6, 2002, when he was issued a third-class medical certificate with the restriction; "must have available glasses for near vision."

The pilot's current flight logbook was stored on a laptop computer, which was reportedly

damaged during the accident. Another copy of the pilot's computerized logbook was located on different computer that documented his flight experience between July 5, 2000, and April 23, 2004. According to the last logbook entry, the pilot had a total flight time of 1,073.8 hours, of which 1,000.0 hours were as pilot-in-command (PIC). The pilot had reportedly flown approximately 65 hours in the accident airplane.

A portion of the pilot's hard-bound flight logbook was provided by a representative of his estate. This logbook contained training endorsements and documented his ground and flight training in the accident airplane. The most current flight review and instrument proficiency check were completed on May 29, 2001, as required by 14 CFR Part 61.56 and 61.57(d) respectively.

On April 26, 2004, the pilot reported his most current flight review was completed on April 10, 2004, while applying for an airplane insurance policy. However, the recovered flight logbooks did not contain a specific endorsement for the reported flight review training.

On April 9-10, 2004, the pilot obtained 10.0 hours of dual flight instruction from a Lancair endorsed flight instructor. On April 9, 2004, the pilot received an endorsement for ground instruction covering Lancair IV-P systems and operations. On April 10, 2004, the pilot received an endorsement for high-altitude airplanes, as required by 14 CFR Part 61.31(g). The pilot did not receive endorsements for a flight review or instrument proficiency check from the Lancair endorsed flight instructor. Subsequent to the accident, the flight instructor provided the pilot's insurance company the following signed statement: "Having flown with [the pilot], if I had been asked at the time we flew (April 2004), I would have agreed to endorse his logbook for the biennial flight review in accordance with the Federal Aviation Regulations."

The following flight times were calculated from the pilot's computerized flight logbook:

The pilot accumulated 156.0 flight hours in the past year, 77.3 hours during the prior 6 months, 47.6 hours during the past 90 days, and no hours during the previous 30 days. The last flight logbook entry was dated April 23, 2004.

The pilot had accumulated 107.1 flight hours in actual IMC. He did not log any flight hours in actual IMC during the previous year and no instrument approaches during flights in actual IMC. The computerized logbook did not track simulated instrument time. No safety pilot or instructor information was included with the logbook entries, as required by 14 CFR Part 61.51(g) if simulated instrument time had been flown.

The pilot had accumulated 113.6 flight hours during night conditions. During the previous 90 days he logged 2.0 hours at night and no hours during the prior 30 days.

AIRCRAFT INFORMATION

The accident airplane was a Hall Lancair IV-P, serial number LIV-363. The airplane was a

pressurized, low-wing airplane equipped with a retractable tricycle landing gear, electrically actuated wing flaps, and a single reciprocating engine with a constant speed propeller. The airframe was constructed of high temperature, epoxy prepreg, carbon fiber materials. The airplane was configured with two pilot stations and dual control side-sticks. The airplane accommodated four occupants and had a builder-specified maximum takeoff weight of 3,700 lbs.

The amateur-built airplane was issued an experimental airworthiness certificate on April 1, 2001. The last annual condition inspection was completed on April 7, 2004, at 84.7 hours total time since new. The airplane had reportedly flown approximately 65 hours since the inspection. The altimeter, static system, automatic pressure altitude reporting equipment and ATC transponder were last tested/certified on March 25, 2003. All applicable service bulletins had been complied with as of the April 2004 condition inspection.

The airplane was equipped with a 350 horsepower Teledyne Continental Motors TSIO-550-E1B engine, serial number 803149. The TSIO-550-E1B model was a six-cylinder, 550 cubic inch displacement, twin turbocharged, fuel injected, horizontally opposed reciprocating engine. The engine was manufactured on November 26, 2000, and installed on the accident airplane on January 4, 2003. The engine had a total time of 24.7 hours since new as of the April 2004 condition inspection. A review of the engine maintenance records found no history of operational problems.

The propeller was a three-bladed Hartzell PHC-H3YF-1RF/F7490, hub serial number HR138B. The propeller was manufactured on October 4, 2000, and was installed on the accident airplane on March 26, 2003. The propeller had accumulated 24.7 hours since new as of the April 2004. A review of the propeller maintenance records found no history of operational problems.

A post-accident calculation of the airplane's weight and balance indicated that it was under the builder-specified maximum gross weight and within the approved center-of-gravity range.

On May 28, 2001, the airplane was substantially damaged during a forced landing following a loss of engine power while in cruise flight. The aircraft was repaired by the original builder and subsequently sold to the accident pilot on April 8, 2004.

METEOROLOGICAL INFORMATION

There was an Automated Surface Observing System (ASOS) station located at the Gerald R. Ford International Airport, about 25 nm west-northwest of the accident site. The following weather conditions were recorded before and after the time of the accident:

At 1256: Wind 240 degrees true at 25 knots, gusting to 29 knots; visibility 10 statute miles (sm); broken ceiling at 2,200 feet above ground level (agl), broken ceiling at 4,500 feet agl; temperature 21 degrees Celsius; dew point 15 degrees Celsius; altimeter setting 29.43 inches

of mercury; Remarks: peak wind of 29 knots from 230 degrees true (recorded at 1256).

At 1356: Wind 250 degrees true at 24 knots, gusting to 29 knots; visibility 10 sm; broken ceiling at 2,800 feet agl (towering cumulus), broken ceiling at 8,000 feet agl, broken ceiling at 16,000 feet agl; temperature 21 degrees Celsius; dew point 13 degrees Celsius; altimeter setting 29.43 inches of mercury, Remarks: peak wind of 29 knots from 240 degrees true (recorded at 1355), towering cumulus present northwest to north.

At 1420: Wind 240 degrees true at 24 knots, gusting to 33 knots; visibility 10 sm; scattered clouds at 3,100 feet agl, broken ceiling at 18,000 feet agl; temperature 21 degrees Celsius; dew point 12 degrees Celsius; altimeter setting 29.44 inches of mercury, Remarks: peak wind of 33 knots from 250 degrees true (recorded at 1415), cumulonimbus present distant east moving northeast.

A Meteorological Impact Statement (MIS) was issued by the Center Weather Service Unit located at the Chicago Air Route Traffic Control Center. The MIS was issued for planning air traffic control operations and coordinating aircraft traffic flow. The statement indicated scattered areas of rain showers with isolated to widely scattered thunderstorms within the ZAU control area. Thunderstorm tops were stated to be between 20,000 feet and 25,000 feet msl.

An AIRMET for turbulence was issued at 1105 and was valid until 1600. The AIRMET forecasted occasional moderate turbulence below 9,000 feet msl due to moderate northwesterly to westerly winds.

Convective SIGMET 47C was valid at the time of the accident and noted a developing area of thunderstorms moving from 260 degrees true at 35 knots, with tops up to 29,000 feet msl.

Convective SIGMET 45C was valid at the time of the accident and noted a line of thunderstorms 30 nm wide moving from 270 degrees true at 30 knots, with tops up to 28,000 feet msl.

WRECKAGE AND IMPACT INFORMATION

Federal Aviation Administration (FAA) inspectors performed the on-scene inspection of the wreckage.

A global positioning system (GSP) receiver recorded the position of the main wreckage as 42-degrees 37.793-minutes north latitude, 85-degrees 03.632-minutes west longitude. The main wreckage was found in a wooded area located about 1.5 nm west of Vermontville, Michigan.

The main wreckage consisted of the fuselage, wings, empennage, engine, and propeller. There was no evidence of lateral wreckage propagation. There were several tree branches surrounding the main wreckage, consistent with the airplane traveling vertically through trees

prior to impact. The leading edges of both wings were not deformed or crushed in the aft direction. There was no evidence of either wing being displaced in the aft direction. The elevator counterbalance weights were found separated and embedded in the terrain directly below their respective elevators. The lower fuselage was crushed upward, uniformly along its length. The engine and propeller were partially buried in the terrain. The distribution of the wreckage was consistent with a slightly nose-low, wings level, vertical impact.

Aircraft debris was distributed around the main wreckage up to 50 feet. All primary airframe structural components, flight control surfaces, powerplant components, and propeller blades were present. Aileron flight control continuity was confirmed from the control surfaces to the cockpit side-sticks. Elevator and rudder flight control continuity could not be established due to damage. Inspection of the recovered flight control components did not exhibit any evidence of pre-impact malfunction. The wing flaps and speed brakes were found retracted. Damage to the nose and main landing gear was consistent an extended landing gear position at the time of impact.

The engine remained attached to its engine mounts and the firewall. The propeller remained attached to the engine propeller flange. All three propeller blades remained attached to the hub assembly. One blade had leading edge damage, chordwise scratching, burnishing of the blade backs, and spanwise S-shape bends. The other two blades were bent spanwise opposite the direction of rotation.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot and two passengers on June 1, 2004, at the Sparrow Regional Laboratories, Lansing, Michigan.

Toxicology samples for the pilot were submitted to the FAA Civil Aeromedical Institute, Oklahoma City, Oklahoma, and negative results were reported for all tests performed.

TESTS AND RESEARCH

FAA handbook 7110.65, "Air Traffic Control", paragraph 2-6-4, "Weather and Chaff Services", states in part:

* Issue pertinent information on observed/reported weather or chaff areas. Provide radar navigation guidance and/or approve deviations around weather or chaff areas when requested by the pilot.

* Issue weather and chaff information by defining the area of coverage in terms of aziumuth (by referring the 12-hour clock) and distance from the aircraft or by indicating the general width of the area of coverage in terms of fixes or distance and direction from fixes.

* Issue the level of echo intensity when that information is available.

* When a deviation cannot be approved as requested and the situation permits, suggest an alternative course of action.

* In areas of significant weather, plan ahead and be prepared to suggest, upon pilot request, the use of alternative routes/altitudes.

* Weather significant to the safety of aircraft includes such conditions as tornadoes, lines of thunderstorms, embedded thunderstorms, large hail, wind shear, microbursts, moderate to extreme turbulence (including clear air turbulence), and light to severe icing.

During an interview of the ZOB Jackson controller, the controller was asked what he meant by telling the pilot to proceed direct Milwaukee when able. The ZOB controller responded that he believed it was better to allow the pilot go on course and give the ZAU center control for possible deviations around any weather that they were showing on their displays. The ZOB controller confirmed that he saw weather about 8-10 minutes ahead of the accident airplane and acknowledged that the LAN controller had placed the airplane on the 270 degree heading to avoid weather. The ZOB controller stated he generally allows pilots to make any weather deviations based on the weather information that he relays. When asked to clarify why he believed the pilot could deviate around weather on his own after the LAN controller initiated the 270 degree heading to avoid weather, he responded that he was allowing the pilot to make his own decisions regarding weather.

Weather intensity and its NWS category is depicted on ARTCC controller displays by shade and type of shading: medium blue (level 2, light to moderate), crosshatched blue and cyan (level 3-4, strong), and solid cyan (level 5-6, intense to extreme).

During a post-accident interview, the ZAU controller stated that there were three levels of weather depicted on a scope: "light green" represented rain, "dark green" represented heavier rain, and a "checkerboard pattern" indicated the heaviest precipitation. The ZAU controller further stated that "light green" areas are level 1 weather or less, "dark green" represents levels 2 and 3, and the "checkerboard pattern" indicates level 3 or above.

ADDITIONAL INFORMATION

Parties to the investigation included the FAA, National Air Traffic Controllers Association (NATCA), and Lancair International Inc.

Pilot Information

Certificate:	Private	**Age:**	52,Male
Airplane Rating(s):	Single-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 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	December 6, 2002
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	May 29, 2001
Flight Time:	1074 hours (Total, all aircraft), 65 hours (Total, this make and model), 1000 hours (Pilot In Command, all aircraft), 48 hours (Last 90 days, all aircraft), 0 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hall	**Registration:**	N707SH
Model/Series:	Lancair IV-P	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	LIV-363
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	April 7, 2004 Annual	**Certified Max Gross Wt.:**	3700 lbs
Time Since Last Inspection:	65 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	150 Hrs at time of accident	**Engine Manufacturer:**	Teledyne Continental
ELT:	Installed, not activated	**Engine Model/Series:**	TSIO-550-E1B
Registered Owner:	Ward Synthesis, Inc.	**Rated Power:**	350 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	GRR,794 ft msl	**Distance from Accident Site:**	25 Nautical Miles
Observation Time:	13:56 Local	**Direction from Accident Site:**	300°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Broken / 2800 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	24 knots / 29 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	250°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.43 inches Hg	**Temperature/Dew Point:**	21°C / 13°C
Precipitation and Obscuration:			
Departure Point:	Ypsilanti, MI (YIP)	**Type of Flight Plan Filed:**	IFR
Destination:	Billings, MT (BIL)	**Type of Clearance:**	IFR
Departure Time:	13:30 Local	**Type of Airspace:**	Class E

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	2 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	3 Fatal	**Latitude, Longitude:**	42.630001,-85.060554

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew
Additional Participating Persons:	Carolyn B Remol; Federal Aviation Administration; Grand Rapids, MI Dan Diggins; Federal Aviation Administration; Washington, DC Barry Anshell; National Air Traffic Controllers Association; Chicago, IL Robert Wolstenhome; Lancair International Inc.; Redmond, OR
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