Aviation Investigation Final Report

Location:	Dana Point, California	**Accident Number:**	LAX03LA092
Date & Time:	February 21, 2003, 16:30 Local	**Registration:**	N7FF
Aircraft:	Everett BD-10	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During cruise flight, the pilot radioed a MAYDAY in which he stated that his experimental jet airplane was disintegrating. A witness flying in the area saw a fast moving object in front him and then a splash in the water. The witness was not able to focus on the object before it hit the water. When he flew over in that area he noted debris in the water as well as debris floating down out of the sky. Portions of the airplane not recovered from the ocean were the tail section with engine, forward cockpit section, and the main and nose landing gear. A failure point was not identifiable in the portions of the wreckage that were recovered. Aircraft logbooks were not made available for the accident airplane. A review of the radar data showed that the flight descended from 13,300 feet to 1,100 feet in 37 seconds.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: in-flight breakup of the experimental airplane for undetermined reasons.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE

Findings
1. (C) AIRFRAME - DISINTEGRATED
2. (C) REASON FOR OCCURRENCE UNDETERMINED

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

Findings
3. (C) DESIGN STRESS LIMITS OF AIRCRAFT - EXCEEDED
4. AIRCRAFT CONTROL - NOT POSSIBLE

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

Findings
5. TERRAIN CONDITION - WATER

Factual Information

HISTORY OF FLIGHT

On February 21, 2003, at 1630 Pacific standard time, an experimental Everett BD-10, N7FF, experienced an in-flight breakup about 3 miles off San Mateo Point near Dana Point, California. The commercial pilot/owner operated the airplane under the provisions of 14 CFR Part 91. The airplane was destroyed. The pilot, the sole occupant, was fatally injured. Visual meteorological conditions prevailed for the local area flight that departed the John Wayne-Orange County Airport (SNA), Santa Ana, California, at 1555. No flight plan had been filed. The flight was scheduled to terminate at SNA. The wreckage was at 33 degrees 21.9 minutes north latitude and 117 degrees 37.9 minutes west longitude.

According to friends of the pilot, he often flew to Catalina Airport (AVX), Avalon, California, in an orbiting pattern to flight test his airplane. Friends further indicated that the pilot had not mentioned any mechanical anomalies.

A Federal Aviation Administration (FAA) inspector interviewed a witness flying in the area at the time of the accident. The witness reported that he was at 1,500 feet traveling from Santa Monica to San Diego. He saw a "very fast moving object in front of him" that he estimated was 1 mile away. He then saw a splash in the water that rose 100 feet from the water's surface. The witness stated that the object was moving too quickly for him to focus on it. When he arrived in the area of the splash, he noted debris floating on the water. He reported that he was not able to identify it at first, but notified flight watch on 122.0. He circled the area for a few minutes before he was able to tell the debris was airplane parts. He notified Hawthorne Automated Flight Service Station (AFSS) of a downed airplane. AFSS requested that he remain in the area until the Coast Guard arrived on scene.

The witness stated about 5 minutes after the initial splash; he saw a square panel "flutter out of the sky" a few hundred feet east of the crash site.

PERSONNEL INFORMATION

A review of FAA airman records revealed the pilot held a commercial pilot certificate with airplane single and multiengine land and rotorcraft-helicopter ratings, and instrument airplane and helicopter ratings. The pilot also held a repairman experimental aircraft builder certificate for the accident airplane, BD-10 serial number 0002. The certificate was issued on July 22, 1998.

The pilot held a third-class medical certificate issued on January 3, 2002. It had the limitation that the pilot must wear corrective lenses.

No personal flight records were located for the pilot and the aeronautical experience listed in this report was obtained from a review of the airman FAA records on file in the Airman and Medical Records Center located in Oklahoma City, Oklahoma. These records indicated a total time of 2,200 hours with 20 hours logged in the last 6 months.

AIRCRAFT INFORMATION

The airplane was a 1997 experimental amateur built Everett BD-10, serial number 0002. There were no engine or airframe logbooks recovered for the accident airplane. However, according to the FAA's registration information a General Electric CJ610-J85-J4 turbojet engine, serial number 255020, was installed on the single engine jet airplane.

According to the airplane's operating limitations, the accident airplane was limited to a maximum airspeed not to exceed 300 knots calibrated airspeed.

COMMUNICATIONS

The following facilities provided services to the accident pilot during the accident flight:
SNA controller (departure airport)
Southern California Terminal Radar Approach Control (TRACON) Pacific Sector - PACR
Los Angeles Air Route Traffic Control Center (ARTCC) Sector 21 radar position - Sector 21

The accident airplane radioed SNA clearance delivery at 1555 UTC, received a visual flight rules (VFR) departure, and was issued a squawk code of 0240. After receiving taxi instructions, the pilot was cleared for takeoff from SNA at 1609. His instructions were to maintain VFR at or below 5,000 feet mean sea level (msl) and to contact SoCal. The pilot acknowledged the instructions; reported leaving 2,000 feet.

At 1610, the pilot reported into PACR and indicated that he was out 4,000 feet for 5,000 feet. At that time the pilot indicated that he wanted to maneuver around Dana Point and climb to 16,000 feet. PACR advised the pilot to resume own navigation and recommended an altitude of 16,500 feet. PACR also advised the pilot to reset his transponder code to 4611, which the pilot acknowledged. At 1612, PACR initiated a manual handoff to Sector 21. Sector 21 advised PACR of radar contact.

Between 1612 and 1616, transmissions between Sector 21 and the accident pilot indicate that the accident airplane was 15 miles southeast of SNA. The pilot requested to circle around 16,500 feet, and that he was VFR. Sector 21 asked what the pilot's route of flight was. The pilot indicated that he was going to fly between Santa Catalina (SXC) and Dana Point.

At 1619, Sector 21 advised the US Navy Fleet Area Control and Surveillance Facility (FACSFAC) that the accident airplane will be doing airwork between SXC and Dana Point at 16,500 feet.

At 1624, the accident pilot made a "MAYDAY" call that was stepped on by another radio transmission. Sector 21 asked if someone said "mayday." The accident pilot again said 'Mayday, mayday," and advised that he "was out of control." Sector 21 queried the transmission, and the accident pilot confirmed the MAYDAY and stated that, he was out of control and that he thought he "was disintegrating."

WRECKAGE AND IMPACT INFORMATION

The Orange County Sheriff's Department rescue boat reported that debris was floating in the Pacific Ocean about 2 to 3 miles off San Mateo Point. The debris was scattered in a 200-yard radius of the accident site. The Coast Guard recovered the debris.

MEDICAL AND PATHOLOGICAL INFORMATION

The Orange County Sheriff-Coroner, Santa Ana, conducted an autopsy on the pilot on February 22, 2003. The FAA Toxicology and Accident Research Laboratory, Oklahoma City, performed a toxicological analysis from samples obtained during the autopsy. The results of the analysis of the specimens were negative for carbon monoxide, cyanide, volatiles, and tested drugs.

TESTS AND RESEARCH

An inspector from the FAA examined the wreckage at the owner's hangar on February 26, 2003. Wreckage not recovered from the ocean included the tail section with engine, forward cockpit section, main and nose landing gear. According to the FAA inspector, he was not able to identify a failure point that lead to the in-flight breakup from the recovered wreckage.

A National Transportation Safety Board Air Traffic Control specialist plotted available radar information for the accident flight. The airplane was identified through discreet transponder codes, 4611 and 0240. As identified by the discreet transponder codes, radar returns showed the airplane departing SNA on a local area flight that went out towards SXC, and then circled back towards the shoreline before dropping off radar.

Radar returns for the last 37 seconds of flight showed the following altitudes:

0024:39 - altitude 13,300 feet
0024:43 - altitude 11,900 feet
0024:53 - altitude 6,200 feet
0024:57 - altitude 3,800 feet
0025:02 - altitude 1,100 feet

ADDITIONAL INFORMATION

The Safety Board investigator in charge released the wreckage to the owner's representative on February 22, 2003.

Pilot Information

Certificate:	Commercial	**Age:**	53,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Unknown
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3	**Last FAA Medical Exam:**	January 1, 2002
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	2200 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Everett	**Registration:**	N7FF
Model/Series:	BD-10	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	0002
Landing Gear Type:	Retractable - Tricycle	**Seats:**	2
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Turbo jet
Airframe Total Time:		**Engine Manufacturer:**	General Electric
ELT:		**Engine Model/Series:**	CJ610-J85--J4
Registered Owner:	Franklin F. Everett	**Rated Power:**	
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SNA,56 ft msl	**Distance from Accident Site:**	20 Nautical Miles
Observation Time:	16:53 Local	**Direction from Accident Site:**	310°
Lowest Cloud Condition:	Few / 25000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.02 inches Hg	**Temperature/Dew Point:**	17°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Santa Ana, CA (SNA)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	VFR
Departure Time:	16:09 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	33.361389,-117.623611

Administrative Information

Investigator In Charge (IIC):	Cornejo, Tealeye
Additional Participating Persons:	Roger A Kari; Federal Aviation Administration; Long Beach, CA
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Last Revision Date:	
Investigation Class:	Class
Note:	
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