National Transportation Safety Board

NTSB Overview

Jill Demko

Technical Training Officer

Mission

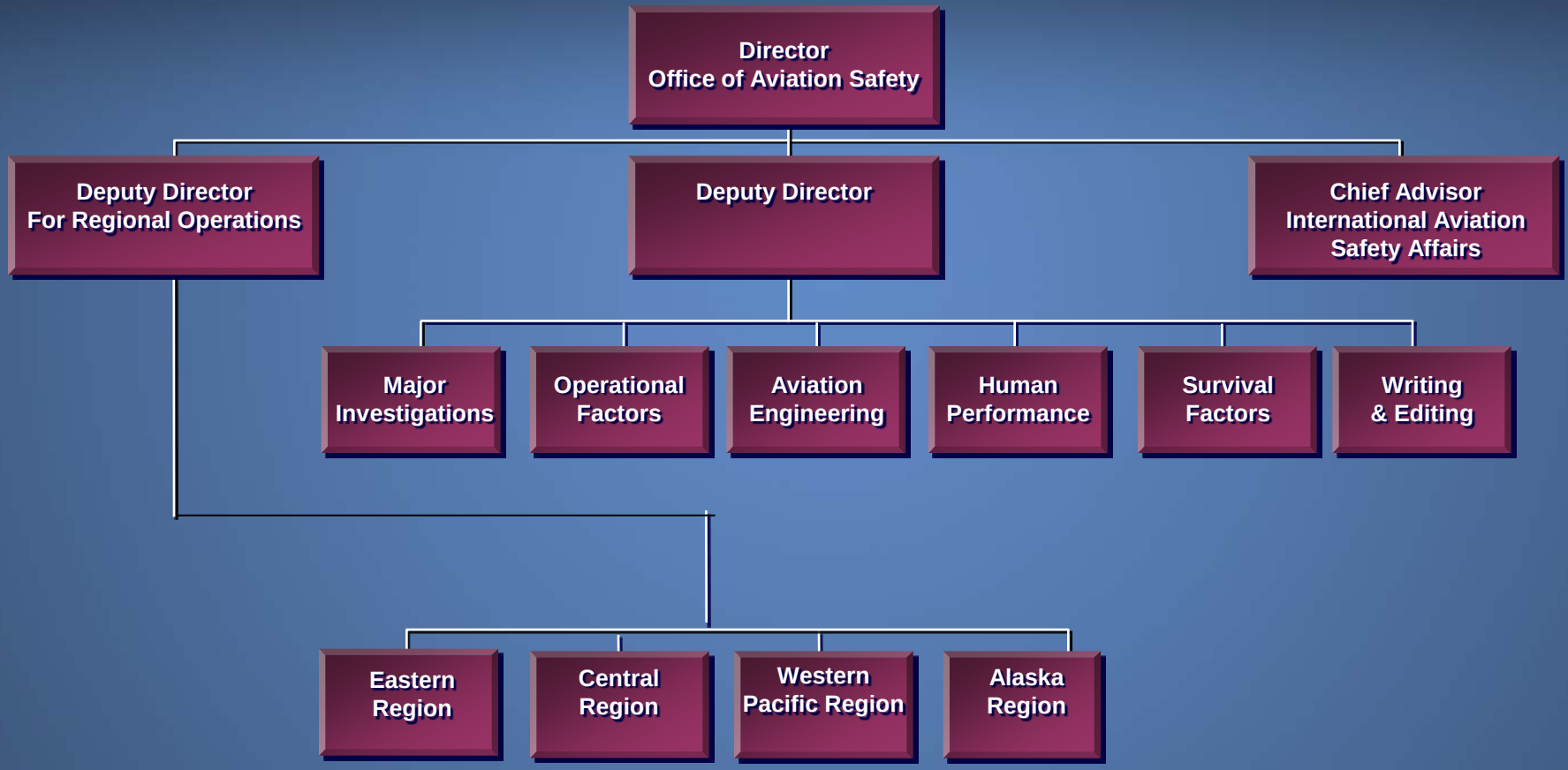
The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in the other modes of transportation -- railroad, highway, marine and pipeline -- and issuing safety recommendations aimed at preventing future accidents.

Mission

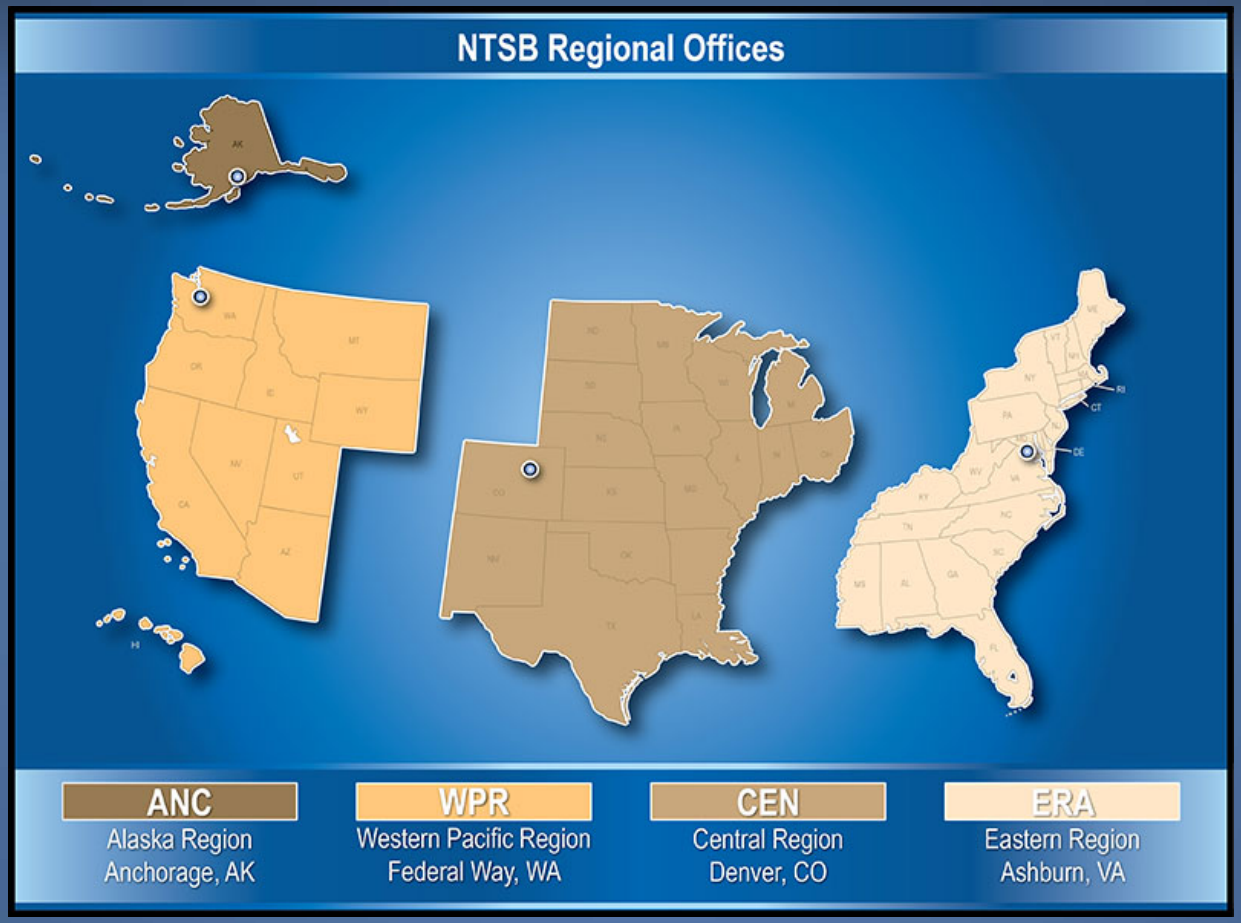
The NTSB is additionally charged with:

- conducting special studies and investigations
- coordinating resources to assist victims and their families after an accident.
- Court of Appeals (through ALJ) for airmen, mechanics, and mariners who have certificate actions against them

The Office of Aviation Safety



NTSB Regional Structure



Your Closest Regional Office

Eastern Regional Aviation (ERA)
45065 Riverside Parkway
Ashburn, Virginia 20147
Phone: 571-223-3930
FAX: 571-223-3926

Chief: Mr. Steven Gottlieb 571-223-3925
Deputy Chief: Mr Jeff Kennedy 305-597-4625

NTSB Communications Center: 202-314-6290

What is an Accident?

What is an Accident?

An occurrence associated with the operation of an aircraft which:

- takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which
- any person suffers death or serious injury, or in which
- the aircraft receives substantial damage

Serious Injury

Any injury which:

- Requires hospitalization for more than 48 hours, commencing within 7 days of the date that the injury was received;
- Results in a fracture of any bone (except simple fractures of fingers, toes, or nose);

Cont'd:

- Causes severe hemorrhages, nerve, muscle, or tendon damage;
- Involves any internal organ or;
- Involves 2nd or 3rd degree burns, or burns affecting more than 5% of the body surface

Substantial Damage

Substantial Damage is…

Damage or failure which:

- Adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which
- Would normally require major repair or replacement of the affected component

Substantial Damage is ***not***…

- Engine failure or damage limited to an engine if only one engine fails or is damaged,
- Bent fairings or cowling
- Dented skin
- Small punctured holes in the skin or fabric
- Ground damage to rotor or propeller blades
- Damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered “substantial damage” for the purpose of this part.

Accident or Incident?

Accident or Incident?

Accident or Incident?

Incidents

Incidents
“An occurrence other than an accident associated with the operation of an aircraft, which affects or could affect the safety of operations.” **- 49 Code Federal Regulations 830.2**

Notification and Reporting

The operator of an aircraft shall *immediately* and by the *most expeditious means available* notify the nearest NTSB Field Office when an *aircraft accident* or any of the following *incidents* occur:

- Flight control system malfunction
- Inability of any crew member to perform normal flight duties as a result of injury or illness
- In-flight fire
- Damage to property, exceeding $25,000
- Aircraft collision in flight

Notification Requirements

Updated Incidents (830.5):

- Uncontained engine failure (turbine)
- Release of propeller blade (not ground)
- Failure of more than 50% of cockpit displays (EFIS, EICAS, PFD, PND, etc.)
- TCAS resolution advisory with risk of collision
- Damage to helicopter rotors (major replacement)

What to do if you are involved in an accident/incident

- ✓ Notify NTSB
- ✓ Preserve wreckage
- ✓ Take photos
- ✓ Retain records
- ✓ Complete NTSB Form 6120 (Pilot/Operator Report)
- ✓ Cooperate with investigators

Accident Reporting

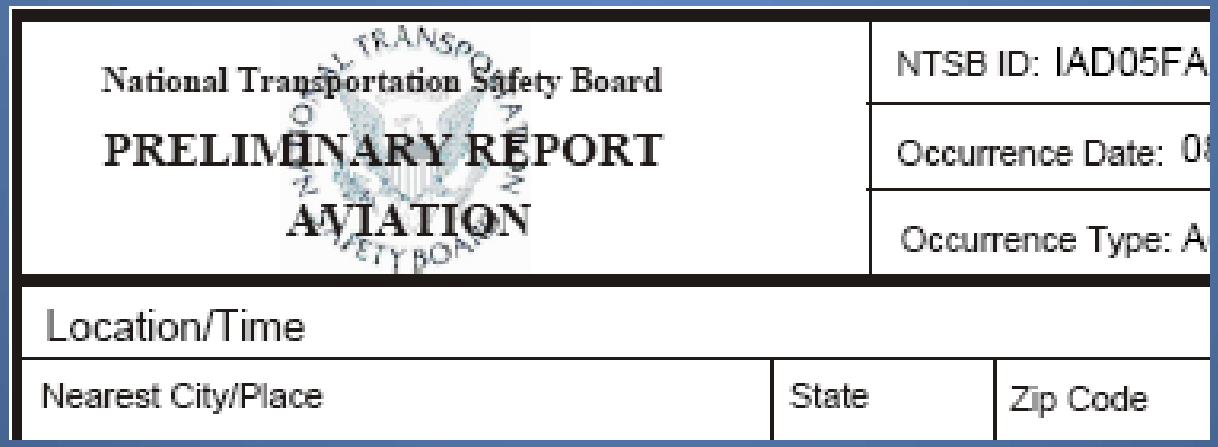
- Notify NTSB field office or NTSB HQ.
- Contact information on NTSB website http://www.ntsb.gov
- Notify local FAA FSDO or ATC
- Law Enforcement will typically notify an FAA Ops Center

Preservation of Wreckage

- Operator is responsible for preserving wreckage and records
- May not be disturbed unless
  - To remove persons injured or trapped
  - To protect from further damage
  - To protect public from injury
- If necessary, operator takes pictures, makes diagrams, etc.

Preliminary Report

- Released about 10 days after accident [Except the one-time Collection Report (CA) 30 days]
- Contains initial information, subject to change
- Available at www.ntsb.gov



National Transportation Safety Board

PRELIMINARY REPORT

AVIATION

NTSB ID: IAD05FA

Occurrence Date: 0

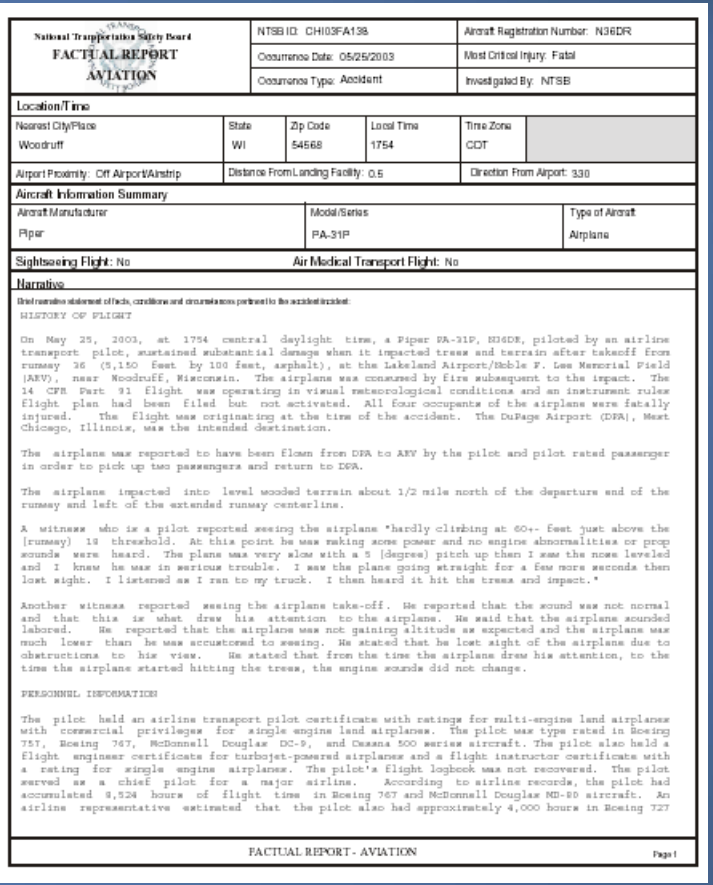
Occurrence Type: A

Location/Time

Nearest City/Place	State	Zip Code

Factual Report

- Released about 4 to 12 months after accident
- Contains much more detailed information
- Available at: www.ntsb.gov



National Transportation Safety Board
FACTUAL REPORT
AVIATION

NTSB ID: CHI03FA138		Aircraft Registration Number: N36DR
Occurrence Date: 05/25/2003		Most Critical Injury: Fatal
Occurrence Type: Accident		Investigated By: NTSB

Location/Time

Nearest City/Place	State	Zip Code	Local Time	Time Zone
Woodruff	WI	54568	1754	CDT

Airport Proximity: Off Airport/Airstrip	Distance From Landing Facility: 0.5	Direction From Airport: 330

Aircraft Information Summary

Aircraft Manufacturer	Model/Series	Type of Aircraft
Piper	PA-31P	Airplane

Sightseeing Flight: No Air Medical Transport Flight: No

Narrative

Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

HISTORY OF FLIGHT

On May 25, 2003, at 1754 central daylight time, a Piper PA-31P, N36DR, piloted by an airline transport pilot, sustained substantial damage when it impacted trees and terrain after takeoff from runway 26 (5,150 feet by 100 feet, asphalt), at the Lakeland Airport/Noble F. Lee Memorial Field (ARV), near Woodruff, Wisconsin. The airplane was consumed by fire subsequent to the impact. The 14 CFR Part 91 flight was operating in visual meteorological conditions and an instrument rules flight plan had been filed but not activated. All four occupants of the airplane were fatally injured. The flight was originating at the time of the accident. The DuPage Airport (DPA), West Chicago, Illinois, was the intended destination.

The airplane was reported to have been flown from DPA to ARV by the pilot and pilot rated passenger in order to pick up two passengers and return to DPA.

The airplane impacted into level wooded terrain about 1/2 mile north of the departure end of the runway and left of the extended runway centerline.

A witness who is a pilot reported seeing the airplane "hardly climbing at 60+- feet just above the [runway] 18 threshold. At this point he was making some power and no engine abnormalities or prop sounds were heard. The plane was very slow with a 5 [degree] pitch up then I saw the nose leveled and I knew he was in serious trouble. I saw the plane going straight for a few more seconds then lost sight. I listened as I ran to my truck. I then heard it hit the trees and impact."

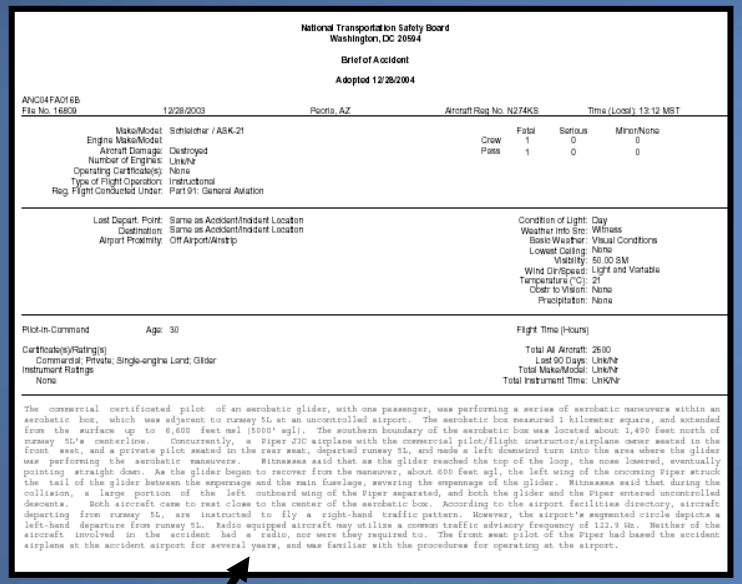
Another witness reported seeing the airplane take-off. He reported that the sound was not normal and that this is what drew his attention to the airplane. He said that the airplane sounded labored. He reported that the airplane was not gaining altitude as expected and the airplane was much lower than he was accustomed to seeing. He stated that he lost sight of the airplane due to obstructions to his view. He stated that from the time the airplane drew his attention, to the time the airplane started hitting the trees, the engine sounds did not change.

PERSONNEL INFORMATION

The pilot held an airline transport pilot certificate with ratings for multi-engine land airplanes with commercial privileges for single engine land airplanes. The pilot was type rated in Boeing 757, Boeing 767, McDonnell Douglas DC-9, and Cessna 500 series aircraft. The pilot also held a flight engineer certificate for turbojet-powered airplanes and a flight instructor certificate with a rating for single engine airplanes. The pilot's flight logbook was not recovered. The pilot served as a chief pilot for a major airline. According to airline records, the pilot had accumulated 8,524 hours of flight time in Boeing 767 and McDonnell Douglas MD-80 aircraft. An airline representative estimated that the pilot also had approximately 4,000 hours in Boeing 727

FACTUAL REPORT - AVIATION Page 1

Brief/Probable Cause Report



National Transportation Safety Board
Washington, DC 20594

Brief of Accident

Adopted 12/28/2004

ANC04FA016B
File No. 16809 | 12/28/2003 | Peoria, AZ | Aircraft Reg No. N274KS | Time (Local): 13:12 MST

		Fatal	Serious	Minor/None
Make/Model:	Schleicher / ASK-21			
Engine Make/Model:				
Aircraft Damage:	Destroyed	Crew	1	0	0
Number of Engines:	Unk/Nr	Pass	1	0	0
Operating Certificate(s):	None				
Type of Flight Operation:	Instructional				
Reg. Flight Conducted Under:	Part 91: General Aviation				

Last Depart. Point: Same as Accident/Incident Location
Destination: Same as Accident/Incident Location
Airport Proximity: Off Airport/Airstrip

Condition of Light: Day
Weather Info Src: Witness
Basic Weather: Visual Conditions
Lowest Ceiling: None
Visibility: 50.00 SM
Wind Dir/Speed: Light and Variable
Temperature (°C): 21
Obstr to Vision: None
Precipitation: None

Pilot-In-Command | Age: 30

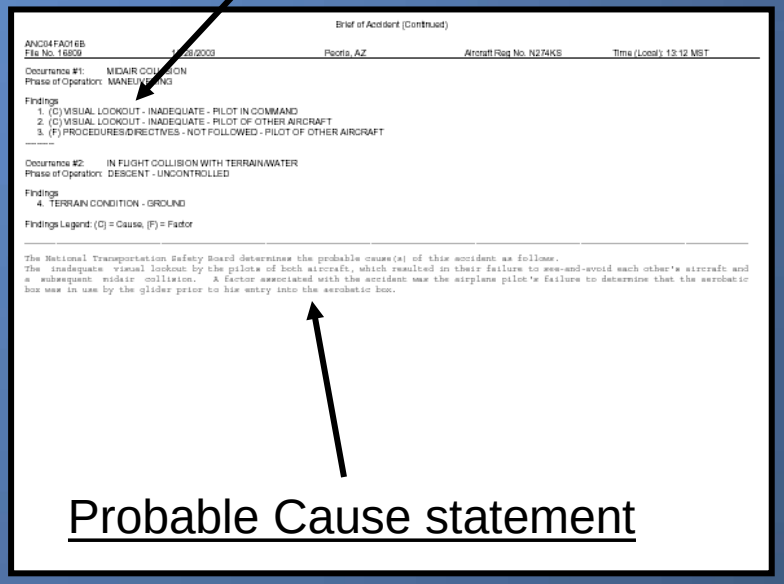
Certificate(s)/Rating(s)
Commercial; Private; Single-engine Land; Glider
Instrument Ratings
None

Flight Time (Hours)
Total All Aircraft: 2500
Last 90 Days: Unk/Nr
Total Make/Model: Unk/Nr
Total Instrument Time: Unk/Nr

The commercial certificated pilot of an aerobatic glider, with one passenger, was performing a series of aerobatic maneuvers within an aerobatic box, which was adjacent to runway 5L at an uncontrolled airport. The aerobatic box measured 1 kilometer square, and extended from the surface up to 6,600 feet msl (5000' agl). The southern boundary of the aerobatic box was located about 1,490 feet north of runway 5L's centerline. Concurrently, a Piper J3C airplane with the commercial pilot/flight instructor/airplane owner seated in the front seat, and a private pilot seated in the rear seat, departed runway 5L, and made a left downwind turn into the area where the glider was performing the aerobatic maneuvers. Witnesses said that as the glider reached the top of the loop, the nose lowered, eventually pointing straight down. As the glider began to recover from the maneuver, about 600 feet agl, the left wing of the oncoming Piper struck the tail of the glider between the empennage and the main fuselage, severing the empennage of the glider. Witnesses said that during the collision, a large portion of the left outboard wing of the Piper separated, and both the glider and the Piper entered uncontrolled descents. Both aircraft came to rest close to the center of the aerobatic box. According to the airport facilities directory, aircraft departing from runway 5L, are instructed to fly a right-hand traffic pattern. However, the airport's segmented circle depicts a left-hand departure from runway 5L. Radio equipped aircraft may utilize a common traffic advisory frequency of 122.9 Mz. Neither of the aircraft involved in the accident had a radio, nor were they required to. The front seat pilot of the Piper had based the accident airplane at the accident airport for several years, and was familiar with the procedures for operating at the airport.

Analytical summary

Coding of causes, factors, and findings



Brief of Accident (Continued)

ANC04FA016B
File No. 16809 | 12/28/2003 | Peoria, AZ | Aircraft Reg No. N274KS | Time (Local): 13:12 MST

Occurrence #1: MIDAIR COLLISION
Phase of Operation: MANEUVERING

Findings
1. (C) VISUAL LOOKOUT - INADEQUATE - PILOT IN COMMAND
2. (C) VISUAL LOOKOUT - INADEQUATE - PILOT OF OTHER AIRCRAFT
3. (F) PROCEDURES/DIRECTIVES - NOT FOLLOWED - PILOT OF OTHER AIRCRAFT

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
4. TERRAIN CONDITION - GROUND

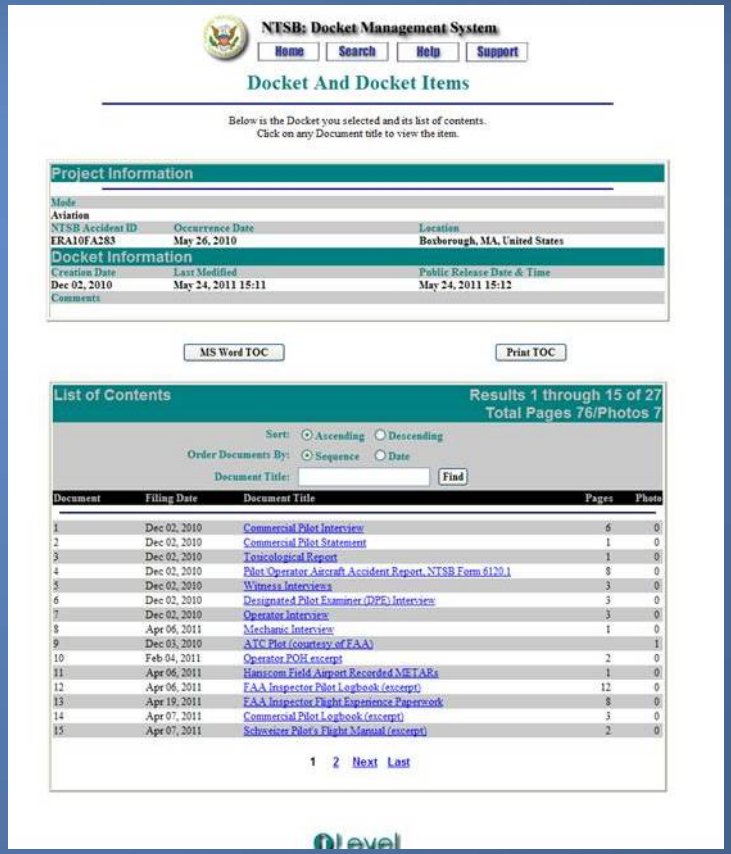
Findings Legend: (C) = Cause, (F) = Factor

The National Transportation Safety Board determines the probable cause(s) of this accident as follows.
The inadequate visual lookout by the pilots of both aircraft, which resulted in their failure to see-and-avoid each other's aircraft and a subsequent midair collision. A factor associated with the accident was the airplane pilot's failure to determine that the aerobatic box was in use by the glider prior to his entry into the aerobatic box.

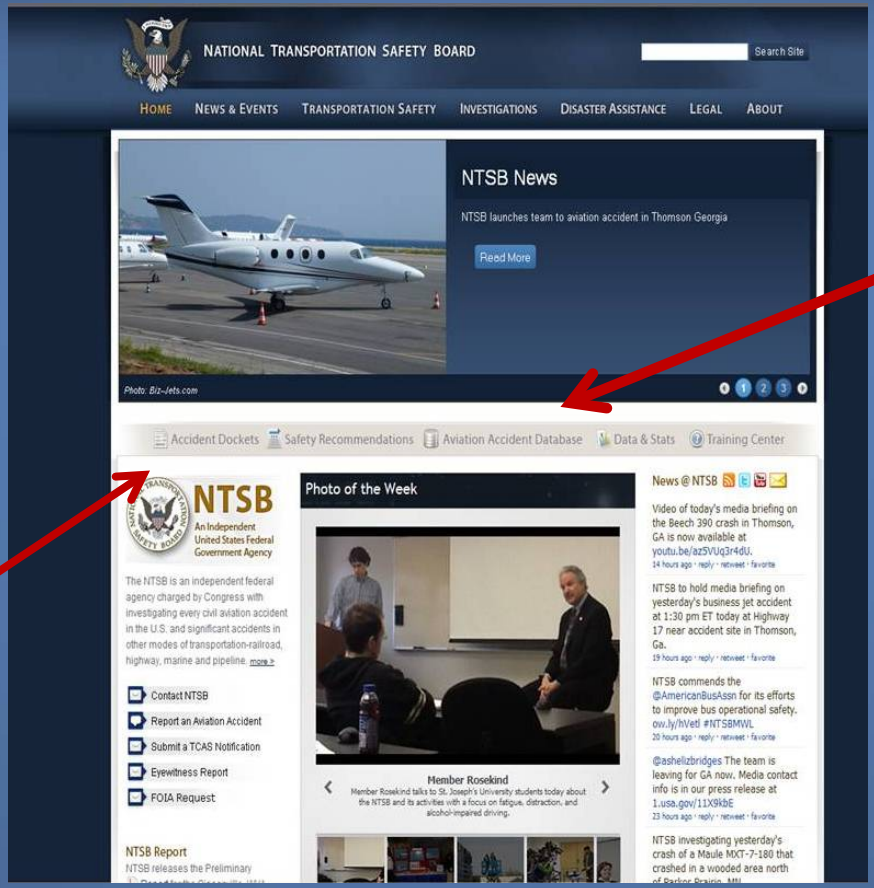
Probable Cause statement

Public Docket

- Contains all supporting documents for a case
- Released concurrently with factual report
- Now available on the web



Where can I find these reports?



Reports

Public Dockets

National Transportation Safety Board