



National Transportation Safety Board Aviation Accident Final Report

Location:	Bayport, NY	Accident Number:	ERA14LA181A
Date & Time:	04/03/2014, 1230 EDT	Registration:	N409FM
Aircraft:	VANS AIRCRAFT INC RV-12	Aircraft Damage:	Minor
Defining Event:	Midair collision	Injuries:	1 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The RV-12 was inbound for landing and had joined a 45-degree approach to the left base leg for the runway. The Chipmunk had taxied to the end of the runway to conduct an engine run-up. The pilot of the RV-12 said that he made a radio call on the common traffic advisory frequency (CTAF) while he was on the 45-degree base leg and during his turn to final. The Chipmunk pilot stated that he made a radio call on the CTAF stating his intention to depart. Both pilots said that they did not hear any traffic on the CTAF, nor did they see any traffic in the pattern or on the ground. The pilot of the RV-12 stated that the front half of the Chipmunk came into his view as the RV-12 was in its landing flare. Subsequently, the propeller of the RV-12 struck the rudder and vertical stabilizer of the Chipmunk, causing substantial damage and causing the RV-12 to lose thrust. A portion of the propeller blade tip from the RV-12 and a lead rudder balance weight from the Chipmunk were later discovered on the west half of the runway. The Chipmunk continued with the takeoff and landed shortly thereafter at a nearby airport. The RV-12 landed safely immediately after the collision.

Examination of the airport environment revealed that, depending on the angle and altitude of inbound aircraft and the position of aircraft on the ground, trees surrounding the approach end of the runway could block a pilot's view of arriving or departing aircraft.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of both pilots to see and avoid each other, which resulted in a collision.

Findings

Personnel issues	Monitoring other aircraft - Pilot (Cause) Monitoring other aircraft - Pilot of other aircraft (Cause)
Environmental issues	Tree(s) - Effect on personnel

Factual Information

HISTORY OF FLIGHT

On April 3, 2014 about 1230 eastern daylight time (EDT), an experimental amateur-built Vans RV-12, N409FM, and a DeHavilland DHC-1 "Chipmunk," N12BH collided over the runway at the Bayport Aerodrome (23N), Bayport, New York. The Chipmunk received substantial damage and the RV-12 received minor damage. The private pilot in the RV-12 and the airline transport pilot in the Chipmunk were not injured. Visual meteorological conditions prevailed and no flight plans were filed for either flight. The RV-12 departed the Cherry Ridge Airport (N30) in Honesdale, Pennsylvania. The Chipmunk was departing Bayport Aerodrome for Long Island MacArthur Airport (ISP) in Islip, New York. Both airplanes were being operated as personal flights in accordance with Title 14 Code of Federal Regulations Part 91.

According to the pilot of the RV-12, he stated that he made a radio call at the "mid bay" position announcing his intentions to land at 23N. The pilot also stated that he made subsequent radio calls while crossing the shoreline, when on 45-degree left base leg for runway 36, and on the turn onto the final. During the approach, the pilot of the RV-12 stated that he did not see any traffic on the runway. When the pilot of the RV-12 began his flare for landing, he stated that the "forward half of a departing aircraft came into view." One of the propeller blades of the RV-12 then struck the upper aft portion of the vertical stabilizer and rudder of the Chipmunk. The RV-12 then landed without power, while the Chipmunk departed to the north and continued to ISP. A portion of the propeller blade tip from the RV-12 and a lead rudder balance weight from the Chipmunk, were later discovered on the west half of runway.

According to the pilot of the Chipmunk, after taxiing to the south end of runway 36 he did an engine run-up and transmitted his intentions to depart on runway 36 on the traffic advisory frequency. The pilot said that he did not see anyone in the traffic pattern or hear them on the radio when he conducted a 360-degree turn to look for traffic prior to departing on the runway. At rotation the pilot of the Chipmunk stated that he "thought something in the tail or in the back had broken or let go or even possibly was hit by a bird." The pilot of the Chipmunk also stated that he thought his airplane was "controllable and flyable" and so he continued to ISP for landing on runway 33L.

PERSONNEL INFORMATION

The pilot of the RV-12 held a Federal Aviation Administration (FAA) private pilot certificate with a rating for airplane single-engine land. He reported on that he had accrued approximately 740 total flight hours.

The pilot of the Chipmunk held a Federal Aviation Administration (FAA) airline transport pilot certificate with a rating for airplane single-engine land, multi-engine land. He also held a flight instructor certificate for airplane single-engine land, multi-engine land, and instrument airplane. His most recent FAA first-class medical certificate was issued on April 4, 2014. He reported on that date that he had accrued approximately 36,000 total flight hours.

AIRCRAFT INFORMATION

According to FAA and airplane maintenance records, the RV-12 was issued its special airworthiness certificate in 2010. The airplane's most recent conditional inspection was completed on October 1, 2013. At the time of accident, the airplane had accrued approximately

338 total hours of operation.

According to FAA and airplane maintenance records, the Chipmunk was manufactured in 1956. The airplane's most recent annual inspection was completed on March 11, 2014. At the time of accident, the airplane had accrued approximately 2,500 total hours of operation.

METEOROLOGICAL INFORMATION

Recorded weather obtained from ISP's automated weather observation system located approximately 3 miles northwest of the accident site revealed that visual flight rules weather existed around the time of the accident.

At 1156 the reported weather included: wind 320 degrees at 9 knots, visibility 10 statute miles, scattered clouds at 25,000 feet, temperature 14 C, dewpoint -4 C, altimeter 30.09 inches of mercury.

AIRPORT INFORMATION

According to the airport facility directory (AFD), 23N, was a publicly owned, non-towered airport with an elevation of about 41 feet above mean sea level (MSL). It had one turf runway oriented in a 18/36 configuration. Which was 2,740 feet long and 150 feet wide. Runway 36 threshold was displaced 550 feet and was marked with concrete blocks flush with the turf surface. The gradient for runway 36 was 2%. There was a visual approach slope indicator which provided a 5 degree glidepath located on the right side of the runway, however, the AFD stated that the panels may or may not be lighted. Obstacles existed at the approach end of runway 36 in the form of 60 foot tall trees which were located 150 feet from the runway on both sides of the centerline which took an 11:1 slope to clear.

The AFD for 23N advised that all arriving aircraft enter the traffic pattern on a 45-degree left base leg for runway 36 at 600 feet MSL due to heavy jet traffic out of ISP.

TESTS AND RESEARCH

A review of satellite imagery and aerial photos of the airport indicated that portions of the approach end of runway 36 would be blocked from view due to trees, when using the published traffic pattern entry for runway 36. It was also noted that aircraft entering the traffic pattern for runway 36 would not be visible by aircraft on the ground holding short at the approach end of runway 36.

ADDITIONAL INFORMATION

As a result of this accident, in order to improve safety, the New York Department of Transportation added the following comments to the Airport/Facility Directory:

"PILOTS BE ADVISED: DUE TO PATTERN PROCEDURES, AIRCRAFT IN THE RUN-UP AREA OR STARTING TAKEOFF ROLL ON RWY 36, AND AIRCRAFT ON FINAL APPROACH TO RWY 36, MAY NOT BE ABLE TO SEE EACH OTHER DUE TO TREES."

History of Flight

Landing-flare/touchdown

Midair collision (Defining event)

Pilot Information

Certificate:	Private	Age:	57
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:	No
Medical Certification:	Sport Pilot None	Last Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	06/23/2012
Flight Time:	740 hours (Total, all aircraft), 338 hours (Total, this make and model), 560 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 9.3 hours (Last 30 days, all aircraft), 2.4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	VANS AIRCRAFT INC	Registration:	N409FM
Model/Series:	RV-12	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental Light Sport	Serial Number:	120290
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	10/01/2013, Conditional	Certified Max Gross Wt.:	1320 lbs
Time Since Last Inspection:	49 Hours	Engines:	1 Reciprocating
Airframe Total Time:	338 Hours	Engine Manufacturer:	Rotax
ELT:	Installed, not activated	Engine Model/Series:	912 ULS
Registered Owner:	On file	Rated Power:	100 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	ISP, 98 ft msl	Observation Time:	1256 EDT
Distance from Accident Site:	3 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	315°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Scattered / 14000 ft agl	Temperature/Dew Point:	9° C / -3° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	11 knots, 350°	Visibility (RVR):	
Altimeter Setting:	30.11 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	HONESDALE, PA (N30)	Type of Flight Plan Filed:	None
Destination:	Bayport, NY (23N)	Type of Clearance:	None
Departure Time:	1130 EDT	Type of Airspace:	Class G

Airport Information

Airport:	Bayport Aerodrome (23N)	Runway Surface Type:	Grass/turf
Airport Elevation:	41 ft	Runway Surface Condition:	Dry
Runway Used:	36	IFR Approach:	None
Runway Length/Width:	2740 ft / 150 ft	VFR Approach/Landing:	Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Minor
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None		

Administrative Information

Investigator In Charge (IIC):	Todd G Gunther	Adopted Date:	10/27/2014
Additional Participating Persons:	Steve Ferrara; FAA/FSDO; Farmingdale, NY		
Publish Date:	10/27/2014		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=89011		

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