



# National Transportation Safety Board Aviation Accident Final Report

<b>Location:</b>	Seattle, WA	<b>Accident Number:</b>	WPR11FA159
<b>Date &amp; Time:</b>	03/10/2011, 1841 PST	<b>Registration:</b>	N671AV
<b>Aircraft:</b>	FAIRCHILD SA227-AC	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Landing gear not configured	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

## Analysis

The pilot reported that following two attempts to land in crosswind conditions, he was cleared to land and was instructed by the air traffic control tower controller to follow another airplane on final approach. For spacing considerations, the controller instructed the pilot to conduct "S" turns behind the traffic landing ahead of him. As the airplane descended to an altitude of about 200 feet above ground level, the controller instructed the pilot to go around and maintain altitude. The pilot executed a go-around procedure, which included retracting the landing gear and reducing the flap setting to one-half flaps. Shortly after, the pilot was issued a clearance to land. The pilot proceeded with the landing clearance and subsequently landed with the gear in the retracted position, which resulted in structural damage to the airframe. Postaccident examination of the airplane revealed no mechanical anomalies or failures with the landing gear or landing gear warning system.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to extend the landing gear, which resulted in a gear-up landing.

## Findings

### Aircraft

<b>Personnel issues</b>	Forgotten action/omission - Pilot (Cause)
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## Factual Information

On March 10, 2011, about 1841 Pacific standard time, a Fairchild SA227-AC, N671AV, sustained substantial damage during a gear-up landing at the Boeing Field King County International Airport (BFI), Seattle, Washington. The commercial pilot, the sole occupant of the airplane, was not injured. The airplane was registered to UAS Transervices Inc., Pasadena, California, and operated by Ameriflight Inc., Burbank, California, under the provisions of Title 14 Code of Federal Regulations Part 135. Visual meteorological conditions prevailed and an instrument flight rules flight plan was filed for the on-demand cargo flight. The cross-country flight originated from Lewiston (LWS), Idaho, at 1715 with an intended destination of BFI.

In a written statement, the pilot reported to the National Transportation Safety Board investigator-in-charge that he began his duty day at 0530 for his scheduled flight from BFI to LWS. Upon arriving at LWS, the pilot was notified of an unscheduled flight back to BFI and subsequent return to LWS. The pilot stated that the unscheduled trip during that day "disrupted my normal sleep pattern." Upon returning to LWS the afternoon of the day of the accident, he began his normal scheduled afternoon flight from LWS to BFI. The pilot said that the flight was uneventful except for moderate turbulence over the Cascade mountain range. While en route to BFI, the pilot obtained weather at BFI, noting wind from 210 degrees at 16 knots, gusting to 35 knots.

The pilot further reported that his first two landing attempts at BFI resulted in aborted landing attempts due to the crosswinds and airspeed deviations of 30 knots. He said that during his third attempt to land, he was instructed by the air traffic control tower (ATCT) controller to follow a Cessna Citation that was on final approach for runway 13R. Upon reporting the traffic in sight, the pilot was given his landing clearance and subsequently told to "turn base early" due to another airplane on approach to landing. The pilot stated that the Citation "missed their runway turnoff" to the taxiway and that he was told by the air traffic controller to make "S" turns for spacing. As the airplane descended to about 200 feet above ground level on final approach to the runway, the pilot was instructed by the controller to "go around, maintain altitude." The pilot said that he executed the go-around procedure, which included flaps to one-half and landing gear up. About 10 seconds later, the pilot was issued a landing clearance by the controller. The pilot stated that he "...proceeded with my landing clearance, knowing that all check-lists have been completed, and I was in a normal position to land. There is no gear warning system with flaps 1/2 and no call outs or check-lists to indicate my gear had been retracted." Subsequently, the airplane landed gear up on runway 13R. The airplane came to rest upright in a safety area between runway 13R and 13L just south of alpha 7 taxiway.

Review of the pilot training manual for the Fairchild SA227-AC revealed that a landing gear warning horn will sound if either power lever is retarded to flight idle or the flaps are lowered slightly beyond 1/2 when the landing gear is not in the down and locked position.

Examination of the airplane by company maintenance personnel and a Federal Aviation Administration (FAA) inspector revealed structural damage to both engine firewalls and aft fuselage bulkhead. Following recovery of the wreckage, the airplane was placed on jack stands. Power was applied to the airplane and the landing gear system was actuated to the up and down positions with no mechanical anomalies noted.

## History of Flight

Landing-flare/touchdown	Landing gear not configured (Defining event) Runway excursion
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## Pilot Information

Certificate:	Commercial	Age:	20, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Without Waivers/Limitations	Last Medical Exam:	07/14/2010
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	02/15/2011
Flight Time:	2432 hours (Total, all aircraft), 78 hours (Total, this make and model), 2294 hours (Pilot In Command, all aircraft), 130 hours (Last 90 days, all aircraft), 55 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Manufacturer:	FAIRCHILD	Registration:	N671AV
Model/Series:	SA227-AC	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	AC671
Landing Gear Type:	Retractable - Tricycle	Seats:	12
Date/Type of Last Inspection:	02/21/2011, AAIP	Certified Max Gross Wt.:	14500 lbs
Time Since Last Inspection:	88 Hours	Engines:	2 Turbo Prop
Airframe Total Time:	21847 Hours	Engine Manufacturer:	AIRESEARCH
ELT:	Installed, not activated	Engine Model/Series:	TPE331 SERIES
Registered Owner:	UAS TRANSERVICES INC	Rated Power:	904 hp
Operator:	AMERIFLIGHT INC	Air Carrier Operating Certificate:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	JIKA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night
Observation Facility, Elevation:	BFI, 21 ft msl	Observation Time:	1853 PST
Distance from Accident Site:	0 Nautical Miles	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 8500 ft agl	Temperature/Dew Point:	7° C / 3° C
Lowest Ceiling:	Broken / 12000 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	16 knots/ 28 knots, 200°	Visibility (RVR):	
Altimeter Setting:	29.86 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Lewiston, ID	Type of Flight Plan Filed:	IFR
Destination:	Seattle, WA (BFI)	Type of Clearance:	IFR
Departure Time:	1715 PST	Type of Airspace:	

## Airport Information

Airport:	Boeing Field King County Int. (BFI)	Runway Surface Type:	Asphalt
Airport Elevation:	21 ft	Runway Surface Condition:	Dry
Runway Used:	13R	IFR Approach:	None
Runway Length/Width:	10000 ft / 100 ft	VFR Approach/Landing:	Full Stop; Traffic Pattern

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	47.530000, -122.301944 (est)

## Administrative Information

Investigator In Charge (IIC):	Joshua Cawthra	Adopted Date:	12/13/2011
Additional Participating Persons:	Jennifer Audette; Federal Aviation Administration; Renton, WA		
Publish Date:	06/12/2017		
Note:	The NTSB traveled to the scene of this accident.		
Investigation Docket:	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=78531">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=78531</a>		

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