



National Transportation Safety Board Aviation Accident Final Report

Location:	Perris, CA	Accident Number:	GAA17CA303
Date & Time:	05/24/2017, 1515 PDT	Registration:	N708PV
Aircraft:	DEHAVILLAND DHC 6	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Skydiving		

Analysis

The pilot of the twin-engine, turbine-powered airplane reported that, while providing flights for skydivers throughout the day, he had a potential new hire pilot flying with him in the right seat. He added that, on the eighth flight of the day, the new pilot was flying during the approach and "approximately 200' [ft.] south from the threshold of [runway] 15 at approximately 15 feet AGL [above ground level] the bottom violently and unexpectedly dropped out. [He] believe[d] some kind of wind shear caused the aircraft [to] slam onto [the] runway and bounce into the air at a 45 to 60-degree bank angle to the right." The prospective pilot then said, "you got it." The pilot took control of the airplane and initiated a go-around by increasing power, which aggravated the "off runway heading." The right wing contacted the ground, the airplane exited the runway to the right and impacted a fuel truck, and the right wing separated from the airplane. The impact caused the pilot to unintentionally add max power, and the airplane, with only the left engine functioning, ground looped to the right, coming to rest nose down.

The airplane sustained substantial damage to the fuselage and right wing.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The automated weather observation system about 8 nautical miles from the accident site reported that, about the time of the accident, the wind was from 280° at 7 knots, visibility 10 statute miles, few clouds at 20,000 ft agl, temperature 86°F, dew point 45°F, and altimeter 29.81 inches of mercury. The pilot landed on runway 15.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The prospective pilot's improper landing flare and the pilot's delayed remedial action to initiate a go-around, which resulted in a runway excursion.

Findings

Aircraft	Landing flare - Not attained/maintained (Cause)
Personnel issues	Aircraft control - Copilot (Cause) Delayed action - Pilot (Cause)
Environmental issues	Windshear - Effect on operation Ground vehicle - Contributed to outcome

Factual Information

History of Flight

Landing	Windshear or thunderstorm Loss of control in flight (Defining event)
Landing-aborted after touchdown	Abnormal runway contact Attempted remediation/recovery Dragged wing/rotor/float/other Runway excursion Collision with terr/obj (non-CFIT) Nose over/nose down

Pilot Information

Certificate:	Airline Transport; Flight Engineer	Age:	56, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap Only
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without Waivers/Limitations	Last Medical Exam:	12/27/2016
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	01/23/2017
Flight Time:	(Estimated) 3358 hours (Total, all aircraft), 2131 hours (Total, this make and model), 3198 hours (Pilot In Command, all aircraft), 31 hours (Last 90 days, all aircraft), 27 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Co-Pilot Information

Certificate:	Commercial	Age:	31, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Lap Only
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without Waivers/Limitations	Last Medical Exam:	09/22/2016
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	03/15/2016
Flight Time:	(Estimated) 1893 hours (Total, all aircraft), 12 hours (Total, this make and model), 1725 hours (Pilot In Command, all aircraft), 26 hours (Last 90 days, all aircraft), 24 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	DEHAVILLAND	Registration:	N708PV
Model/Series:	DHC 6 300	Aircraft Category:	Airplane
Year of Manufacture:	1976	Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	489
Landing Gear Type:	Tricycle	Seats:	24
Date/Type of Last Inspection:	05/01/2017, 100 Hour	Certified Max Gross Wt.:	12500 lbs
Time Since Last Inspection:		Engines:	2 Turbo Prop
Airframe Total Time:	37885.7 Hours	Engine Manufacturer:	Pratt & Whitney
ELT:	C126 installed, not activated	Engine Model/Series:	PT6A-27
Registered Owner:	PM LEASING INC	Rated Power:	620 hp
Operator:	On file	Air Carrier Operating Certificate:	None
Operator Does Business As:	SKYDIVE PERRIS	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KRIV, 1536 ft msl	Observation Time:	2158 UTC
Distance from Accident Site:	8 Nautical Miles	Direction from Accident Site:	349°
Lowest Cloud Condition:	Few / 20000 ft agl	Temperature/Dew Point:	30° C / 7° C
Lowest Ceiling:		Visibility	10 Miles
Wind Speed/Gusts, Direction:	7 knots, 280°	Visibility (RVR):	
Altimeter Setting:	29.81 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Perris, CA (L65)	Type of Flight Plan Filed:	None
Destination:	Perris, CA (L65)	Type of Clearance:	Traffic Advisory; VFR
Departure Time:	1445 PDT	Type of Airspace:	Class G

Airport Information

Airport:	PERRIS VALLEY (L65)	Runway Surface Type:	Asphalt
Airport Elevation:	1413 ft	Runway Surface Condition:	Dry
Runway Used:	15	IFR Approach:	None
Runway Length/Width:	5100 ft / 50 ft	VFR Approach/Landing:	Full Stop; Straight-in; Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	33.761111, -117.218056 (est)

Preventing Similar Accidents

Stay Centered: Preventing Loss of Control During Landing

Loss of control during landing is one of the leading causes of general aviation accidents and is often attributed to operational issues. Although most loss of control during landing accidents do not result in serious injuries, they typically require extensive airplane repairs and may involve potential damage to nearby objects such as fences, signs, and lighting.

Often, wind plays a role in these accidents. Landing in a crosswind presents challenges for pilots of all experience levels. Other wind conditions, such as gusting wind, tailwind, variable wind, or wind shifts, can also interfere with pilots' abilities to land the airplane and maintain directional control.

What can pilots do?

- Evaluate your mental and physical fitness before each flight using the Federal Aviation Administration's (FAA) ["I'M SAFE Checklist."](#) Being emotionally and physically ready will help you stay alert and potentially avoid common and preventable loss of control during landing accidents.
- Check wind conditions and forecasts often. Take time during every approach briefing to fully understand the wind conditions. Use simple rules of thumb to help (for example, if the wind direction is 30 degrees off the runway heading, the crosswind component will be half of the total wind velocity).
- Know your limitations and those of the airplane you are flying. Stay current and practice landings on different runways and during various wind conditions. If possible, practice with a flight instructor on board who can provide useful feedback and techniques for maintaining and improving your landing procedures.
- Prepare early to perform a go around if the approach is not stabilized and does not go as planned or if you do not feel comfortable with the landing. Once you are airborne and stable again, you can decide to attempt to land again, reassess your landing runway, or land at an alternate airport. Incorporate go-around procedures into your recurrent training.
- During landing, stay aligned with the centerline. Any misalignment reduces the time available to react if an unexpected event such as a wind gust or a tire blowout occurs.
- Do not allow the airplane to touch down in a drift or in a crab. For airplanes with tricycle landing gear, do not allow the nosewheel to touch down first.
- Maintain positive control of the airplane throughout the landing and be alert for directional control difficulties immediately upon and after touchdown. A loss of directional control can lead to a nose-over or ground loop, which can cause the airplane to tip or lean enough for the wing tip to contact the ground.
- Stay mentally focused throughout the landing roll and taxi. During landing, avoid distractions, such as conversations with passengers or setting radio frequencies.

Interested in More Information?

The FAA’s “[Airplane Flying Handbook](#)” (FAA-H-8083-3B), [chapter 8](#), “Approaches and Landings,” provides guidance about how to conduct crosswind approaches and landings and discusses maximum safe crosswind velocities. The handbook can be accessed from the FAA’s [website](#) (www.faa.gov).

The FAA Safety Team (FAASafetyTeam) provides access to online training courses, seminars, and webinars as part of the FAA’s “WINGS—Pilot Proficiency Program.” This program includes targeted flight training designed to help pilots develop the knowledge and skills needed to achieve flight proficiency and to assess and mitigate the risks associated with the most common causes of accidents, including loss of directional control. The courses listed below can be accessed from the [FAASafetyTeam website](#) (www.faasafety.gov).

- [Avoiding Loss of Control](#)
- [Maneuvering: Approach and Landing](#)
- [Normal Approach and Landing](#)
- [Takeoffs, Landings, and Aircraft Control](#)

The Aircraft Owners and Pilots Association Air Safety Institute offers several interactive courses, presentations, publications, and other safety resources that can be accessed from its [website](#) (www.aopa.org/asf/).

The NTSB’s Aviation Information Resources web page, [www.nts.gov/air](#), provides convenient access to NTSB aviation safety products.

The NTSB presents this information to prevent recurrence of similar accidents. Note that this should not be considered guidance from the regulator, nor does this supersede existing FAA Regulations (FARs).

Administrative Information

Investigator In Charge (IIC):	Eric A Swenson	Adopted Date:	08/03/2017
Additional Participating Persons:	Patrick Gates; FAA; Riverside, CA		
Publish Date:	08/03/2017		
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=95231		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.