



National Transportation Safety Board Aviation Accident Final Report

Location:	Farmingdale, New York	Accident Number:	GAA16CA527
Date & Time:	June 20, 2016, 17:58 Local	Registration:	N127WD
Aircraft:	Swearingen SA226	Aircraft Damage:	Substantial
Defining Event:	Abnormal runway contact	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

According to the pilot in command (PIC), he was conducting an instructional flight for his "new SIC (second in command)," who was seated in the left seat. He reported that they had flown two previous legs in the retractable landing gear-equipped airplane. He recalled that, during the approach, they discussed the events of their previous flights and had complied with the airport control tower's request to "keep our speed up." During the approach, he called for full flaps and retarded the throttle to flight idle. The PIC asserted that there was no indication that the landing gear was not extended because he did not hear a landing gear warning horn; however, he was wearing a noise-cancelling headset. He added that the landing gear position lights were not visible because the SIC's knee obstructed his view of the lights. He recalled that, following the flare, he heard the propellers hit the runway and that he made the decision not to go around because of unknown damage sustained to the propellers. The airplane touched down and slid to a stop on the runway. The airplane sustained substantial damage to the fuselage bulkheads, longerons, and stringers.

The SIC reported that the flight was a training flight in visual flight rules conditions. He noted that the airspace was busy and that, during the approach, he applied full flaps, but they failed to extend the landing gear. He added that he did not hear the landing gear warning horn; however, he was wearing a noise-cancelling headset.

The Federal Aviation Administration Aviation Safety Inspector that examined the wreckage reported that, during recovery, the pilot extended the nose landing gear via the normal extension process. However, due to significant damage to the main landing gear (MLG) doors, the MLG was unable to be extended hydraulically or manually. He added that an operational check of the landing gear warning horn was not accomplished because the wreckage was unsafe to enter after it was removed from the runway.

The landing gear warning horn was presented by an aural tone in the cockpit and was not configured to be heard through the pilots' noise-cancelling headsets.

When asked, the PIC and the SIC both stated that they could not remember who read the airplane flight manual Before Landing checklist.

Probable Cause and Findings

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

The pilot-in-command's failure to extend the landing gear before landing and his failure to use the Before Landing checklist. Contributing to the accident was the pilots' failure to maintain a sterile cockpit during landing.

Findings

Aircraft	Gear extension and retract sys - Not used/operated
Personnel issues	Use of checklist - Pilot
Personnel issues	Use of equip/system - Pilot
Personnel issues	Lack of action - Pilot
Personnel issues	(general) - Flight crew
Personnel issues	Task monitoring/vigilance - Flight crew

Factual Information

History of Flight

Landing-flare/touchdown	Abnormal runway contact (Defining event)
Landing-landing roll	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial	Age:	68, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	August 30, 2015
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	April 29, 2016
Flight Time:	(Estimated) 11450 hours (Total, all aircraft), 410 hours (Total, this make and model), 11175 hours (Pilot In Command, all aircraft), 85 hours (Last 90 days, all aircraft), 21 hours (Last 30 days, all aircraft)		

Co-pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	45, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	February 20, 2016
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	April 24, 2016
Flight Time:	(Estimated) 1300 hours (Total, all aircraft), 5 hours (Total, this make and model), 10000 hours (Pilot In Command, all aircraft), 300 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft), 10 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Swearingen	Registration:	N127WD
Model/Series:	SA226 T(B)	Aircraft Category:	Airplane
Year of Manufacture:	1978	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	T-297
Landing Gear Type:	Retractable - Tricycle	Seats:	10
Date/Type of Last Inspection:	March 15, 2016 Annual	Certified Max Gross Wt.:	12262 lbs
Time Since Last Inspection:		Engines:	2 Turbo jet
Airframe Total Time:	4500 Hrs as of last inspection	Engine Manufacturer:	Garrett
ELT:	C126 installed, not activated	Engine Model/Series:	TPE33110U501G
Registered Owner:		Rated Power:	950 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KFRG, 81 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	22:53 Local	Direction from Accident Site:	331°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	29.82 inches Hg	Temperature/Dew Point:	9°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Westchester, NY (HPN)	Type of Flight Plan Filed:	None
Destination:	Farmingdale, NY (FRG)	Type of Clearance:	None
Departure Time:	14:20 Local	Type of Airspace:	Class D

Airport Information

Airport:	REPUBLIC FRG	Runway Surface Type:	Asphalt
Airport Elevation:	80 ft msl	Runway Surface Condition:	Dry
Runway Used:	19	IFR Approach:	None
Runway Length/Width:	5516 ft / 150 ft	VFR Approach/Landing:	Full stop;Straight-in

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	40.728889,-73.41333(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Michael
Additional Participating Persons:	Jeffery J Rose; FAA; Farmingdale, NY
Original Publish Date:	June 20, 2017
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=94377

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