



# National Transportation Safety Board

## Aviation Accident Final Report

<b>Location:</b>	West Palm Beach, FL	<b>Accident Number:</b>	ERA17LA096
<b>Date &amp; Time:</b>	01/27/2017, 1750 EST	<b>Registration:</b>	N60RA
<b>Aircraft:</b>	BEECH 200	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Landing gear not configured	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Positioning		

## Analysis

The airline transport pilot reported that, before landing following an uneventful flight, he extended the wing flaps to the approach position and extended the landing gear; the gear indicator lights showed "3 green." After touchdown, he heard noises, and the airplane started to sink. After the airplane came to a stop on the right side of the runway, he noticed that the landing gear handle was up. The pilot stated to the copilot, "How did the gear handle get up?" then placed the handle to the down position and the flight crew exited the airplane. The copilot reported that he was acting as an observer during the flight and that he also saw three green landing gear down-and-locked indicator lights before landing.

The airframe sustained substantial damage from contact with the runway. All three landing gear were found in a partially-extended position. Skid marks from all three tires were observed on the runway leading up to the main wreckage. Both propeller assemblies were damaged due to contact with the runway. The pressure vessel was compromised from contact with a propeller blade. The nose landing gear actuator was forced up, into the nose gear well and penetrated the upper nose skin. Examination of the landing gear components did not reveal evidence of a preexisting mechanical malfunction or malfunction.

The skid marks leading to the wreckage and the partially-extended gear were inconsistent with the pilot's account that the gear handle was up after the airplane came to rest and was then lowered. The gear handle consisted of an electrical switch that required it to be pulled out of a detent before placing it up or down. There was no mechanical linkage between the gear handle and the landing gear, as the gear were driven by an electric motor. It is likely that the pilot realized that the gear were not extended just before touchdown and then tried to lower the gear, resulting in a touchdown with the gear only partially extended.

The pilot reported that he had experienced several interruptions to his sleep the night before the accident. He also reported that he flew 7 legs on the day of the accident for a total of 5.2 hours, only eating a banana for breakfast during this time period. It is likely that the pilot's

fatigue contributed to his failure to ensure that the landing gear were down and locked before landing.

## Probable Cause and Findings

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

The pilot's failure to ensure that the landing gear were down and locked before touchdown. Contributing to the accident was the pilot's self-reported fatigue at the time of the accident.

### Findings

Aircraft	Landing gear/wheel fairing - Not used/operated (Cause)
Personnel issues	Delayed action - Pilot (Cause) Use of equip/system - Pilot (Cause) Lack of sleep - Pilot (Factor)

## Factual Information

On January 27, 2017, at 1750 eastern standard time, a Beech 200T, N60RA, was substantially damaged during landing at Palm Beach International Airport (PBI), West Palm Beach, Florida. The airline transport pilot and a commercial-rated copilot were not injured. The airplane was registered to a private corporation and operated by Eastern Air Express under the provisions of 14 *Code of Federal Regulations Part 91* as a positioning flight. Day, visual meteorological conditions prevailed at the time, and an instrument flight rules flight plan was filed. The flight originated at Treasure Cay, Bahamas (MYAT) at 1652.

The pilot reported that the preflight and enroute portions of the flight were uneventful. The flight was established on the localizer for the approach to runway 28R, which was dry. Flaps were set to the approach position and the landing gear were extended and showed "3 green." After touchdown, he heard noises, and the airplane started to sink. After the airplane came to a stop on the right side of the runway, the pilots noticed that the gear handle was up. The pilot stated, "How did the gear handle get up?" He then placed the handle to the down position. The pilots secured the airplane and were met by first responders.

An inspector with the Federal Aviation Administration responded to the accident site and examined the airplane. Structural damage to the fuselage was confirmed. All three landing gear were found in a partially extended position. Skid marks from all three tires were observed on the runway, leading up the main wreckage. Both propeller assemblies were damaged due to contact with the runway. The pressure vessel was compromised from contact with a propeller blade. The nose landing gear actuator was forced up, into the nose gear well and penetrated the upper nose skin. Examination of the landing gear components did not reveal evidence of a preexisting mechanical malfunction or malfunction.

A 28-volt split-field motor, located on the forward side of the center-section main spar, extended and retracted the landing gear. The landing gear motor was controlled by a switch placarded "LDG GEAR CONT – UP – DN" on the pilot's right subpanel. The switch handle had to be pulled out of a detent before it could be moved from either the up or the down position.

The pilot reported in a written statement that he went to bed around 2245 local on the evening prior to the accident and woke up around 0500 local. He also reported that he "was up several times" during the night to go to the bathroom. On the day of the accident, he flew 7 legs for a total of 5.2 hours. The only food he consumed that day was a banana for breakfast.

## History of Flight

Landing-flare/touchdown

Landing gear not configured (Defining event)

## Pilot Information

Certificate:	Airline Transport; Flight Instructor	Age:	47, Male
Airplane Rating(s):	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):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Without Waivers/Limitations	Last FAA Medical Exam:	01/04/2017
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	11/09/2016
Flight Time:	14414 hours (Total, all aircraft), 631 hours (Total, this make and model), 11454 hours (Pilot In Command, all aircraft), 166 hours (Last 90 days, all aircraft), 53 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

## Co-Pilot Information

Certificate:	Commercial	Age:	, Male
Airplane Rating(s):	Multi-engine Land; Single-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):	None	Toxicology Performed:	No
Medical Certification:	Last FAA Medical Exam:		
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	1560 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	Registration:	N60RA
Model/Series:	200 T	Aircraft Category:	Airplane
Year of Manufacture:	1979	Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	BT-7
Landing Gear Type:	Retractable - Tricycle	Seats:	9
Date/Type of Last Inspection:	12/10/2016, Continuous Airworthiness	Certified Max Gross Wt.:	12500 lbs
Time Since Last Inspection:	44 Hours	Engines:	2 Turbo Prop
Airframe Total Time:	15782 Hours at time of accident	Engine Manufacturer:	Pratt and Whitney Canada
ELT:	C126 installed, not activated	Engine Model/Series:	PT6A-41
Registered Owner:	RIDGEAIRE INC	Rated Power:	850 hp
Operator:	Eastern Air Express	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	1EAA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PBI, 19 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1753 EST	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 3600 ft agl	Visibility	10 Miles
Lowest Ceiling:	Broken / 25000 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	350°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.03 inches Hg	Temperature/Dew Point:	21°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Treasure Cay, FN (MYAT)	Type of Flight Plan Filed:	IFR
Destination:	West Palm Beach, FL (PBI)	Type of Clearance:	IFR
Departure Time:	1652 EST	Type of Airspace:	Class C

## Airport Information

Airport:	Palm Beach Int. (PBI)	Runway Surface Type:	Asphalt
Airport Elevation:	19 ft	Runway Surface Condition:	Dry
Runway Used:	28R	IFR Approach:	Localizer Only
Runway Length/Width:	10001 ft / 150 ft	VFR Approach/Landing:	Full Stop

## **Wreckage and Impact Information**

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	26.683056, -80.095556 (est)

## **Administrative Information**

<b>Investigator In Charge (IIC):</b>	Ralph E Hicks	<b>Adopted Date:</b>	11/06/2018
<b>Additional Participating Persons:</b>	Allan Gallindo; FAA/FSDO; Miramar, FL		
<b>Publish Date:</b>	11/06/2018		
<b>Note:</b>	The NTSB did not travel to the scene of this accident.		
<b>Investigation Docket:</b>	<a href="http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=94659">http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=94659</a>		

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