National Transportation Safety Board
Aviation Accident Final Report

Location:	West Palm Beach, Florida	**Accident Number:**	ERA17LA096
Date & Time:	January 27, 2017, 17:50 Local	**Registration:**	N60RA
Aircraft:	Beech 200	**Aircraft Damage:**	Substantial
Defining Event:	Landing gear not configured	**Injuries:**	2 None
Flight Conducted Under:	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
Personnel issues	Delayed action - Pilot
Personnel issues	Use of equip/system - Pilot
Personnel issues	Lack of sleep - Pilot

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:**	January 4, 2017
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	November 9, 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):	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):	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:**	
Airworthiness Certificate:	Normal	**Serial Number:**	BT-7
Landing Gear Type:	Retractable - Tricycle	**Seats:**	9
Date/Type of Last Inspection:	December 10, 2016 Continuous airworthiness	**Certified Max Gross Wt.:**	12500 lbs
Time Since Last Inspection:	44 Hrs	**Engines:**	2 Turbo prop
Airframe Total Time:	15782 Hrs at time of accident	**Engine Manufacturer:**	Pratt and Whitney Canada
ELT:	C126 installed, not activated	**Engine Model/Series:**	PT6A-41
Registered Owner:		**Rated Power:**	850 Horsepower
Operator:		**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 (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PBI,19 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	17:53 Local	**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:	Tresure Cay (MYAT)	**Type of Flight Plan Filed:**	IFR
Destination:	West Palm Beach, FL (PBI)	**Type of Clearance:**	IFR
Departure Time:	16:52 Local	**Type of Airspace:**	Class C

Airport Information

Airport:	Palm Beach Int. PBI	**Runway Surface Type:**	Asphalt
Airport Elevation:	19 ft msl	**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

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:**	26.683055,-80.095558(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	Allan Gallindo; FAA/FSDO; Miramar, FL
Original Publish Date:	November 6, 2018
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=94659

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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. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available here.