Aviation Investigation Final Report

Location:	SEDONA, Arizona	**Accident Number:**	LAX99LA018
Date & Time:	October 27, 1998, 13:28 Local	**Registration:**	N37PT
Aircraft:	Beech C90	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The certificated flight instructor (CFI) and student pilot departed on a local training flight. During the takeoff roll, the airplane began drifting to the right. The CFI applied full left rudder and left aileron but was unable to stop the drift. After the CFI rotated, he heard the gear warning horn. After becoming airborne, he was advised by another airplane that his right gear was not visible. He was also advised by an FBO operator that his right gear was missing. Concerned that he might also have a fuel leak, the CFI declared an emergency and landed. An inspection of the runway revealed a tire track which left the right side of the runway 1,050 feet from the approach end and continued into the grass to an electrical service box on the right side of the runway. Cracks and gouges were found on the cement electrical service box and the right main gear assembly was found on the ground beyond it. The fractured portion of the upper torque link revealed characteristics consistent with an overstress separation. The CFI and ground witnesses said weather was not a factor.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The instructor's failure to maintain runway alignment during the takeoff roll.

Findings

Occurrence #1: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: TAKEOFF - ROLL/RUN

Findings
1. OBJECT - AIRPORT FACILITY
2. (C) PROPER ALIGNMENT - NOT MAINTAINED - PILOT IN COMMAND(CFI)

Factual Information

On October 27, 1998, at 1328 hours mountain standard time, a Beech C90, N37PT, veered off the runway and collided with an electrical utility box during takeoff at the Sedona, Arizona, airport. The aircraft sustained substantial damage; however, neither the flight instructor nor his student was injured. The aircraft was being operated by Hayden Leasing LC under 14 CFR Part 91 of Federal Aviation Regulations as an instructional flight when the accident occurred. The flight was originating from the Sedona airport as a cross-country flight to Scottsdale, Arizona. Visual meteorological conditions prevailed at the time and no flight plan was filed.

The instructor reported that he was taking off on runway 21 at Sedona when the aircraft began drifting to the right as he accelerated through 80 knots. He checked the power and found it stabilized at 1,230 pounds of torque. He applied full left rudder and 3/4 left aileron to counteract the turn but was unable to stop the drift. He rotated at 90 knots and immediately heard the sound of the gear warning horn. After becoming airborne, he was advised by another aircraft that his right gear was not visible. Instead of retracting the gear, he made a low pass over the field for further visual confirmation. He was advised by an FBO operator on the field that his right gear assembly was missing.

The pilot informed the FBO operator that he was going to continue to Scottsdale, but a few minutes later decided that it was possible that the loss of the gear assembly might have also initiated a fuel leak. At this point, he declared an emergency with Albuquerque center and made and emergency landing at Ernest A. Love Field, Prescott, Arizona.

During the landing roll the pilot shutdown the right engine and feathered the propeller. At 55 knots he gradually lowered the right wing toward the runway. As the wing contacted the runway, the aircraft began a right arc off the runway, coming to rest between the runway and taxiway.

An inspection of the runway at the Sedona airport revealed tire tracks diverging from the right side of the runway at 1,050 feet from the approach end. The track continued until it terminated at a cement electrical service box 322 feet from the point where the tracks left the runway. Impact marks were found on the cement box and the right main gear assembly was found on the ground about 152 feet beyond the box.

The fractured portion of the upper torque link was submitted to the Safety Board's Materials Lab for examination. The examination revealed the fracture surface exhibited characteristics consistent with an overstress separation.

The instructor and the ground witnesses said weather was not a factor in this accident.

Pilot Information

Certificate:	Airline transport; Commercial	**Age:**	54,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	August 26, 1998
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	15000 hours (Total, all aircraft), 2000 hours (Total, this make and model), 7500 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N37PT
Model/Series:	C90 C90	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	LJ-731
Landing Gear Type:	Retractable - Tricycle	**Seats:**	9
Date/Type of Last Inspection:	August 25, 1998 Continuous airworthiness	**Certified Max Gross Wt.:**	10500 lbs
Time Since Last Inspection:	82 Hrs	**Engines:**	2 Turbo prop
Airframe Total Time:	11103 Hrs	**Engine Manufacturer:**	P&W
ELT:	Installed, not activated	**Engine Model/Series:**	PT6A-21
Registered Owner:	HAYDEN LEASING, LC	**Rated Power:**	550 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:	HAYDEN LEASING, LC	**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PRC ,5045 ft msl	**Distance from Accident Site:**	33 Nautical Miles
Observation Time:	12:50 Local	**Direction from Accident Site:**	236°
Lowest Cloud Condition:	Unknown	**Visibility**	10 miles
Lowest Ceiling:	Broken / 6500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	170°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	14°C / -1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	, AZ (SEZ)	**Type of Flight Plan Filed:**	None
Destination:	SCOTTSDALE , AZ (SDL)	**Type of Clearance:**	None
Departure Time:	13:28 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	SEDONA SEZ	**Runway Surface Type:**	Asphalt
Airport Elevation:	4827 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	21	**IFR Approach:**	None
Runway Length/Width:	5132 ft / 75 ft	**VFR Approach/Landing:**	None

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:**	34.939472,-111.939865(est)

Administrative Information

Investigator In Charge (IIC):	Crispin, Robert
Additional Participating Persons:	DEAN A HENNIES; SCOTTSDALE , AZ
Original Publish Date:	June 21, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=45323