



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Minden, Nevada	Accident Number:	WPR19LA139
Date & Time:	May 5, 2019, 08:20 Local	Registration:	N1510S
Aircraft:	Beech 35	Aircraft Damage:	Substantial
Defining Event:	Landing gear not configured	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that the approach for landing was uneventful, and he selected the landing gear lever to the extended position. When the airplane touched down, the landing gear collapsed.

The landing gear circuit breaker was found in the out position during postaccident examination. The airplane was placed on jacks and a gear swing test was conducted. During the test, the electric motor that drove the landing gear was noted to be "weak"; gear retraction was slow and the gear would only partially extend. No other anomalies in the landing gear system were noted. The cockpit landing gear lever, landing gear indications, and warning audio functioned properly during the test; thus, the pilot should have been alerted to the partial extension of the landing gear.

Probable Cause and Findings

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

A partial extension of the landing gear due to the poor condition of the electric landing gear motor, which resulted in a gear collapse upon landing.

Findings

Aircraft	Gear extension and retract sys - Damaged/degraded
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Factual Information

History of Flight

Landing-flare/touchdown	Landing gear not configured (Defining event)
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On May 5, 2019, about 0820 Pacific daylight time, a Beech P35, N1510S, was substantially damaged when it was involved in an accident at Minden-Tahoe Airport (MEV), Minden, Nevada. The private pilot was not injured. The airplane was operated by the pilot as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that the approach was uneventful, and he selected the landing gear lever to the down position. When the airplane touched down, the landing gear collapsed.

Postaccident examination of the airplane by a Federal Aviation Administration (FAA) inspector revealed substantial damage to its underside. Additionally, the landing gear circuit breaker was observed to be in the out position. At a later date, the airplane was further examined by an airframe and powerplant mechanic under the oversight of a FAA inspector. The airplane was placed on jacks and a landing gear swing was accomplished. The electrical motor that drove the landing gear to the extended and retracted position, was noted to be extremely weak and degraded. The motor would take an excessive time to retract and extend the gear. Furthermore, during gear extension, the gear would only partially extend. No other anomalies in the landing gear system were noted. The cockpit landing gear lever, landing gear indications, and warning audio were properly functioning.

Pilot Information

Certificate:	Private	Age:	75,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	May 21, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	May 12, 2018
Flight Time:	(Estimated) 2052 hours (Total, all aircraft), 52.7 hours (Total, this make and model), 2052 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N1510S
Model/Series:	35 P35	Aircraft Category:	Airplane
Year of Manufacture:	1962	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	D-6940
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	March 11, 2019 Annual	Certified Max Gross Wt.:	3125 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1793 Hrs as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-470
Registered Owner:		Rated Power:	260 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KMEV, 4726 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	08:35 Local	Direction from Accident Site:	171°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	240°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.89 inches Hg	Temperature/Dew Point:	10°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fresno, CA (E79)	Type of Flight Plan Filed:	None
Destination:	Minden, NV (MEV)	Type of Clearance:	None
Departure Time:	06:30 Local	Type of Airspace:	Class E

Airport Information

Airport:	Minden-Tahoe MEV	Runway Surface Type:	Asphalt
Airport Elevation:	4723 ft msl	Runway Surface Condition:	Dry
Runway Used:	34	IFR Approach:	Global positioning system;RNAV
Runway Length/Width:	7399 ft / 100 ft	VFR Approach/Landing:	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	39.000556,-119.751113(est)

Administrative Information

Investigator In Charge (IIC):	Nixon, Albert		
Additional Participating Persons:	Lee Oscar; Federal Aviation Administration; Reno, NV Charles Geyer; Federal Aviation Administration; Reno, NV		
Original Publish Date:	November 19, 2020	Investigation Class:	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=99400		

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