Aviation Investigation Final Report

Location:	RENO, Nevada	**Accident Number:**	LAX00LA303
Date & Time:	August 16, 2000, 09:35 Local	**Registration:**	N8638V
Aircraft:	Bellanca 8GCBC	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

The right main landing gear collapsed during the landing rollout at a private dirt glider airstrip. The pilot said that he made a 3-point landing after towing a glider aloft. The airplane bounced slightly on touchdown and, on the second ground contact, the pilot heard a snap sound and the right main landing gear collapsed. The airplane fell down on the right wing and spun around in the dirt. An FAA airworthiness inspector examined the airplane and the runway. The inspector observed the two touchdown markings on the dirt runway and reported that they were about 12-feet apart and not heavy impressions. About 20 feet beyond the second touchdown point, drag markings consistent with a separated main landing gear were found. The inspector reported that the right main landing gear strut separated near the fuselage with a transverse fracture. A majority of the fracture face appeared dirty and rusty, with the remaining portion exhibiting a pattern of beach markings and a chevron-like pattern near the edge opposite the discolored portion. According to the operator, this airplane has been used exclusively for glider tow operations and has accumulated over 4,000 flight hours. The operator and the FAA inspector estimated the total number of landing cycles somewhere between 15,000 and 16,000 for the life of the part.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The fatigue failure and separation of the right main landing gear.

Findings

Occurrence #1: GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Findings
1. (C) LANDING GEAR,MAIN GEAR STRUT - FATIGUE
2. (C) LANDING GEAR,MAIN GEAR STRUT - SEPARATION

Factual Information

On August 16, 2000, at 0935 hours Pacific daylight time, a Bellanca 8GCBC, N8638V, collapsed the landing gear during landing rollout at a private dirt glider airstrip near Reno, Nevada. The airplane was owned and operated by the Nevada Soaring Association and was engaged in glider towing operations under 14 CFR Part 91 of the Federal Aviation Regulations. The airplane incurred substantial damage. The airline transport pilot, the sole occupant, was not injured. Visual meteorological conditions prevailed and included calm wind conditions. No flight plan was filed for the local area business flight, which originated at the private airstrip about 20 minutes prior to the accident.

The pilot reported to Federal Aviation Administration (FAA) inspectors that he was making a 3-point landing after towing a glider aloft. The airplane bounced slightly on touchdown and, on the second ground contact, the pilot heard a snap sound and the right main landing gear collapsed. The airplane fell down on the right wing and spun around in the dirt.

An FAA airworthiness inspector from the Reno Flight Standards District Office examined the airplane and the runway. The inspector observed the two touchdown markings on the dirt runway and reported that they were about 12-feet apart and not heavy impressions. About 20 feet beyond the second touchdown point, drag markings consistent with a separated main landing gear were found.

The inspector reported that the right main landing gear strut separated near the fuselage with a transverse fracture. A majority of the fracture face appeared dirty and rusty, with the remaining portion exhibiting a pattern of beach markings and a chevron-like pattern.

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Pilot Information

Certificate:	Airline transport; Commercial; Flight engineer; Flight instructor	**Age:**	63,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	Glider	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	February 14, 2000
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	15200 hours (Total, all aircraft), 210 hours (Total, this make and model), 14700 hours (Pilot In Command, all aircraft), 71 hours (Last 90 days, all aircraft), 22 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bellanca	**Registration:**	N8638V
Model/Series:	8GCBC 8GCBC	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	162-75
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	July 18, 2000 Annual	**Certified Max Gross Wt.:**	1600 lbs
Time Since Last Inspection:	58 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	4000 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	O-360
Registered Owner:	NEVADA SOARING ASSOCIATION	**Rated Power:**	180 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	RNO ,4412 ft msl	**Distance from Accident Site:**	28 Nautical Miles
Observation Time:	16:56 Local	**Direction from Accident Site:**	165°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	70°C / 25°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	08:45 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	AIR SAILING GLIDERPORT	**Runway Surface Type:**	Dirt
Airport Elevation:	4300 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	35	**IFR Approach:**	None
Runway Length/Width:	7100 ft / 150 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:**	39.489253,-119.840057(est)

Administrative Information

Investigator In Charge (IIC):	Rich, Jeff
Additional Participating Persons:	JERRY ROBERTS; RENO , NV
Original Publish Date:	September 27, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=50010