

N613TX Accident Investigation Report.
NTSB Accident Number CEN13LA177
March 6, 2013

Submitted by: Les Thompson
Aviation Safety Inspector

NARRATIVE

Initial Report

Inspectors Georg Bloch, Drew Holmes, Stewart Salisbury, and I arrived at the FBO located at Eagle Creek Airpark at approximately 11:20am, February 21 2013. We entered the office of the FBO and introduced ourselves to the receptionist; she informed us we were expected, the pilots were waiting for us and that a conference room was set aside for our use. She also informed us runways 3/21 were closed and that the Airport Manager and his crew had already secured the accident site and were awaiting our arrival. We were introduced to the pilots Doug McCain and Scott Fordham. During the initial conversation we established that Scott McCain was the Pilot in Charge. Inspectors Bloch and Salisbury conducted the pilot interviews (attached). Inspector Holmes and I were given access to the field and proceeded to accident site.

On Site Investigation

Upon arrival at the accident site, we met Mike Norris, Eagle Creek Airport Manager. He and his crew had already inspected the runway for damage. He stated that there was negligible damage to the runway but there were 2 damaged runway lights.

The initial examination of the site showed the aircraft resting on its fuselage to the right of runway 3 in the grass, approximately 30 feet from the runway edge, facing in an East North East direction. Runway 3 is aligned approximately 30 DEG North East direction.

The 4 propeller blades damage/curl appear symmetrical and consistent with the engine under power. There is some light gouging at the exhaust stacks on both sides of the engine cowling and damage at the air intake at the lower engine cowl consistent with prop strikes from the curled blades.

There is a damage area measuring approximately 5 inches long x 3 inches wide to the left wing leading edge just outboard of the wing root panel consistent with the damage from the northern most damaged runway light. There is hole measuring approximately 4 inches in diameter in the right wing lower surface just forward of the front wing spar and about 3 feet outboard of the fuselage consistent with the damage to the southernmost damaged runway light. There is grass impacted into the 2 left wing flap hinges. There was no grass present in the 2 right wing flap hinges. There was no evidence of any fluid leaking from the wings.

The aircraft was resting in the grass listing approximately 5 degrees left wing down. The left wing fuel tank was accessed through the left wing fuel cap and fuel was present. The right wing fuel tank was accessed through the right wing fuel cap and fuel was not present. No samples were taken.

The entry step on the left side of the fuselage just aft of the left wing trailing edge was bent upwards and damaged and it appeared the step was missing.

There was no other damage visible at this time.

Inspector Holmes gained access to the cockpit through the aircrafts only cabin door on the left side of the aircraft, the airworthiness certificate and registration certificates were present and the N number and serial numbers matched the aircraft and aircraft data plate. The aircraft maintenance log books were not located. A pilot log book was in the aircraft. The Pilots Operating handbook was also present. The aircraft DC power switch was in the off position. The Hobbs Meter showed 47 hours. The Gear Handle was in the down position. Flap Handle in the up position. There were no tripped Circuit Breakers observed. ELT was armed but not active. The Power Lever was at approximately 30%, Propeller Lever was all the way forward and the Condition Lever all the way aft. There was no damage observed inside the aircraft.

I proceeded to follow the ground scars and gouges on the runway back to the point of origin. From the point of origin I observed a path of two parallel light gouges and light prop strike scars on the runway surface, starting at about 40 feet north of the second crossing taxiway and continuing down the approximate center of the runway to a point of about where the 3rd crossing taxiway is located. From this point the 2 parallel light gouges and prop strikes start to gently veer off to the right and into the grass. From here the ground scars in the grass continue from the edge of the runway to where the aircraft had come to rest in the grass. The 2 damaged runway lights are in this path. The distance from touchdown to aircraft is approximately 1844 feet. Also in the path of travel was some debris that consisted of shards of paint and composite as well as pieces of antennas and a piece of metal that appeared to be part of a step, these were found in grass in the path of travel from the edge of the runway and extending about 30 feet along the ground scar. Other debris was located in the vicinity of the 2 damaged runway lights. The debris was consistent in color and material to the runway lights present and consistent with material from the aircraft.

After completion of the onsite inspection and after consulting with the other Inspectors we granted permission to allow the removal of the aircraft from the accident site.

In preparation for lifting the aircraft, the upper engine cowl was removed by the aircraft owner Brad Andreae. We did not observe any damage to the engine or firewall and no fluid leaks were present in the engine compartment. The PIC entered the aircraft and sat in the left seat. Two recovery vehicles were brought to the site and a lifting strap approximately 6 inches wide was placed around the upper engine mounts close to the firewall. A second 12 inch wide strap was placed around the fuselage forward of the empennage.

The aircraft was hoisted clear from the ground to a suitable height by the recovery crew, the Emergency Gear Extension was deployed. The Right Main Gear and the Nose Gear deployed immediately, but the Left Main Gear did not. The PIC turned the DC power on and with hydraulic system pressure applied, the Left Main Gear extended. Hydraulic and DC power was then turned off. The aircraft was lowered onto its wheels pushed out of the grass onto the taxi way and then towed back to the FBO.

Inside the hangar, the aircraft was now sitting on its gear/wheels and we were able to access the lower fuselage of the aircraft. Starting at about 2 feet aft of the firewall, there were large areas of scuffing and abrasion damage ranging from just the loss of paint, so that the copper "surface" was exposed, to areas that fully exposed the carbon fiber composite material. This type of damage extended fully along the length of the lower fuselage. At the bottom of the rudder the abrasion from runway contact had ground a hole through the skin. The same damage was also observed in the fuselage directly forward of the rudder. The rear jack point located approximately 6 inches forward of the rudder was also damaged. All lower antennas were gone and all that remained were the damaged antenna bases. A crack measuring about 4 inches long was observed in the lower fuselage skin about 4 inches left of the center line and approximately 6 feet aft of the firewall.

I approached several people at the FBO and no one had witnessed the Accident nor did anyone come forward. No witnesses were apparent.

Photo's

Photo's of site and aircraft taken. See attached CD.

Landing Gear Operational Check.

On March 5, 2013 Inspector Dave Kline and I went back to the FBO to observe the Landing Gear System Operational Checks. The FBO had obtained the aircrafts jack pads and data for the jacking procedure from the aircraft owner. However, due to the damage to the aft jack point, the FBO had obtained additional directions from Lancair on how to overcome this situation to correctly jack the aircraft. I had obtained Data from Lancair on the Landing Gear System and Landing Gear Aural Warning System.

FBO Chief Inspector John Fleishman directed 2 technicians to conduct the checks. They turned on aircraft electrical power and hydraulic power and checked the operation of the Landing Gear Indication Lights. The indication lights were operational. Inspector Kline and I observed the Landing Gear cycle successfully 3 times in succession with correct Gear Indication Lights on the Landing Gear Control Panel at every cycle. The Emergency Gear Extension system was tested twice. The first time the Left Main Gear extended slower than the Right Main and Nose Gear. The second time all 3 gear extended at the same time but the Left Main did not extend as far as the Right Main Gear when compared.

The Landing Gear Aural Warning system was checked next. With Flaps at 25 (first detent, we could not extend flaps fully due to the damaged/bent step on the fuselage left side would interfere with fully extended flap travel) and landing Gear fully retracted, simulated airspeed was applied to the aircraft via Air Data Test Equipment supplied by the FBO. Starting at a simulated airspeed of 110 knots as indicated on the Aircraft Airspeed Indicator. Airspeed was slowly decreased. At 100 knots IAS a loud 2 tone Aural Warning sounded. As IAS was decreased the Aural Warning extinguished at 89 knots IAS. Increasing IAS, the Aural Warning was heard again at 89 knots and extinguished again 100 knots IAS. The technicians raised flaps to the fully retracted position and slowly decreased IAS. When the IAS was decrease to 100 knots, the Aural Warning came on and extinguished again as simulated airspeed was decreased to 89 knots.

Pilot Interviews: See attached

Aircraft Information

Registered Owner

Mr. Bradley M. Andreae
[REDACTED]
Sturgeon Bay, WI 54235

Pilot In Command

Mr. Douglas R. McCain
[REDACTED]
Fish Creek, WI 54212

Instructor

Mr. Scott E. Fordham
[REDACTED]
Bend. OR 97702

Aircraft Description

Make/Model: Lancair Evolution
SN: EVO-0039
Year: 2012
Engine: Pratt & Whitney PT6A-135
Propellor: Hartzell HC-E4N-3NX
Certificate Date: 06/12/2012
Certificate Type: Experimental Amateur Built