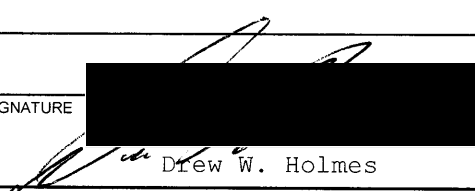


RECORD OF ☒ VISIT ☐ CONFERENCE OR ☐ TELEPHONE CALL		TIME 2:00 PM	DATE 08/09/2012
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION Mr. Mark Kemper		ROUTING	
		SYMBOL	INITIALS
SUBJECT N34283 incident investigation			
DIGEST Cessna CE-177B, Serial number			
Tach Time 2671.0			
FAA PMI: Drew Holmes			
Inspection performed on 8/9/2012			
Upon arrival at the Evansville airport (EVV), contact was made with Mr. Mark Kemper, the Director of Maintenance for Tri State Aero. The aircraft was positioned within a closed hanger and was observed intact with all cowling and external panels installed.			
Initial visual inspection of the right wing identified buckling of the upper wing skin emanated from the upper portion of the leading edge beginning approximately three feet from the fuselage and extending aft and outboard at a 45 degree angle. The damaged appears to extended across three wing stringers but no punctures or cracking was noted. Additional wrinkling of the wing skin consistent with the event was identified extending from the upper and lower wing root.			
CONCLUSION, ACTION TAKEN, OR REQUIRED Closed incident investigation and open an accident investigation.			
DATE 08/09/2012	TITLE Aviation Saftey Inspector	SIGNATURE  Drew W. Holmes	

DIGEST (CONT.):

The wing fuel tank appeared to be full and the integrity of the fuel tank did not appear to be compromised. Additional skin wrinkling was identified but did not appear to be consistent with the event.

An internal examination of the right wing was performed through access panels located on the bottom of the wing to include the wing to fuselage attachment points. Damage to the forward fuel tank bulk head attaching to the upper wing skin was observed. All control cables and pulleys appear to be intact and not damage noted.

The initial visual inspection of the left wing identified buckling of the upper wing skin emanated from the upper portion of the leading edge approximately three feet from the fuselage extending outboard. The skin damage followed the upper portion of the leading edge approximately two feet and then proceeded aft along the outboard perimeter of the fuel tank. The damage appears to extend to and include three wing stringers. The left wing fuel tank appeared to be full and the integrity of the fuel tank did not appear to be compromised. Additional skin wrinkling was identified but did not appear to be consistent with the event.

An internal examination of the left wing was performed through access panels located on the bottom of the wing to include the wing to fuselage attachment points. Damage to the forward fuel tank bulk head attaching to the upper wing skin was observed. All control cables and pulleys appear to be intact and not damage noted.

A visual inspection in the aircraft fuselage, empennage and landing gear was performed. No additional damage was noted on these areas.

The engine cowlings were removed and a visual inspection of the engine was performed. All components appear intact with no indications of damage noted. The propeller was then rotated through and the rotary motion of the vacuum pump input shaft was observed. The vacuum pump was removed and examined. The unit appeared to be intact and no malfunction could be detected. Next, an external vacuum source was connected to the aircraft and five pounds of vacuum was applied. The aircraft vacuum gauge indicated 4.5 pounds of vacuum. Prior to the initial application of vacuum, the horizon gyro was resting in a normal (level flight) attitude. Upon application of the external vacuum source, the action (spooling) of the internal components within the instrument could be heard but the instrument did not appear to move. Force was applied to aircraft to simulate a rolling motion; however the instrument indicator remained stationary. The external vacuum was removed and the instrument was allowed to wind down. At this time the instrument indicator slowly rolled approximately 10 degrees to the right. When external vacuum source was reapplied, the instrument indicator did not erect and remained stationary at a 10 degree roll to the right.

FAA form 8020-2 (custody tags) were prepared for the horizon gyro and the vacuum pump and provided to the Mr. Mark Kemper. Both components were retained and are currently secured at the Indianapolis Flight Standards District office.

The damage sustained by the wings is consistent with the definition of substantial damage outlined within FAA Order 8900.1