



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

May 5, 2016

AIRFRAME AND ENGINE EXAMINATION

WPR16FA097

This document contains 2 embedded photos

A. ACCIDENT

Location: Henderson, Nevada
Date: April 30, 2016
Aircraft: Extra Flugzeugproduktions-UND, EA-300/L,
N330MT, Serial No. 1316
NTSB IIC: Albert Nixon

B. EXAMINATION PARTICIPANTS:

Albert Nixon
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C. SUMMARY

Examination of the recovered airframe was conducted on May 5, 2016, at the facilities of Air Transport, in Phoenix, Arizona. A certified airframe and powerplant (A&P) mechanic, who worked on the Extra EA-300 airplane, examined the airplane under the supervision of the NTSB investigator-in-charge. No evidence of preimpact mechanical failure was noted during the examination of the recovered airframe and engine.

DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

Examination of the composite airframe revealed that both wings had separated. The top portion of the left-wing top separated about two ft from the wing root. The bottom portion of the left wing separated mid-span. The right-wing separated into about 4 major sections and several more smaller fragments of the wing were recovered.

On the empennage section, the vertical stabilizer and horizontal stabilizer were relatively intact. The rudder and elevators remained attached at all their respective attachment points. The aft control rod was intact, and movement was appropriate with elevator movement. Flight control continuity was established to the cockpit controls despite impact damage. Impact separations of

the control rods and cables were consistent with overload. The tailwheel was separated. Windshield fragments were all observed to be clear of debris or contamination.



Figure 1: View of the Airplane Wreckage Laid Out.

2.0 Engine and Components Examination

Examination of the Lycoming AEIO-580-B1A engine, serial number L-244-79E revealed that it separated from the airframe and sustained substantial impact damage. The bottom side of the engine and the accessory section had impact damage.



Figure 2: View of the bottom of the Engine.

The engine accessories were separated. The crankshaft could not be rotated by hand utilizing the propeller. However, mechanical continuity of the rotating group and internal mechanisms was established during the removal of a cylinder. A borescope inspection of the cylinders revealed of carbon deposits consistent with normal operational conditions.

The spark plugs sustained impact damage to their outer shells; however, each spark plug lead was attached. The sparkplugs were removed for examination and all sparkplug electrodes exhibited normal wear signatures when compared to the Champion Check-A-Plug comparison chart. The starter and alternator had separated and were not located in the main wreckage. The oil pressure screen and oil suction screen were removed and were clear of contamination.

The left and right magnetos separated from their mounting pads, sustained substantial damage, and could not be functionally tested.

The three-bladed constant speed propeller hub remained attached to the crankshaft flange. The hub was fragmented, and the propeller blades had separated. The propeller governor was attached with the pitch control rod securely attached at the control arm. The governor was

removed for examination and the drive was intact and rotated freely by hand. The gasket screen was free of contamination.

The throttle control was attached at the control arm of the fuel servo. The mixture control lever was separated from the fuel servo. The fuel flow divider remained attached to the top of the engine. Several fuel lines had been displaced from the divider, however, they remained secure at each cylinder fuel injector. No evidence of internal malfunction or obstruction to fuel flow was observed. The fuel injection nozzles remained attached and were removed for examination. The nozzles were observed to be free of contamination and no obstructions to flow were noted.

3.0 Examination Summary

The examination of the airframe and engine revealed no evidence of pre-impact mechanical malfunctions or failures that would have precluded normal operation.

Submitted by: Albert Nixon