



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

November, 2013

AIRFRAME EXAMINATION

WPR13FA289

This document contains zero embedded photos.

A. ACCIDENT

Location: San Luis Obispo, California
Date: June 24, 2013
Aircraft: Cessna P337H, N337LJ
NTSB IIC: Elliott Simpson

B. EXAMINATION PARTICIPANTS:

Elliott Simpson
Aviation Accident Investigator
National Transportation Safety Board
Los Angeles, California

Kurt Gibson (ARS Exam Only)
Air Safety Investigator
Continental Motors Inc.
Mobile, Alabama

Pete Basile
Air Safety Investigator
Cessna Aircraft Company
Wichita, Kansas

C. SUMMARY

Examination of the airframe was conducted both at the accident site, and following recovery at the facilities of ARS in Pearblossom, California on June 26, 2013.

D. DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

The entire cabin structure and wing center section was consumed by fire, with burnt wire remnants, seating structure, and lower frame components remaining. The flap actuator jack screw displayed 2.9 inches of thread between the screw and actuator housing, which corresponded to 10 degree (1/3) flap deployment. The main and nose gear were in the stowed position. The engine controls within the cabin were in the full forward position, with the exception of the rear engine mixture control, which was about 10 degrees short of full forward. The horizontal stabilizer had separated from the tailbooms, and sustained crush damage along the entire length of its leading edge. The elevator and associated trim tab remained attached to the stabilizer; the elevator trim tab actuator position could not be determined accurately due to cable pull-through. The forward left seat rails were consumed by fire, and not located. The forward engine was separated from its mount, and had escaped fire damage. The rear engine remained partially attached to the firewall by its control cables, and came to rest lying on top of its mount.

The engine sustained charring and thermal damage to its outer surface and all ancillary components.

The rear engines propeller had separated at the crankshaft, and was located behind the delivery truck. Counter weight contact marks on the cylinder domes were indicative of both propellers being at flat pitch (power) setting.

The left wing had separated at the root with the center wing section, and sustained thermal damage to a 4-foot section inboard of the root. The lower side of the outboard leading edge exhibited serrations and thermal damage consistent with power conductor contact. The left tailboom remained attached, and had become separated mid-span, connected only by its control cables. The aileron and both the inboard and outboard flaps remained attached. The aileron control cable remained attached to the outboard bellcrank, but had become pulled through the wing structure. All four wing tanks appeared unbreached, and the fuel cap was in place. Residual fuel was present in the tanks, and 60 gallons of fuel was recovered from the accident site according to recovery personnel. The elevator control cables were continuous from aft bellcrank through to the wing where they had become impinged against the wing structure. The elevator aft bellcrank was attached to the push-pull tube, which had separated from the balance weight assembly. The elevator torsional tube had separated from both the left and right balance weight assemblies.

The right wing sustained damage to the leading edge at the left center tank, which had become detached from the wing. The outboard tanks contained residual quantities of fuel; the fuel cap was in place at the filler neck. The inboard tank was thermally damaged within the center wing structure. The right tailboom sustained similar damage to the left boom. The aileron and inboard and outboard flaps remained attached. The aileron control cable remained attached to the outboard bellcrank, and was continuous through to the wing root.