



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

March 13, 2019

WRECKAGE EXAMINATION SUMMARY

WPR19LA078

This document contains 3 embedded photos.

A. ACCIDENT

Location: Socorro, New Mexico
Date: February 1, 2019
Aircraft: N536RH, RANS S-12XL

On February 1, 2019, about 1355 mountain standard time, a Rans S-12XL experimental airplane, N536RH, was substantially damaged when it was involved in an accident near Socorro, New Mexico. The private pilot was the sole occupant on board and was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to the Federal Aviation Administration (FAA), the pilot recently purchased the airplane and departed from an unknown runway at Socorro Municipal Airport (ONM), Socorro, New Mexico, for a local training flight. There were no witnesses to the accident. Immediately after the accident, the pilot was transported to the hospital, and after seven days, died from his injuries.

The kit airplane was built in 2000 and was equipped with a Rotax 912UL series engine. The airplane had a two-seat side-by-side configuration and a fixed tricycle landing gear.

ONM was situated at an elevation of 4,875 ft above mean sea level. It was equipped with two paved runways, designated 15/33 and 6/24, which measured 5,841 ft by 75 ft and 4,590 ft by 60 ft, respectively. ONM was not equipped with an air traffic control tower.

The 1353 automated weather observation at Truth or Consequences Municipal Airport (TCS), Truth or Consequences, New Mexico, located about 51 nautical miles to the south of the accident site, included winds from 160° at 12 knots gusting to 20 knots, visibility 10 miles, and clear skies.

B. PARTICIPANTS

Andrew Swick-NTSB IIC
Eric Gutierrez-NTSB
Tom Vernon-FAA

C. SUMMARY

Examination of the wreckage was conducted at the airplane owner's hangar at ONM by an FAA inspector and the National Transportation Safety Board investigator-in-charge. The examination did not reveal any anomalies that would have precluded normal operation.

D. DETAILS OF THE INVESTIGATION

1.0 Engine

The engine remained attached to the fuselage by its mount. The propeller assembly remained attached to the engine and one blade was separated near its shank. The propeller blades showed damage consistent with rotation at impact. The engine control cables had impact damage and control continuity was attained. The carburetors were loose from their mounting brackets and induction attachment and remained intact. The carburetor bowls were removed, and no debris was noted in the bowls. The internal carburetor components were undamaged. Fuel was noted in the left carburetor bowl. The fuel pump lines from the engine to the shutoff valve remained intact and undamaged. The fuel shutoff valve was in the open position and fuel was noted in the lines. No fuel filter was found in the fuel system. The upper spark plugs were removed from the cylinders and revealed light amounts of combustion deposits. The electrodes showed no wear. The cylinder valve covers were removed, and the cylinder overhead components were undamaged and had a light residue of clear oil. The crankshaft was rotated easily by hand through the propeller assembly. During rotation fuel flowed freely from the fuel pump, thumb compression was established from each cylinder, rocker valve movement and gear continuity was established. During rotation of the crankshaft, ignition spark was obtained from each ignition lead.



Figure 1-Engine and propeller assembly attached to the airframe.

2.0 Airframe

The right wing remained intact and was separated during the recovery of the wreckage. The right flap and aileron control continuity was established. The left wing remained partially attached to the fuselage and was substantially damaged. The left wing outboard section was damaged and separated into several sections. The left wing tank separated from the wing and remained attached to its fuel lines. All internal left wing structure was noted. The left aileron and flap control continuity was established through broken control tubes and control cables.



Figure 2-Main wreckage and cabin area.

The empennage had impact damage. The vertical stabilizer was damaged near the top. The left horizontal stabilizer leading edge was bent, and its lower support cable separated with signatures consistent with tension overload. The horizontal stabilizer leading edge was positioned (rigged) to the lower attachment hole. The tailboom was bent near the empennage. Elevator and rudder control continuity was established through to the cabin area.



Figure 3-Empennage

The left seat left rudder pedal separated near its cable attachment. Flight control cable continuity was established in the cabin area with overload separation of the left aileron cable near its upper pulley. The left flap control cable was found in the main wreckage and was separated at both ends near the eyebolt attachments consistent with impact damage.

A [marine] heater and blower motor assembly was attached to the airframe in between and aft of the seats.

The seat belt buckle remained secured and belts were cut during the first responder's actions.

A nylon strap was secured near the right seat rudder pedals for the security of ballast weight. Two ballast bags were located with the main wreckage. The ballast bags were damaged and the total weight was undetermined. A blue strap on the passenger side floor panel was secured and was positioned to hold the ballast weight.

According to the cabin instrument panel indication, elevator trim was set to approximately neutral.

3.0 Logbooks

Recent logbooks were not obtained during the investigation.

Submitted by: Andrew Swick