



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

April 19, 2022

AIRFRAME AND ENGINE EXAMINATION

WPR22LA138

This document contains 4 embedded photos.

A. ACCIDENT

Location: Tucson, AZ
Date: March 30, 2022
Aircraft: Cozy Mark IV, N294MV
Serial 0394
NTSB IIC: Albert Nixon

B. EXAMINATION PARTICIPANTS:

Albert Nixon
Senior Aviation Accident Investigator
National Transportation Safety Board
Federal Way, WA

Kevin Hanna
Aviation Safety Inspector
Federal Aviation Administration
Scottsdale, AZ

C. SUMMARY

Examination of the recovered airframe and engine was conducted on April 19, 2022, in a hangar at Ryan Field Airport (RYN), Tucson, Arizona. No evidence of preimpact mechanical failures or malfunctions was noted during the examination of the recovered engine. However, examination of the fuel system revealed a clogged fuel filter on the left side.

D. DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

The left wing was separated about mid-span. The right winglet and rudder top portions were damaged. Both ailerons were attached.

In the cockpit, the fuel selector was positioned to off. The throttle and mixture levers were full forward. The landing brake was selected up. The Hobbs time read 32.9 hours.

Throttle and mixture control continuity was established.

All fuel lines were secured. Examination of the right fuel line filter revealed that it was partially clogged with a grey colored material. Examination of the left fuel line filter revealed that it was clogged with the grey colored material.



Figure 1: View of the airplane as viewed from the left side rear.



Figure 2: View of the portion of the left wing that separated.



Figure 3: Material that clogged and surrounded the left fuel filter.



Figure 4: Material found inside the left fuel filter cover as viewed from the top.

2.0 Engine Examination

The engine was observed attached to the fuselage. The two bladed propeller was attached to the crankshaft. Both blades were relatively intact.

The top spark plugs were removed, and the electrodes were observed undamaged and exhibited normal wear signatures. The rocker covers were removed, and no anomalies were noted. Rotational continuity was accomplished through manual rotation of the propeller and thumb

compression was obtained on all cylinders. A lighted borescope examination of the cylinders revealed no damage, normal operational signatures, and no anomalies.

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

Submitted by: Albert Nixon