



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

April 13, 2022

AIRFRAME / ENGINE EXAMINATION SUMMARY

WPR22LA046

This document contains 1 embedded photo.

A. ACCIDENT

Location:	Hurricane, Utah
Date:	November 22, 2021
Aircraft:	Vans RV-10, N54CT
NTSB Investigator-in-Charge:	Joshua Cawthra

B. SUMMARY

Examination of the recovered wreckage at the facilities of Air Transport, Phoenix, Arizona, was conducted on April 13, 2022.

C. DETAILS OF THE INVESTIGATION

1.0 Airframe/Engine Examination

Examination of the recovered airplane revealed that the Lycoming IO-540-X engine remained attached to the airframe via the engine mount. All engine accessories remained attached to the engine. All fuel and oil lines appeared to be connected to their respective fittings, however, the fuel line from the fuel servo outlet port to the fuel flow transducer inlet port was loose at the fuel servo fitting. An external fuel source was attached to the left wing fuel inlet line, and the number 1 cylinder fuel injector line was removed from the fuel injector for testing purposes. When power was applied to the airframe and the airframe boost pump was turned on with the throttle and mixture levers in the full forward position, fuel was observed expelling from the loose fuel line fitting (at the fuel servo), and no fuel was observed flowing from the fuel injector line. Damage sustained to the firewall appeared to restrict fuel flow from left and right wing fuel inlet lines.

An external electric fuel boost pump was attached inline from an external fuel source to the fuel inlet line of the engine driven fuel pump, and the loose fuel fitting at the fuel servo was tightened about 3.5 turns. The fuel boost pump was turned on with the throttle and mixture levers full forward position. Fuel was observed expelling from the cylinder no. 1 fuel injector line. Then the fuel outlet line at the fuel servo was loosened about 3.5 turns, fuel began to leak from the fitting, with no fuel expelling from the no. 1 fuel injector line.



Figure 1: View of the fuel servo outlet fuel line, with fuel leaking.

Submitted by: Joshua Cawthra