

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR24LA030

EXAMINATION REPORT

07/08/2024

A. ACCIDENT

Location: Firebaugh, California
Date: November 4, 2023
Time: 1200 Pacific daylight time
Helicopter: Arrow Falcon Exporters UH-1H, N3053Q

B. EXAMINATION REPORT

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C. SUMMARY

On November 4, 2023, at 1200 Pacific standard time, an Arrow Falcon Exporters UH-1H, N3053Q, was substantially damaged during startup near Firebaugh, California. The pilot was not injured. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 137 aerial application flight.

According to the pilot, this was going to be the first flight of the day. After, startup he began to see and smell smoke in the cockpit. He looked outside and saw smoke coming from the upper engine compartment. The pilot shutdown the helicopter and called 911. The fire department extinguished the fire.

The cockpit area to the engine compartment sustained thermal damage.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The helicopter was located at West Valley Aviation on their ramp and was in the process of starting up for the first flight of the day when an on-ground fire started.

2.0 Airframe Examination

The airframe sustained extensive thermal damage from aft of cockpit (cargo area) to the engine, with the most thermal damage localized on the left side.



Photograph 1: Fire Damaged Left Side of Helicopter (Photo Courtesy of Insurance)

The engine remained attached to the engine mounts and connected to the transmission and the main rotor assembly.

The engine side fuel filter remained attached to the firewall with the fuel lines attached. The fuel shutoff valve located on the airframe had been thermally destroyed and was in the debris in the helicopter in its relative normal position. However, the fuel lines associated with the component had been thermally consumed by the on-ground fire.



Photograph 2. Engine Side Fuel Filter



Photograph 3. Airframe Side Fuel Shutoff Valve



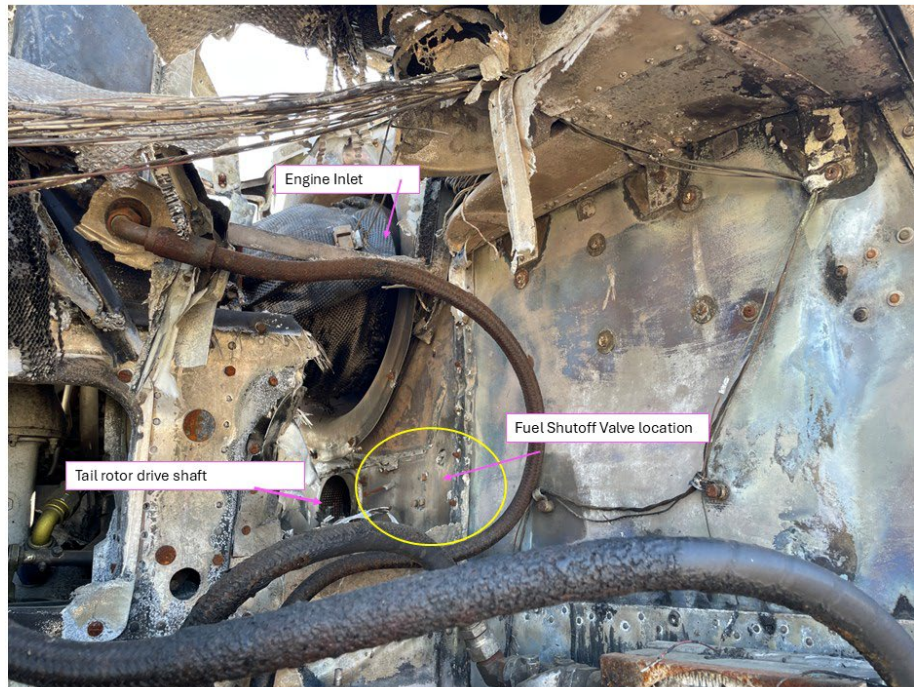
Photograph 4. Exemplar Fuel Shutoff Valve



Photograph 5. Side View of Fuel Shutoff Valve



Photograph 6. Top View of Fuel Shutoff Valve



Photograph 7. Location of Fuel Shutoff Valve

The helicopter was certificated in 2004 and purchased by West Valley Aviation in 2018 from "Huron," at that time the fuel pumps, filters and hoses, and hydraulic hoses were changed. The starter/generator was overhauled in 2020. The last annual inspection performed was July 18, 2023.

Routine maintenance was performed from 2018-2023 for the hoses. Maintenance consisted of visual checks and making sure the fittings and connections were tight and there were no fluids leaking. Regular maintenance was performed utilizing the United States (US) Army maintenance procedures for a phase inspection check.

The fuel lines on the airframe side located by the fuel shutoff valve are on-condition items to be replaced as needed. At the last annual inspection, the fuel lines on the airframe side were torqued at the fuel valve. There was no logbook entries found that identified that the fuel shutoff valve had been replaced and the operator believed the part to be original equipment manufacturer (OEM). The fuel shutoff valve is an "on-condition" item, which would require replacement only when the component failed to operate.

Due to the fire damage, there was no way to tell if the fuel hoses were OEM or replaced during the 2018 inspection; per maintenance personnel it is likely they were replaced during the 2018 inspection. According to maintenance, the operator utilized the US Army maintenance manual for the UH-1H and noted that the fuel hoses are a replace as needed item. There is also a repair section with approval for

the operator to repair and manufacture the fuel hose. As a result of this accident, the operator has instituted a replacement program for the hoses for every 10 years. Additionally, they checked all the hoses on their other helicopters and replaced the fuel hoses as necessary.

Submitted by:

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