

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR22FA331

ACCIDENT SITE EXAMINATION

September 5, 2022

A. ACCIDENT

Location: Shafter, California
Date: September 2, 2022
Time: 1100 Pacific daylight time
Airplane: N5943, Yakovlev Yak-11

B. DETAILS OF THE EXAMINATION

1.0 Accident Site

Examination of the accident site revealed that the airplane impacted an open field on a heading of about 127° magnetic about 3,777 ft northwest of the approach end of runway 12 at an elevation of 397 ft mean sea level (msl). The wreckage debris path was about 392 ft in length and 60 ft wide, oriented on a heading of about 127° magnetic. The first identified point of contact (FIPC) with terrain was a large swath of freshly disturbed dirt, which extended about 32 ft to an impact crater that was about 17 ft wide. Within the crater was 2 of the 4 propeller blades. The empennage was separated from the fuselage and was located about 170 ft from the FIPC. The forward portion of the fuselage, which included the instrument panel, engine, and right wing, was located about 244 ft from the FIPC. All major structural components of the airplane were located within the debris path.

The left wing was separated from the fuselage and was fragmented into multiple sections. The left wing fuel tank was displaced from the wing structure and exhibited hydro deformation. The left flap and left aileron remained attached to the left wing structure.

The right wing remained attached to the fuselage structure. The inboard portion of the leading edge was torn open. The outboard tip of the wing was bent and buckled. The inboard half of the right aileron remained attached to the inboard hinge, however, the outboard portion was separated from the hinge and bent upward.

The empennage remained attached to the aft section of fuselage structure. The vertical stabilizer, rudder, horizontal stabilizers, and elevators remained attached to their respective mounts. Both elevator trim tabs remained attached. The outboard tip of the right horizontal stabilizer and elevator were crushed upward. The outboard tip of the left horizontal stabilizer and elevator were impact damaged. The bottom of the rudder was crushed upward.

The engine section separated into two sections being that of the propeller hub and cylinder section, and the accessory case. The supercharger casing was the point of separation, which exposed the drive shaft. Multiple cylinders sustained impact

damage and four of the cylinders were liberated from the engine. The propeller hub remained attached, as did one of the propeller blades.

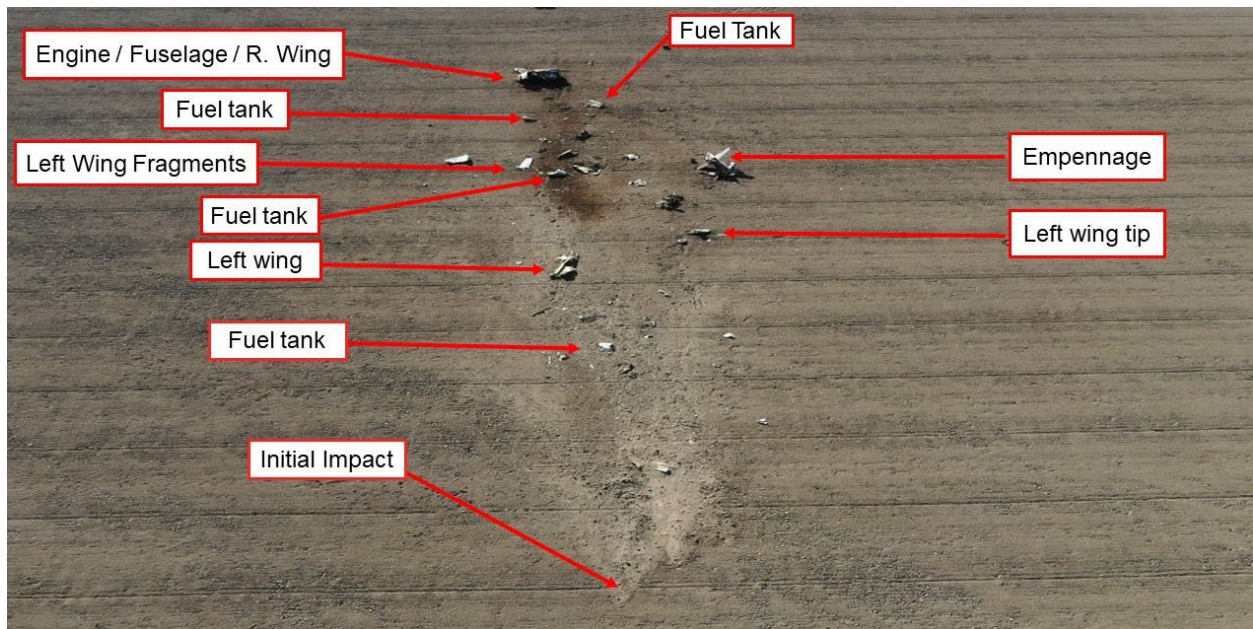


Figure 1: Wreckage Diagram. Aerial photo courtesy of Kern County Sheriff.

Submitted by:

Michael Hicks
Air Safety Investigator