

# National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



WPR25LA060

## **MATERIALS LABORATORY**

Factual Report 25-025

**May 12, 2025**

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## **A. ACCIDENT INFORMATION**

Location: Reedley, CA  
Date: 12/12/2024  
Vehicle: Zall Jihlavan Airplanes S R O JA-600 Skyleader, N789RC  
Investigator: Kristyn Blocher

## **B. COMPONENTS EXAMINED**

Portions of the nose landing gear assembly (Figure 1)

## **C. EXAMINATION PARTICIPANTS**

Specialist Joseph Panagiotou  
National Transportation Safety Board  
Washington, DC

## **D. DETAILS OF THE EXAMINATION**

The nose landing gear assembly was fractured into two pieces near the bottom of the steering tube (Figure 2). The fractured steering tube exhibited plastic deformation and buckling on the aft side (Figure 3). The buckling deformation was angled relative to the axis which indicates that there was a torsion load combined with the bending load. The orientation of the torsion load is consistent with the wheel turning right relative to the upper end of the steering tube. The fracture surface of the steering tube exhibited a slant fracture all the way around the circumference of the tube (Figure 4). The deformation and bulking along with the slant fracture surface is consistent with bending overload.

The landing gear assembly was further disassembled to examine the steering joint since it was difficult to rotate by hand. Upon disassembly, the steering joint was found to be well lubricated with no evidence of binding or scoring of the bearing surfaces. The axle (Figure 5) exhibited a bend which accounted for the difficulty when attempting to manipulate the steering by hand. The bend was consistent with the direction of bending that caused the buckling and fracture of the steering tube.

Examination of the remainder of the nose landing gear assembly did not reveal any other cracks or fractures.

Submitted by:

Joseph Panagiotou  
Fire Protection Engineer



**Figure 1.** Portions of nose landing gear as received.



**Figure 2.** Fracture in the nose landing gear steering tube.



**Figure 3.** Plastic deformation and buckling of the steering tube.



**Figure 4.** Fracture surface exhibiting slant fracture.



**Figure 5.** Steering axle exhibiting bending deformation.