

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



ERA25MA171

MATERIALS LABORATORY

Factual Report 26-007

February 11, 2026

(This page intentionally left blank)

A. ACCIDENT INFORMATION

Location: Jersey City, New Jersey
Date: April 10, 2025
Vehicle: Bell 206L-4, N216MH
Investigator: Leani Benítez-Cardona, AS-40

B. COMPONENTS EXAMINED

Forward section of tail boom.

C. EXAMINATION PARTICIPANTS

Specialist Donald Kramer
National Transportation Safety Board
Washington, DC

D. DETAILS OF THE EXAMINATION

The forward section of the tail boom was submitted to the NTSB Materials Laboratory for examination (figure 1). The forward section of the tail boom was found attached to the main fuselage, but the aft end had fractured and separated.

The tail boom fractured about in line with the annular frame at the aft end of the tail boom section. The frame was buckled on the left side (figure 1) and the upper left portion of the tail boom was deformed downward (figure 2a). A longitudinal stiffener in the upper left quadrant was buckled and bent downward (figure 2b), commensurate with the downward deformation. Along the top, the frame was fractured in two places and part of it was missing. The longitudinal stiffener in the upper right quadrant was fractured near the forward end and the adjacent tail boom skin was twisted and bent outward (figure 2c). Near the bottom, the frame was cracked (figure 2b). The vertical flanges of the tail rotor drive shaft hanger bearing support were bent in the forward direction, relative to the support attachment base (figure 2a).

Fracture features in the skin were consistent with separation starting on the upper left quadrant of the tail boom. The skin was fractured along a line of six rivets at this location. The skin fracture moved aft, away from the rivet line as it progressed around the tail boom. Near the bottom side, the fractured skin was bent and pressed against the frame. At the upper side, the skin was missing forward of the frame, along with a piece of the fractured stiffener. On the right side, the skin was bent outward.

The skin fracture along the rivet line exhibited features consistent with ductile overstress. The paint was spalled and cracked (figure 3a) and the fracture surface was inclined at about 45° to the skin surface (figure 3b).

Taken together, the deformation and fracture features were consistent with an overload separation of the tail boom that started with down and right bending loads.

Submitted by:

Donald Kramer, Ph.D.
Supervisory Materials Engineer

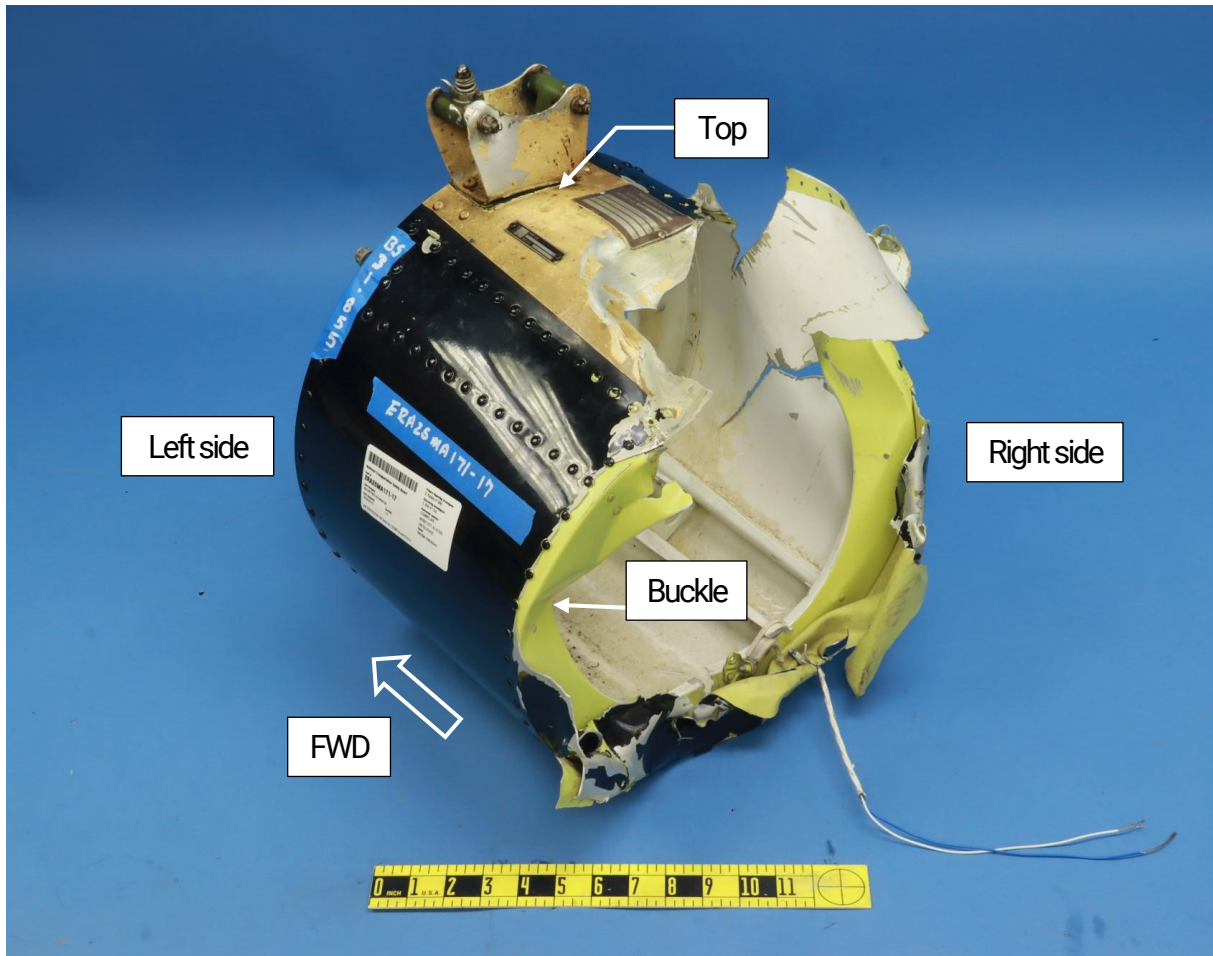


Figure 1. The forward section of the tail boom as received by the laboratory.

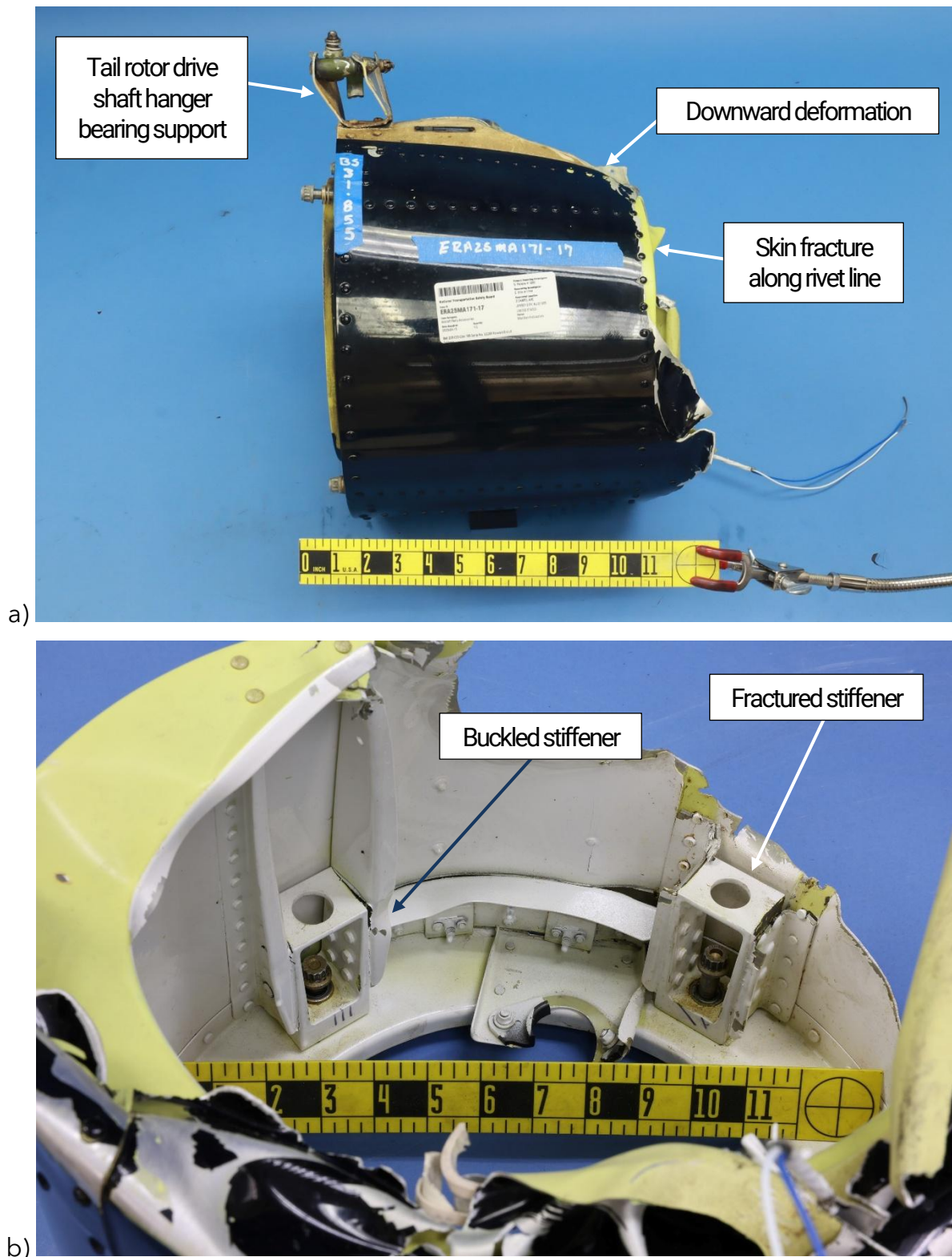


Figure 2. a) Left side of the forward tail boom section; b) interior view of upper left and right quadrants showing a buckled and bent stiffener and a fractured stiffener; and

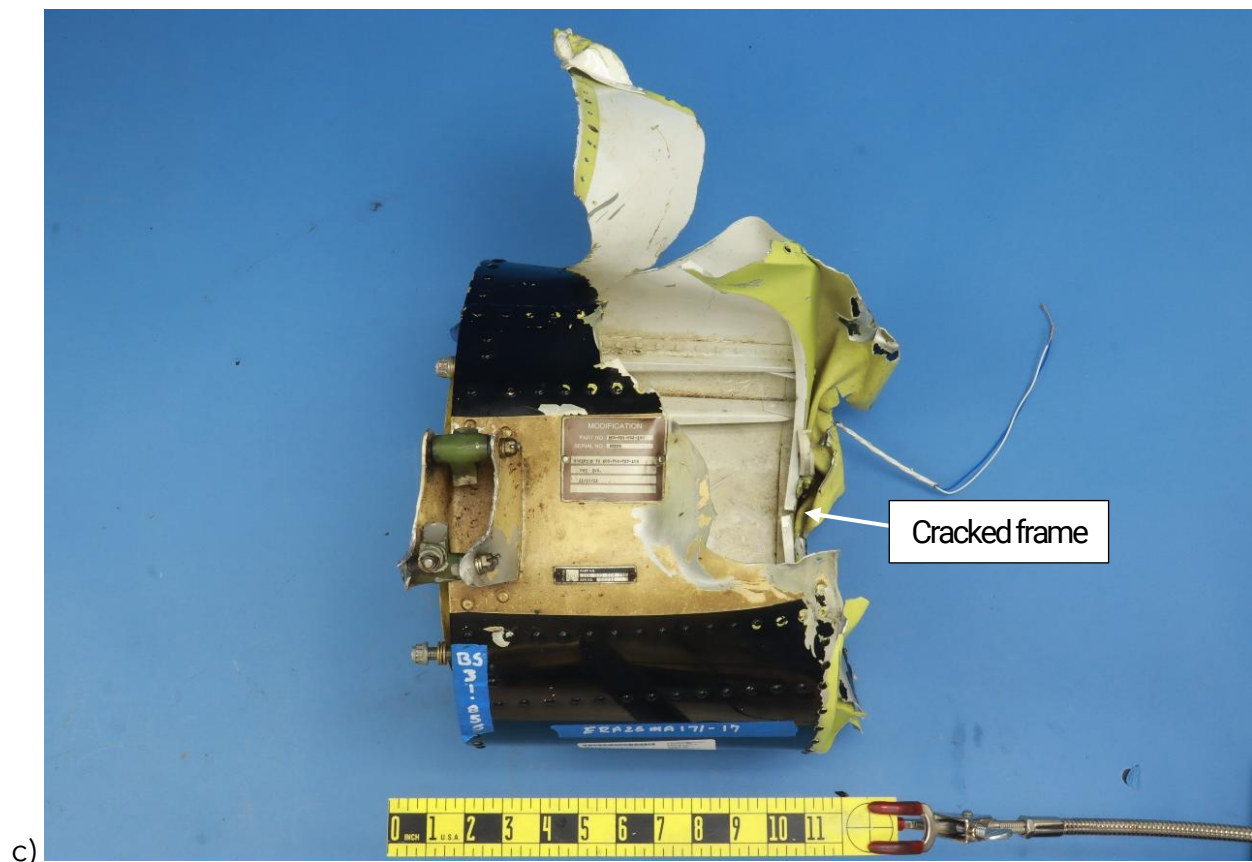


Figure 2 (cont.). c) top-down view of the forward tail boom section.

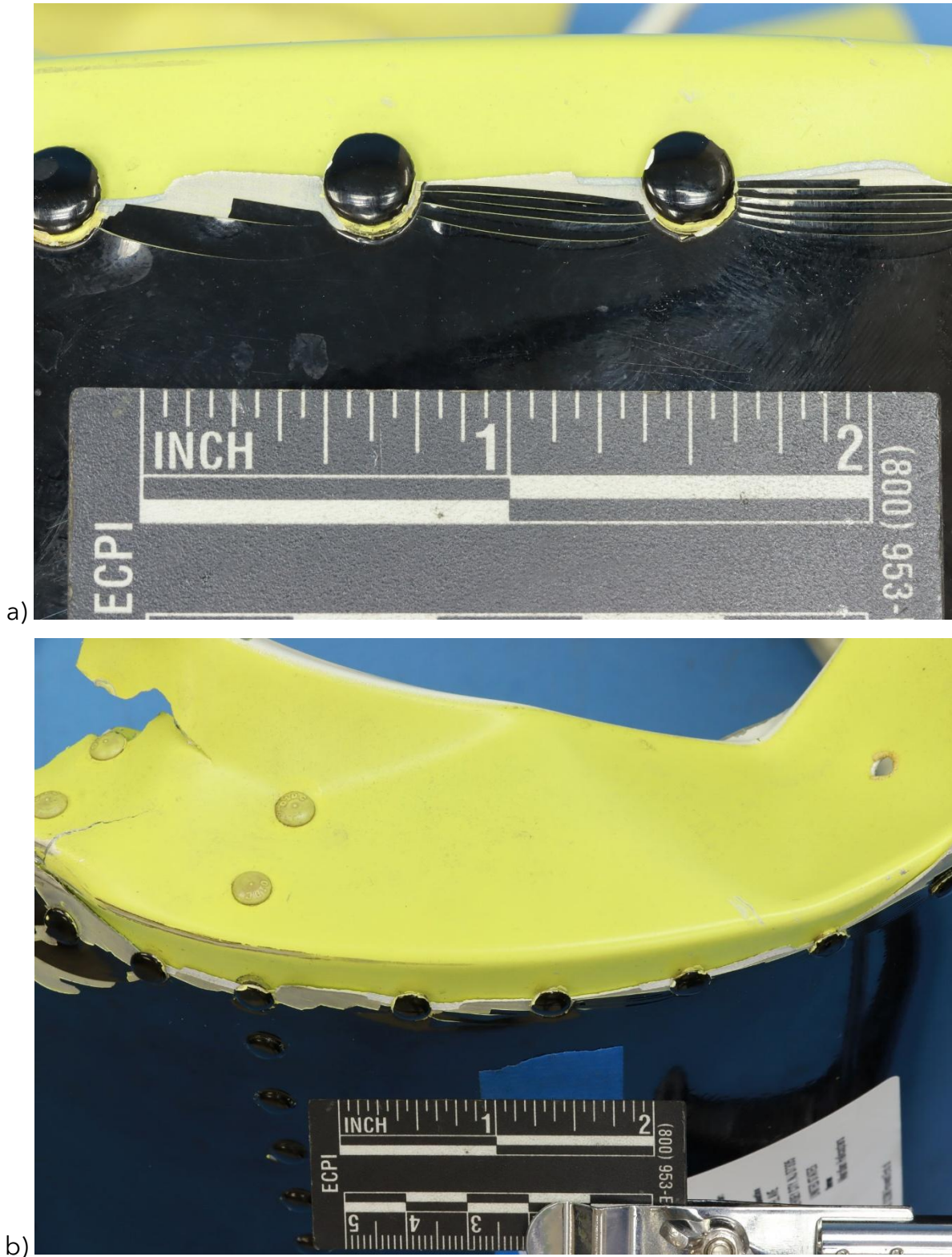


Figure 3. Images of the skin fracture along the rivet line on the upper left quadrant of the tail boom: a) close-in side view showing spalling and cracking of the paint and b) oblique view showing inclined fracture surfaces consistent with ductile overstress fracture.