

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



WPR22LA217

MATERIALS LABORATORY

Factual Report 22-078

October 11, 2022

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A. ACCIDENT INFORMATION

Location: McCall, Idaho
Date: June 9, 2022
Vehicle: Cub Crafters CC19-215, N61KT
Investigator: Eric Gutierrez, AS-WPR

B. COMPONENTS EXAMINED

Left brake caliper and brake line.

C. EXAMINATION PARTICIPANTS

Specialist Matthew R. Fox, Ph.D.
NTSB
Washington, DC

D. DETAILS OF THE EXAMINATION

An overall view of the submitted brake caliper and brake line components from the left main landing gear are shown in figure 1. The brake line 45-degree fitting at the lower side of the caliper was fractured. The fracture surfaces had a uniform matte gray appearance as shown in figure 2, and the fracture intersected the surfaces at slant angles, features consistent with ductile overstress fracture.

A sliding contact mark was observed on the lower surface of the caliper aft of the fitting as indicated in figure 2. The surface within the contact mark was smeared showing a deformation pattern consistent with contacting an object moving forward relative to the brake caliper. A contact mark was also observed on the aft side of the fitting adjacent to the sliding contact mark on the caliper as shown in figure 3.

Submitted by:

Matthew R. Fox, Ph.D.
Chief Technical Advisor - Materials

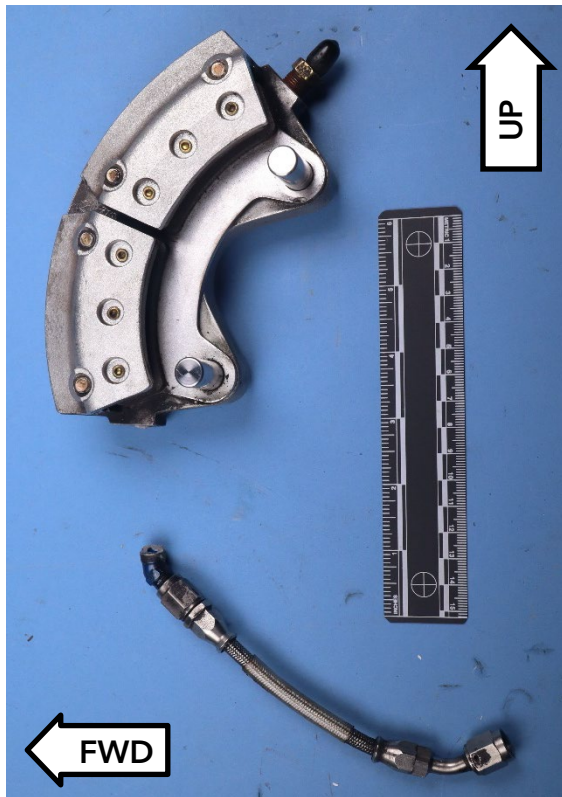


Figure 1. Outboard side of the brake caliper and brake line showing the fractured 45-degree fitting.

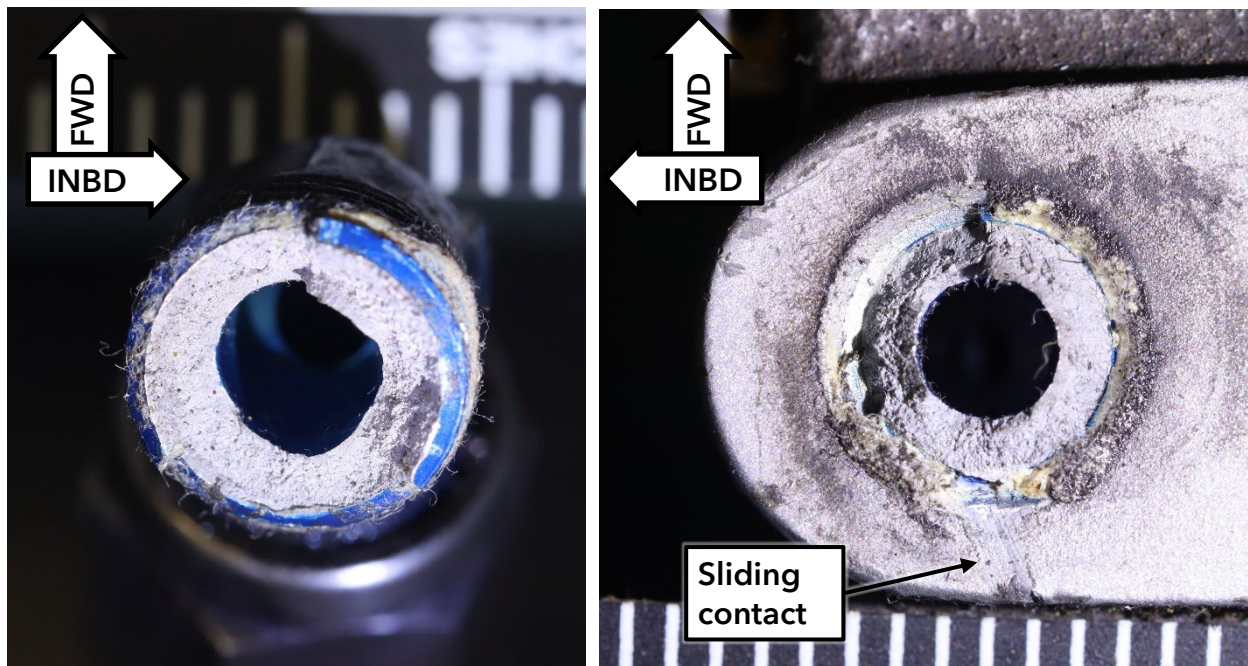


Figure 2. Upper (right image) and lower (left image) mating fracture surfaces of the 45-degree fitting.

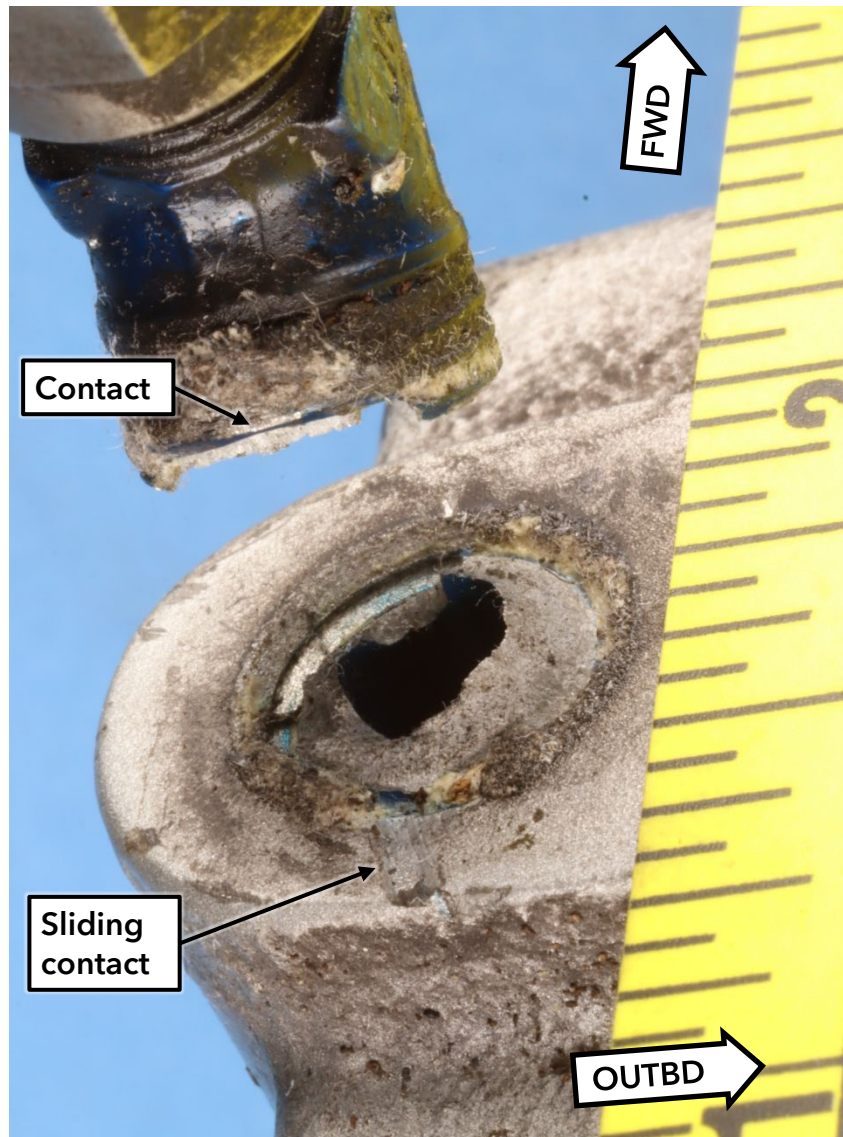


Figure 3. Lower surface of the brake caliper showing a sliding contact mark on the caliper surface and a contact mark on the adjacent surface on the aft side of the fractured fitting.