

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Materials Laboratory Division
Washington, D.C. 20594



June 25, 2020

MATERIALS LABORATORY FACTUAL REPORT

Report No. 20-012

A. ACCIDENT INFORMATION

Place : Sutter, California
Date : May 5, 2019
Vehicle : Schweizer G-164B
NTSB No. : WPR19LA137
Investigator : Stephen Stein

B. COMPONENTS EXAMINED

Fuel control unit (FCU) interconnect rod, propeller governor cam boss, and cam.

C. DETAILS OF THE EXAMINATION

Figure 1 shows a photograph of the as-received FCU interconnect rod, propeller governor cam boss, and cam. The cam fractured at the arm portion in the areas indicated in figure 1. The as-received pieces were ultrasonic cleaned in Alconox, a commercial detergent that removes oxides and lubricants from ferrous metal. Detailed bench binocular microscope examination of the cam revealed the fracture faces exhibited a coarse texture consistent with an overstress separation and no evidence of fatigue cracking. The FCU interconnect rod at one end contained a rod bearing assembly with a bolt. The bolt was inserted through the hole portion of the ball. A castellated nut and washer were attached to the threaded end of the bolt. A cotter pin was not attached to the nut. In the laboratory, the nut was disassembled from the bolt and the exposed threads showed no evidence of mechanical damage. The rod bearing assembly at the other end of the FCU interconnect rod contained no evidence of a bolt, castellated nut and washer, and the through-hole at the ball portion of the rod end bearing assembly showed no evidence of corrosion or mechanical damage.

Frank Zakar
Senior Metallurgist

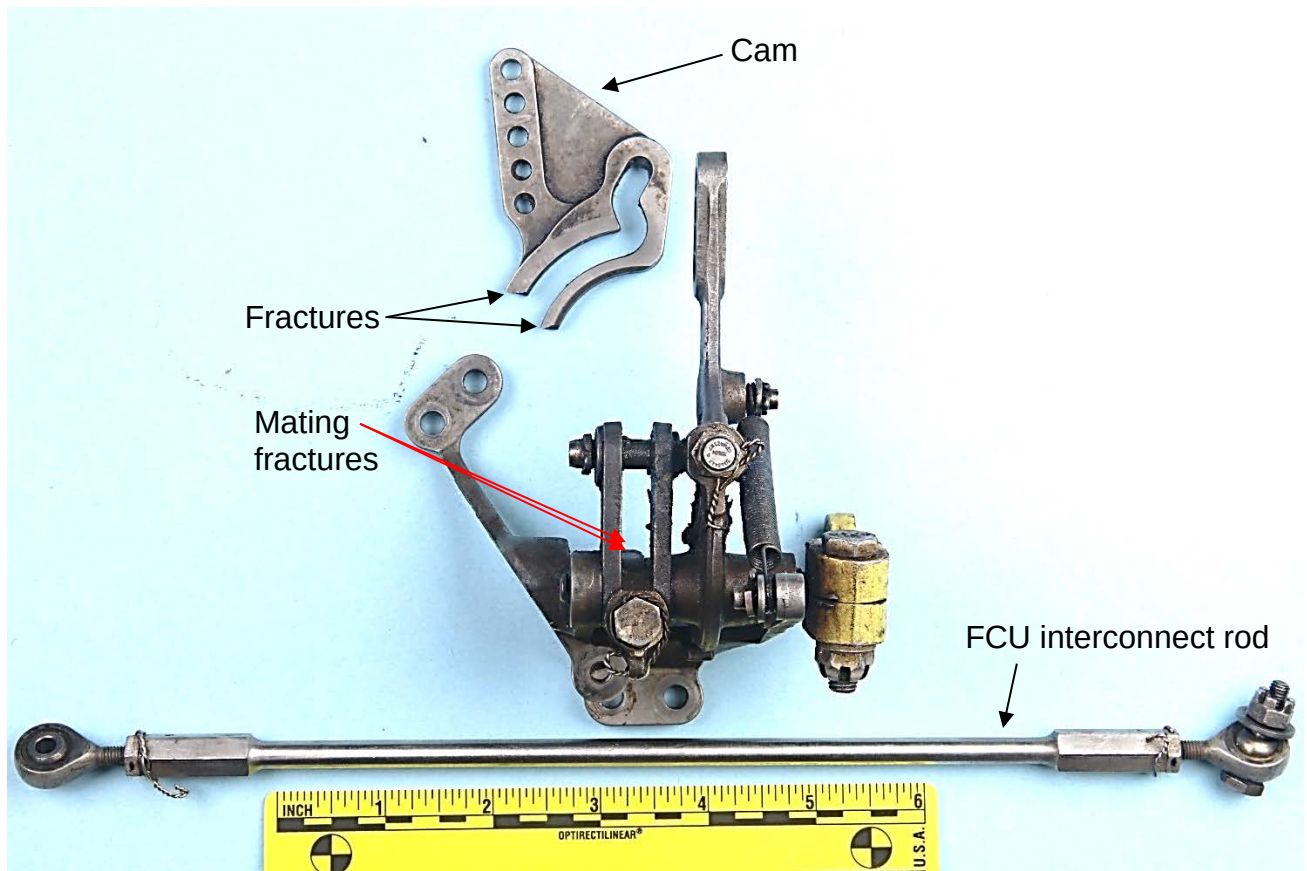


Figure 1. As-received FCU interconnect rod, propeller governor cam boss, and cam.