

NATIONAL TRANSPORTATION SAFETY BOARD

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



3/5/2019

MATERIALS LABORATORY FACTUAL REPORT

Report No. 18-047

A. ACCIDENT INFORMATION

Place : Nantucket, MA
Date : September 13, 2017
Vehicle : Cessna 402B, N836GW
NTSB No. : ERA17LA329
Investigator : Timothy Monville

B. COMPONENTS EXAMINED

An elevator trim tab actuator, a push pull rod and a cross drilled bolt (figure 1)

C. DETAILS OF THE EXAMINATION

Examination of the actuator end of the push-pull rod revealed deformation of the bolt hole on one of the clevis yoke halves (figure 2) as well as an impression from rubbing between the clevis yoke and the actuator end bearing. The deformation is characterized by a rounding of the bolt hole edge and raised burr (figures 3, 4). The bolt hole bores of the clevis were smooth and did not exhibit thread impressions.

The cross drilled bolt was consistent with a NAS464P3-8 bolt (figure 5). The threads on the end of the bolt had a flattened and polished appearance (figure 6). The cross drilled hole had debris inside. The bolt had remnants of paint on the head and did not appear to have been a replacement.

Joseph Panagiotou
Fire Protection Engineer



Figure 1: Trim tab actuator, push-pull rod and cross drilled bolt as received.

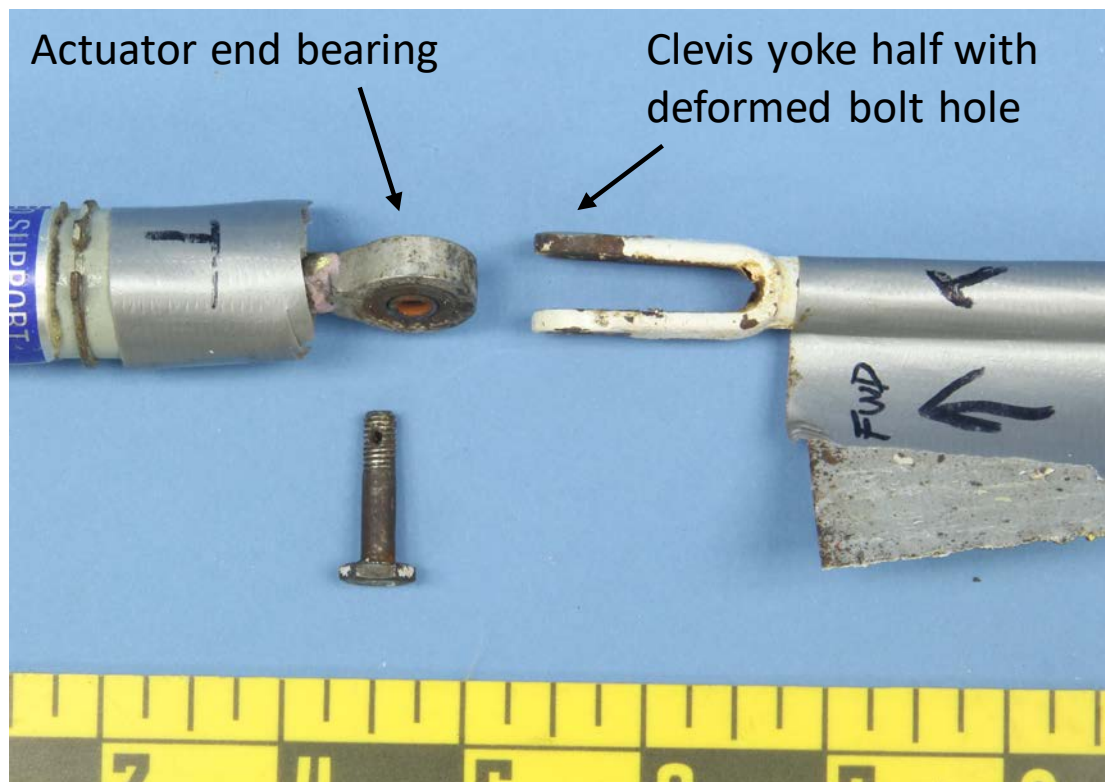


Figure 2: Clevis yoke half with deformed bolt hole.

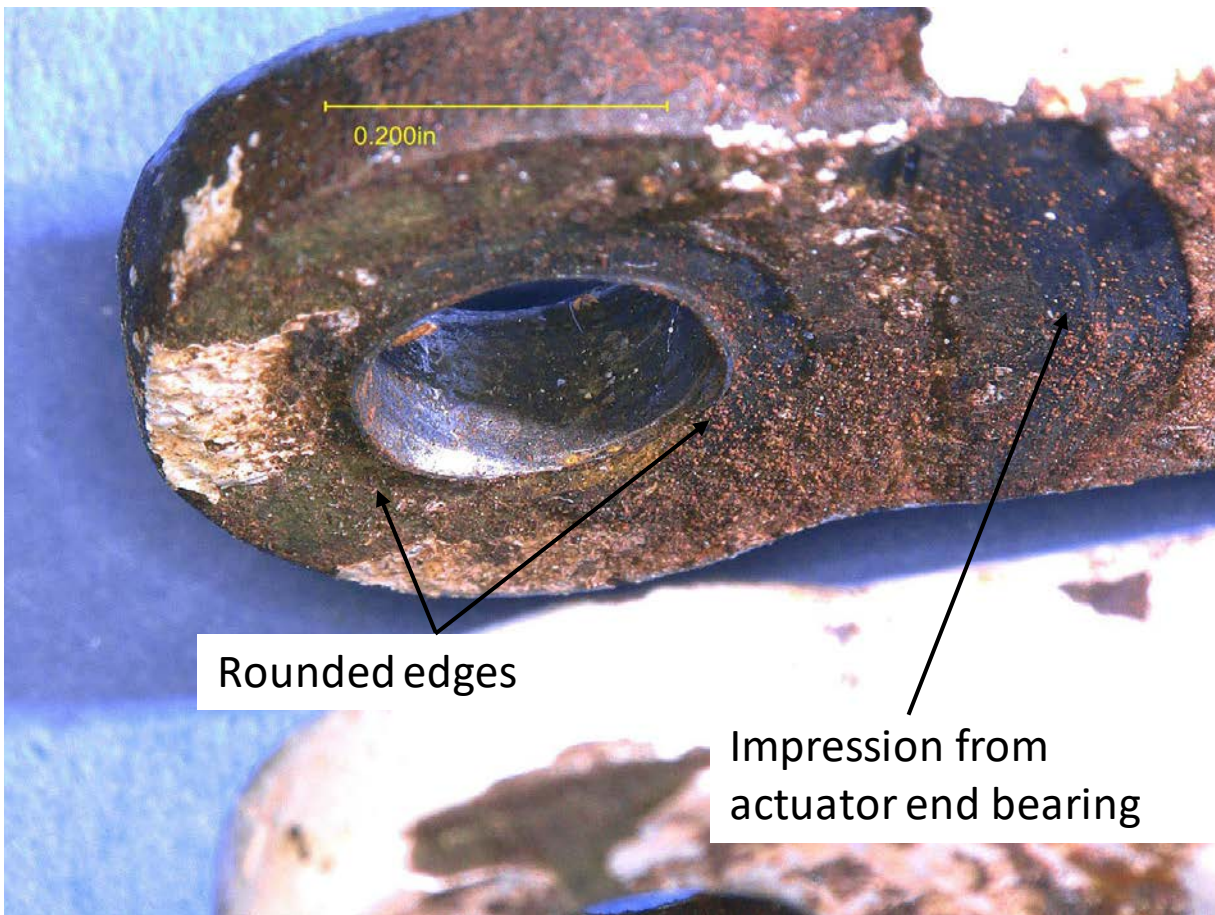


Figure 3: Deformed yoke bolt hole and impression from actuator end bearing.



Figure 4: Deformed yoke bolt hole exhibiting a raised burr.



Figure 5: Bolt consistent with NAS464P3-8.



Figure 6: Flattened and polished bolt threads.