

NATIONAL TRANSPORTATION SAFETY BOARD

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



May 14, 2020

MATERIALS LABORATORY FACTUAL REPORT

Report No. 20-021

A. ACCIDENT INFORMATION

Place : La Verne, CA
Date : September 30, 2018
Vehicle : Cessna 177RG, N46321
NTSB No. : WPR18FA279
Investigator : Fabian Salazar (AS-WPR)

B. COMPONENTS EXAMINED

Throttle cable assembly

C. DETAILS OF THE EXAMINATION

A portion of the throttle cable assembly from the accident aircraft was submitted for evaluation. The throttle sheath had detached from the mating ball mount, as shown in Figure 1.

Close-up images of the ball mount before and after light cleaning are shown in Figure 2. The surfaces of the ball mount had light scoring consistent with movement against the mating throttle sheath. Safety wire was observed wrapped around the base of the ball mount. A portion of the safety wire was tucked against the side of the ball mount that mated to the throttle sheath. The yellow double-sided arrow in Figure 3 indicates the radial distance along the ball mount that had safety wire against it.

The end of the throttle sheath that mated to the ball mount is shown in Figure 4. The end was slightly out of round, as indicated by the red circle. No distinct damage consistent with pinching that would have resulted in the out of round condition was observed on the flared end.

Adrienne V. Lamm
Materials Engineer

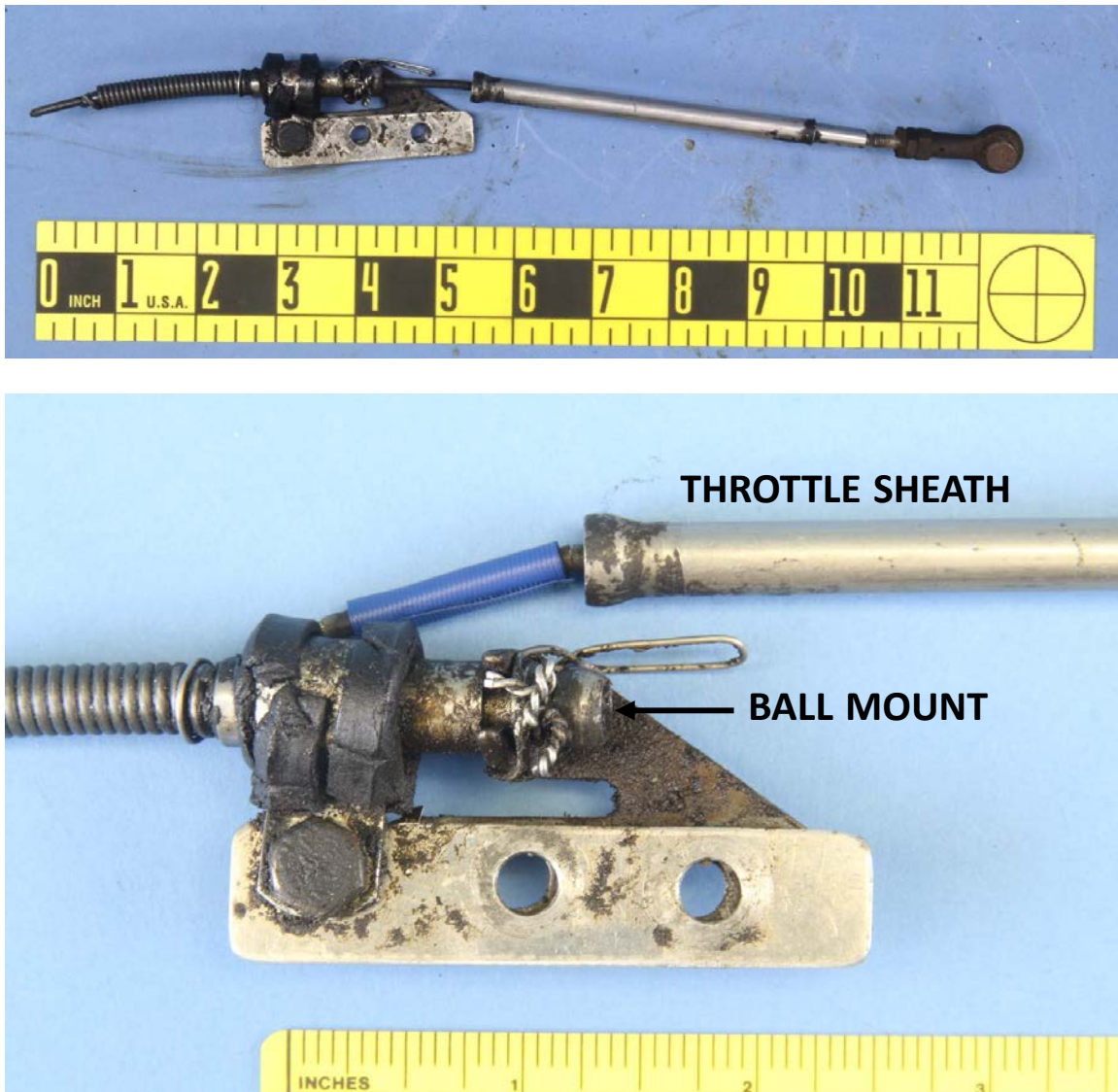


Figure 1: Overall (top) and close-up (bottom) photos of the submitted throttle cable assembly. The bottom photo shows the throttle sheath detached from the ball mount.



Figure 2: Digital microscope images of the detached ball mount before (top) and after (bottom) cleaning. Safety wire was observed wrapped around the base of the ball mount.

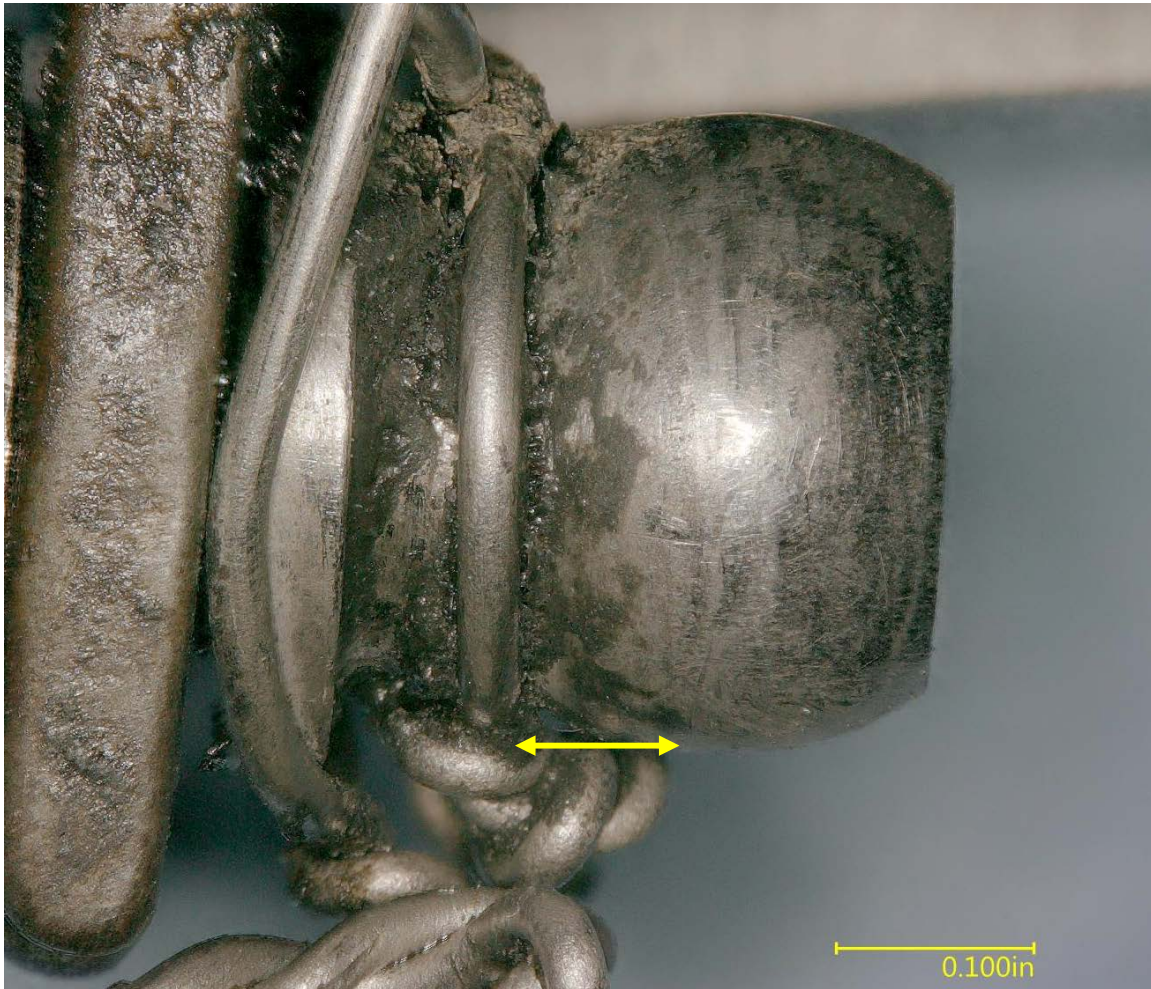


Figure 3: Digital microscope image showing close-up of the cleaned ball mount. The yellow double-sided arrow indicates the radial distance along the ball mount that had safety wire against it.

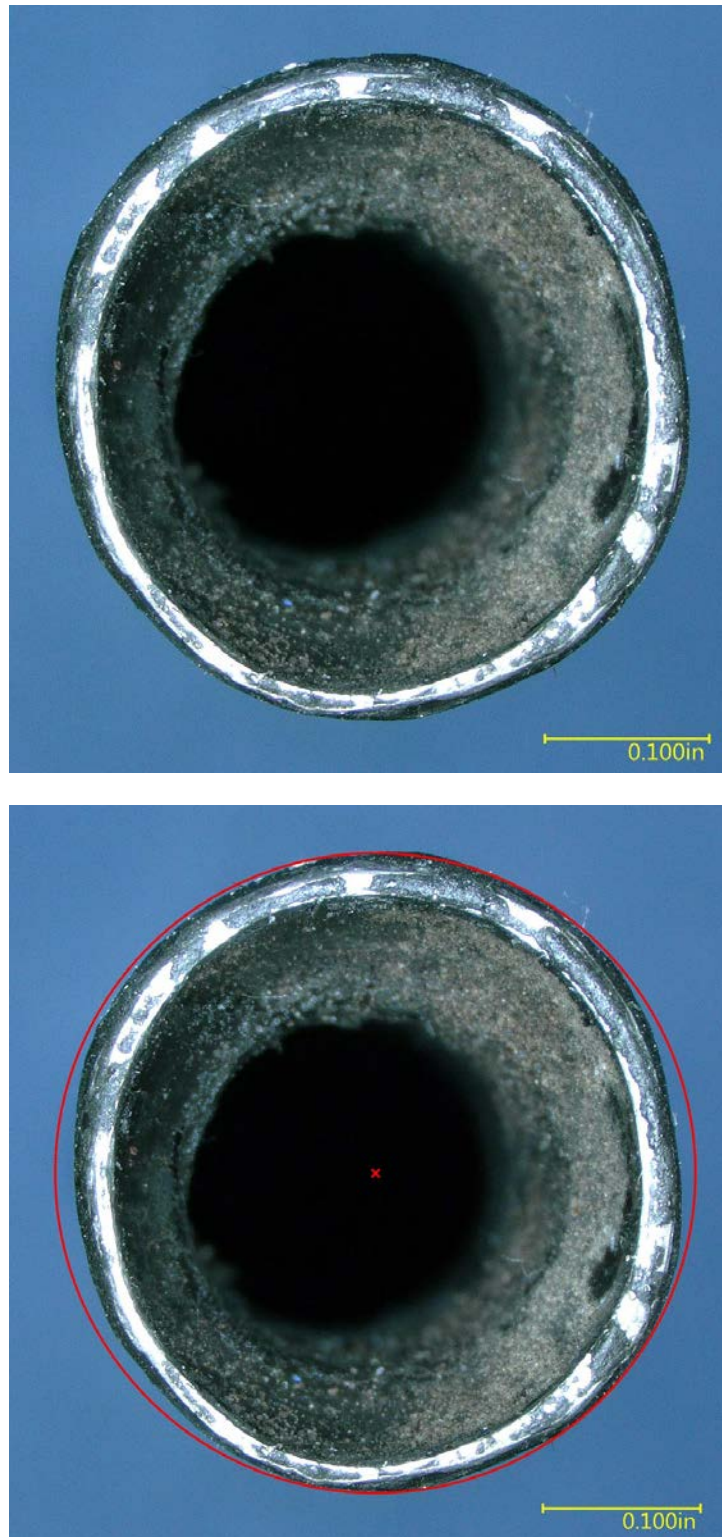


Figure 4: Digital microscope images showing the flared end of the throttle sheath. The end was slightly out of round, as indicated by the red circle in the bottom image.