

NATIONAL TRANSPORTATION SAFETY BOARD

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



7/30/2018

MATERIALS LABORATORY FACTUAL REPORT

Report No. 18-062

A. ACCIDENT INFORMATION

Place : Jackson, CA
Date : January 6, 2017
Vehicle : Cessna 421C, N71RC
NTSB No. : WPR17LA051
Investigator : Thomas Little

B. COMPONENTS EXAMINED

Right main landing gear torque link bolt (figure 1)

C. DETAILS OF THE EXAMINATION

The torque link bolt was approximately two and an eighth inch long with a bare shank length of 1.58 inch and a thread shank length of 0.55 inch. The bolt shank diameter was 0.31 inch. The bolt had a hexagonal head inscribed with a triangle containing an "X" (figure 2).

The torque link bolt threads had been rounded over and exhibited remnants of material consistent with the threads of the mating nut (figure 3). Remains of a cotter pin that was installed through the bolt are also visible. The deformation of the cotter pin remains are indicative of a shear overstress fracture.

Joseph Panagiotou
Fire Protection Engineer



Figure 1: Torque link bolt as received.



Figure 2: Bolt head with triangle and "X" inscription.

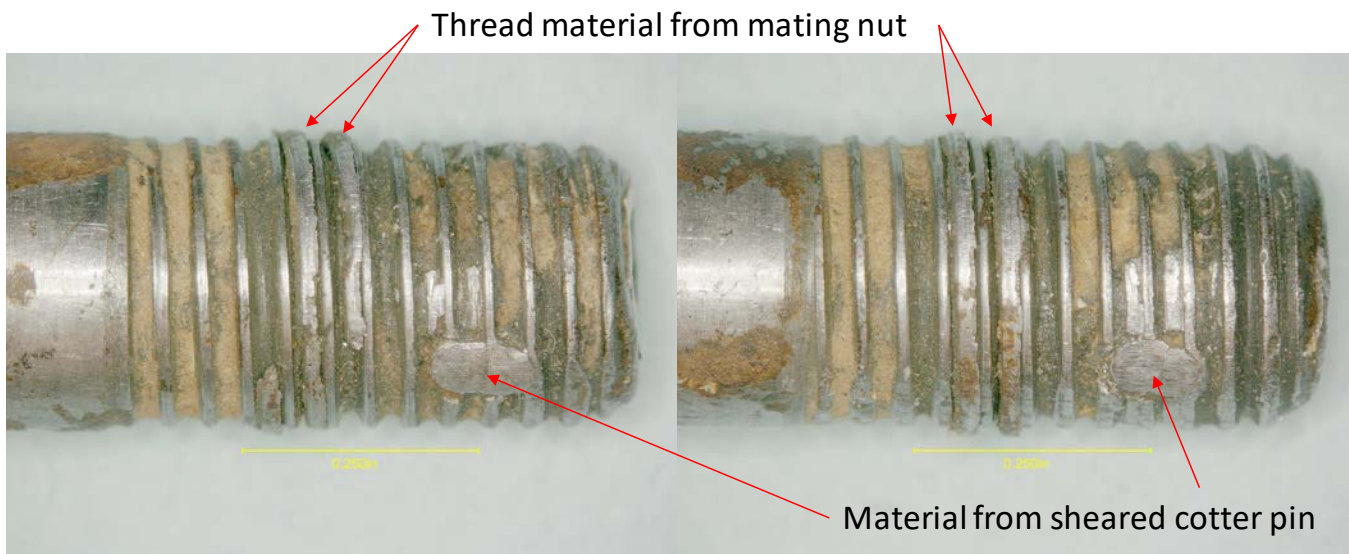


Figure 3: Rounded bolt threads with remnants of the threads from the mating nut and sheared cotter pin.