

NATIONAL TRANSPORTATION SAFETY BOARD

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



August 3, 2018

MATERIALS LABORATORY FACTUAL REPORT

Report No. 18-063

A. ACCIDENT INFORMATION

Place : San Bernardino, CA
Date : 12/29/2017
Vehicle : Cessna 210
NTSB No. : WPR18LA058
Investigator : Jack Vanover

B. COMPONENTS EXAMINED

Main landing gear saddle assembly (figure 1)

C. DETAILS OF THE EXAMINATION

The main landing gear saddle assembly had fractured as depicted in figure 2. Examination of the fracture surface using a stereo microscope revealed fracture surface features consistent with a fatigue fracture. These features included ratchet marks at the origin of the crack and two distinct crack arrest fronts. Additionally, an area with a series of crack arrest fronts was also observed on the fracture surface. These features are identified in the digital microscope photographs in figure 3.

Joseph Panagiotou
Fire Protection Engineer



Figure 1: Main landing gear saddle assembly as received.



Figure 2: Portions of the saddle assembly showing the orientation of the fracture.

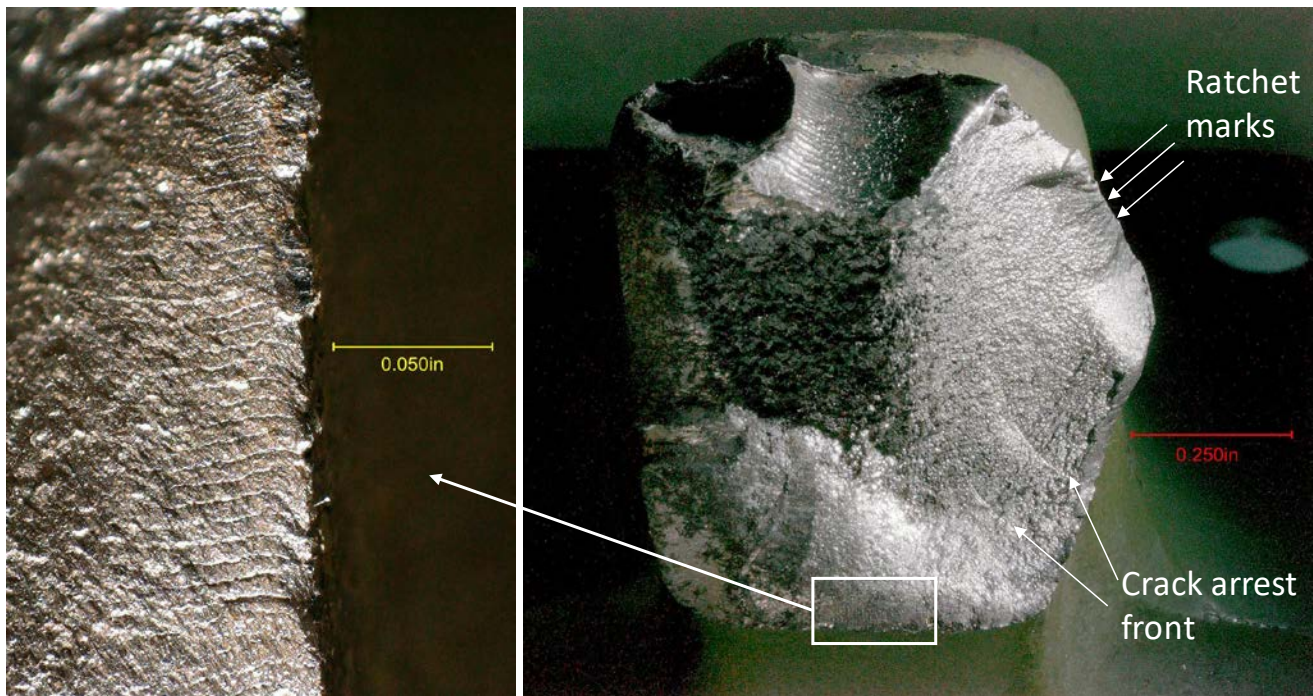


Figure 3: Fracture surface exhibiting ratchet marks and crack arrest fronts.