

NATIONAL TRANSPORTATION SAFETY BOARD

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



August 16, 2018

MATERIALS LABORATORY FACTUAL REPORT

Report No. 18-065

A. ACCIDENT INFORMATION

Place : Kapolei, HI
Date : 1/13/2018
Vehicle : Experimental JA30 Superstol
NTSB No. : WPR18LA065
Investigator : Maja Smith

B. COMPONENTS EXAMINED

Left landing gear strut (figure 1)

C. DETAILS OF THE EXAMINATION

The landing gear strut fractured and separated at the end fitting. Examination of the landing gear strut's cylinder revealed plastic deformation of the cylinder and a portion of the end fitting remaining inside. The portion of the end fitting remaining inside the cylinder exhibited a shear lip around the circumference of the fracture surface (figure 2). The separated end fitting exhibited plastic deformation (figure 3). The shear lip fracture surfaces and plastic deformation of both the cylinder and end fitting are consistent with an overload type of failure.

Joseph Panagiotou
Fire Protection Engineer



Figure 1: Left landing gear strut as received.

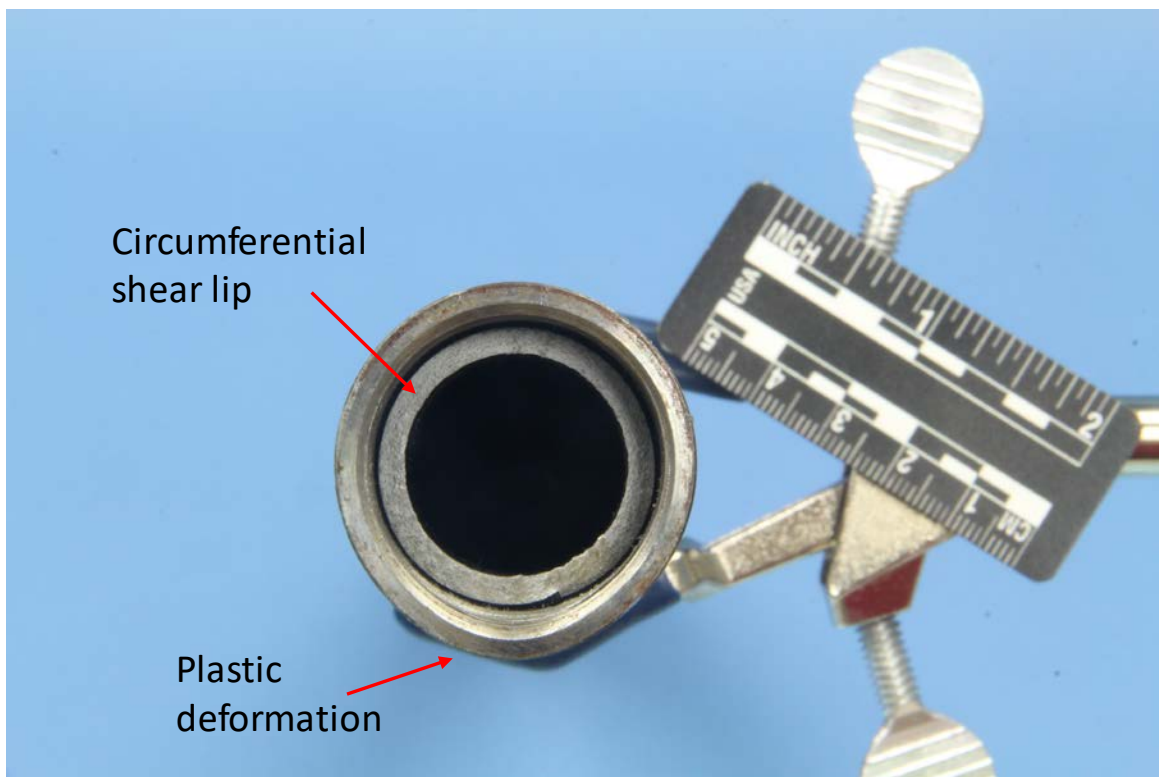


Figure 2: Plastic deformation of the strut cylinder and shear lip around the circumference of the portion of the end fitting remaining inside the cylinder.



Figure 3: Portion of the end fitting exhibiting plastic deformation.