

NATIONAL TRANSPORTATION SAFETY BOARD

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



March 14, 2013

MATERIALS LABORATORY FACTUAL REPORT

Report No. 13-021

A. ACCIDENT INFORMATION

Place : Parkers Prairie, Minnesota
Date : February 20, 2013
Vehicle : Maule MXT7-180
NTSB No. : CEN13FA172
Investigator : Pam Sullivan, AS-CEN

B. COMPONENTS EXAMINED

Bolt and bracket pieces from the forward spar/wing strut attachment.

C. DETAILS OF THE EXAMINATION

An overall view of the submitted bolt and bracket pieces are shown in figure 1. The bolt was slightly bent and was fractured in the shank. The bracket was fractured through a bolt hole. The bolt fracture surface was flat and showed deformation adjacent to the fracture consistent with overstress fracture under direct shear loading. The bracket had rough matte-gray fracture features with necking deformation and some twist deformation consistent with ductile overstress fracture under mostly tension loading and some torsion loading. No evidence of preexisting cracks was observed on either of the submitted pieces.

Matthew R. Fox
Senior Materials Engineer



Figure 1. Overall view of the submitted bracket and bolt pieces.