

From: [REDACTED]
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Subject: Materials Laboratory Factual Report - Email - ERA23LA318
Date: Friday, December 1, 2023 5:42:43 PM

ACCIDENT INFORMATION:

Place: Laconia, New Hampshire
Date: July 30, 2023
Vehicle: Cessna 195A, N9855A
NTSB No.: ERA23LA318
Investigator: Brian Rayner, ASI-ERA

COMPONENTS EXAMINED:

Left landing gear wheel, pieces of wheel fender, shim plate.

DETAILS OF THE EXAMINATION:

A left landing gear wheel that had separated from its left landing gear spring was submitted to the NTSB Materials Laboratory for examination. By design, the wheel hub contains a plate on its inboard side with three studs that are threaded into the plate. The studs are arranged in a triangle with one stud located at the top of the plate and the other two studs located near the bottom of the plate. The studs (and a shim) are used to attach the wheel assembly to the landing gear spring. The studs pass through holes in the landing gear and nuts are installed and tightened to pull the plate against the landing gear spring.

The examination revealed that the top stud was still attached to the wheel hub's attachment plate, but the threads were stripped and the nut was missing. The thread crests were deformed upward and exhibited a smeared appearance. The lower two studs had fractured at the face of the attachment plate. The stud fragments exhibited downward shear deformation and the fracture surfaces were either smeared or had a rough appearance. The features were consistent with stripping of the nut and separation of the top stud followed by shear/bending overstress fractures of the two lower studs.

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