
**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590**

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provides the aviation community with an economical means to exchange service experiences and to assist the FAA in improving aeronautical product durability, reliability, and safety. We prepare this publication from information operators and maintenance personnel who maintain civil aeronautical products pertaining to significant events or items of interest. At the time we prepared this document, we have not fully evaluated the material. As we identify additional facts such as cause and corrective action, we may publish additional data in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported to the FAA Service Difficulty Reporting System (SDRS). We welcome your participation, comments, and suggestions for improvement. Send to: FAA; ATTN: Aviation Data Systems Branch (AFS-620); P.O. Box 25082; Oklahoma City, OK 73125-5029.

(Editor's notes are provided for editorial clarification and enhancement within an article. They will always be recognized as italicized words bordered by parentheses.)

AIRPLANES

Boeing: A75N1; Broken Engine Mount Bolts; ATA 7120

A mechanic states, "During inspection of the engine installation on this aircraft, it was determined that one of the four high strength NAS-148 bolts that hold the engine mount to the fuselage was fractured completely through -- under the head of the bolt. This bolt has 100 hours total time in service. After informing the STC (*supplemental type certificate*) holder of the failure, we were informed we should have re-torqued these bolts after 25 hours of operation. This information was not included in the STC. According to the STC holder (*this data*) was referenced in the original aircraft maintenance manual where it states the original engine mount 'studs' should be re-torqued to 450 to 500 inch-pounds after the first 25 hours. These original engine mount studs are not installed in the STC aircraft as they have been removed, and the entire assembly was replaced with a different mount and hardware assembly. The replacement bolts are NAS 148 (internal wrenching) and are oversize from the original studs. The original (*maintenance*) manual torque values would not be sufficient, and no further instructions (*were*) given.

"These bolts are hidden and it would require the removal of the engine to re-torque them. We believe a critical safety issue exists, as the failure of these bolts will result in a catastrophic (*accident*). (See accident report CA18/2/3/8321 where the failure of an identical bolt in a similar STC caused the separation of the engine and a fatality accident.) (*This*) STC is inadequate in its description for maintenance to ensure continued airworthiness."





(That is a dramatic shot! Thanks for the photo effort—Ed.)

Part Total Time: 100.0 hours

Cessna: 170B; Failed Tail Wheel Assembly; ATA 3220

"During an annual inspection, it was noted that the tail wheel could not be steered," says this mechanic. "The tail wheel had been painted in the past (*as*) the top grease fitting was completely (*covered*). The aircraft owner stated (*a previous mechanic*) who had worked on the aircraft in the past told him not to grease the tail wheel, and to tighten the nut on the bottom of the steering bolt as tight as possible. Disassembly revealed all parts inside the tail wheel unit were extremely worn. The pins that should have been attached to the thrust plate were missing. Additionally, the axle for the tail wheel had been damaged previously, and the end of the axle was partially ground off—(*extending*) through the hole for the cotter pin (*used*) to secure the nut on the end of the axle. The entire tail wheel was beyond repair and was replaced with a serviceable (*unit*)." (*Part name and number: Scott 3200.*)