

UNAPPROVED PARTS NOTIFICATION

Aircraft Certification Service



FAA
Aviation Safety

No.: 2014-2014ACE072501

Date: November 14, 2014

<http://www.faa.gov/aircraft/safety/programs/sups/upn>

AFFECTED PRODUCTS:

Barrel Nuts, PN NAS577B7A, Alcoa Fastening Systems: Batch Numbers 5334992-000, M004187-000 or 5323292-000

PURPOSE:

The purpose of this notification is to advise aircraft owners, operators, manufacturers, maintenance organizations, and parts suppliers and distributors regarding the standard hardware identified above, to conduct a close visual inspection for surface irregularities, such as gouges or cracks, before being installed on a product. Suspect parts should be quarantined until conformity to the manufacturing standard is verified.

Not all non-conformities to the manufacturing standards can be visually detected, so the importance of quality acceptance criteria for standard parts is also emphasized.

Occurrences of cracked hardware should be reported through the established channels.

BACKGROUND

On July 25, 2014, the FAA issued Emergency AD (EAD) 2014-15-51, which requires inspection and replacement as necessary of the barrel nuts at the horizontal stabilizer to vertical stabilizer attachment joint on Embraer S.A. Model EMB-500 airplanes. This emergency AD was sent previously to all known U.S. owners and operators of these airplanes. This action was prompted by the Agencia Nacional De Aviacao Civil (ANAC), which is the aviation authority for Brazil, issuing emergency AD No.: 2014-07-02, dated July 25, 2014 (referred to after this as "the MCAI"), to correct an unsafe condition for Embraer S.A. Model EMB-500 airplanes. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0511. The MCAI states:

“This EAD results from a report of cracking in the barrel nuts at the horizontal stabilizer-to-vertical stabilizer attachment joint found during an inspection at the assembly line. This EAD is being issued to detect and correct cracking of the barrel nuts at the horizontal stabilizer-to-vertical stabilizer attachment joint, which could result in reduced structural integrity of the affected part and consequent detachment of the horizontal stabilizer from the airplane.

Since this condition may exist in other airplanes of the same type and affects flight safety, an immediate corrective action is required. Thus, sufficient reason exists to request compliance with this EAD in the indicated time limit without prior notice.”

RECOMMENDATIONS:

Regulations require that type-certificated products conform to their type design and are in a condition for safe condition. Aircraft owners, operators, manufacturers, maintenance organizations, and parts suppliers and distributors are encouraged to inspect their aircraft and/or parts inventories for the referenced part numbers. If these PN NAS577B7A barrel nuts are found in existing inventory, it is recommended that they be quarantined to prevent installation until a determination can be made regarding their origin and eligibility for installation.

FURTHER INFORMATION:

Further information concerning this investigation may be obtained from the FAA Manufacturing Inspection Office (MIO) listed below. In addition to the above recommendations, the FAA would appreciate any information concerning the discovery of the above-referenced PN NAS577B7A barrel nuts, Alcoa Fastening Systems: Batch numbers 5334992-000, M004187-000 or 5323292-000 from any source, the means used to identify the source, and the actions taken to remove the PN NAS577B7A barrel nuts from aircraft and/or parts inventories. Of particular interest are: the hardware part number, manufacturer (or markings), lot number, location on the product and time since install.

This notice originated from the Federal Aviation Administration, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri, telephone number, 816-329-4180, fax number 816-329-4157.