EMERGENCY AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

www.faa.gov/aircraft/safety/alerts/

DATE: September 16, 2009
AD #: 2009-19-51

Send to all U.S. owners and operators of Agusta S.p.A. (Agusta) Model AB139 and AW139 helicopters.

This Emergency Airworthiness Directive (AD) is prompted by a mandatory continuing airworthiness information (MCAI) AD issued by the European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community. The MCAI states that while taxiing, the tailboom of a Model AW139 helicopter bent and collapsed. Also, EASA had received previous reports of evidence of debonding on some tailboom panels of the specified Agusta model helicopters. This condition, if not corrected, could result in failure of a tailboom and subsequent loss of control of the helicopter.

The FAA has reviewed Agusta Alert Bollettino Tecnico (ABT) Nos. 139-193 and 139-194, both dated September 3, 2009. These ABTs refer to the aircraft maintenance publications for inspecting the affected tail panels for signs of debonding. If you find evidence of debonding, the ABTs also advise you to contact the manufacturer for repair instructions.

EASA has issued AD No. 2009-0198-E, dated September 4, 2009, which supersedes EASA AD No. 2008-0157, dated August 13, 2008, to correct an unsafe condition for the specified model helicopters. The latest EASA AD requires repetitive inspections of the tailboom panels at closer intervals. In case of debonding, the EASA AD requires you to mark the debonded areas for identification, contact the manufacturer for instructions, and follow their corrective actions.

These helicopter models have been approved by the aviation authority of Italy and are approved for operation in the United States. Pursuant to our bilateral agreement with Italy, EASA, their technical agent, has notified us of the unsafe condition described in the MCAI AD. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs. Therefore, this AD requires inspecting the tail panels for debonding as follows:

• Using the *large* end of the head of a specified part-numbered aluminum hammer, tap inspect the full skin surface of the tailboom between Stations 8700 and 11019.5 for a hollow or

dull sound. A bond separation will give a hollow or dull sound. A good bond will make a solid or clear sound. Do the inspections at the following intervals:

° For helicopters, serial number (S/N) 31006, 31020, 31022, 31042, 31136, 31157, and 31248, within 5-hours time-in-service (TIS), unless done previously, and thereafter at intervals not to exceed 50-hours TIS.

° For all helicopters, except S/N 31006, 31020, 31022, 31042, 31136, 31157, and 31248, within 25-hours TIS or 30 days, whichever occurs first, unless done previously, and thereafter at intervals not to exceed 50-hours TIS.

• If you find bond separation, use the *small* end of the head of the hammer to identify the edges of the debonded area. If the debonded area goes beyond the strake, remove the strake. Using a marking pen or chalk, mark the edge of the debonded area.

° Measure the surface area of each debonded area, the distance between the edges of the debonded areas, and the distance of the edge of each debonded area from the edge of the bond joint.

° Before further flight, repair the tailboom using FAA-approved data and procedures if:

° The debonded area exceeds 320 mm^2 (0.5 in^2),

° The distance between the edges of any two debonded areas is less than or equal to three times the largest debond dimension of the two debonded areas measured on a line between the centers of the two debonded areas, or

° The edge of any debond area is less than 3 mm (0.118 in) from the edge of the panel bond joint.

This AD differs from the MCAI AD in that we refer to flight hours as hours TIS. Also, we do not require you to contact the manufacturer nor do we reference their ABT, which references the maintenance manual. We have also inserted the inspection requirements and the debonding limits in this AD as required in the maintenance manual.

This rule is issued under 49 U.S.C. Section 44701 pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this emergency AD.

2009-19-51 AGUSTA S.p.A.: Directorate Identifier 2009-SW-50-AD.

Applicability: Model AB139 and AW139 helicopters, certificated in any category.

Compliance: Required as indicated.

To prevent failure of a tailboom and subsequent loss of control of the helicopter, do the following:

(a) Using the *large* end of the head of an aluminum hammer, part number 109-3101-58-1 (GF-06-00), tap inspect the full skin surface of the tailboom between Stations 8700 and 11019.5 for a hollow or dull sound, which will indicate a bond separation or debond area. Do the inspections at the following intervals:

(1) For helicopters, serial number (S/N) 31006, 31020, 31022, 31042, 31136, 31157, and 31248, within 5-hours time-in-service (TIS), unless done previously, and thereafter at intervals not to exceed 50-hours TIS.

Note 1: Following the Compliance Instructions of Agusta Alert Bollettino Tecnico Nos. 139-193, and 139-194, both dated September 3, 2009, accomplishes the requirements of this AD.

(2) For all helicopters, except S/N 31006, 31020, 31022, 31042, 31136, 31157, and 31248, within 25-hours TIS or 30 days, whichever occurs first, unless done previously, and thereafter at intervals not to exceed 50-hours TIS.

(b) If you find any bond separation, use the *small* end of the head of the hammer to identify the edges of the debonded area. If the debonded area goes beyond the strake, remove the strake. Using a marking pen or chalk, mark the edge of the debonded area.

(1) Measure the surface area of each debonded area, the distance between the edges of the debonded areas, and the distance of the edge of each debonded area from the edge of the bond joint.

(2) Before further flight, repair the tailboom using FAA-approved data and procedures if:

(i) The debonded area exceeds 320 mm^2 (0.5 in^2),

(ii) The distance between the edges of any two debonded areas is less than or equal to three times the largest debond dimension of the two debonded areas measured on a line between the centers of the two debonded areas, or

(iii) The edge of any debonded area is less than 3 mm (0.118 in) from the edge of the panel bond joint.

(c) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Manager, Safety Management Group, ATTN: DOT/FAA Southwest Region, Sharon Miles, ASW-111, Aviation Safety Engineer, Rotorcraft Directorate, Regulations and Guidance Group, 2601 Meacham Blvd, Fort Worth, Texas 76137, telephone (817) 222-5122, fax (817) 222-5961, for information about previously approved alternative methods of compliance.

(d) Special flight permits will not be issued.

(e) Copies of the applicable service information may be obtained from Agusta, Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA), Italy, telephone 39 0331-229111, fax 39 0331-229605/222595, or at http://customersupport.agusta.com/technical_advice.php

(e) The Joint Aircraft System/Component (JASC) Code for this part is Code 5302: Rotorcraft Tailboom.

(f) Emergency AD 2009-19-51, issued September 16, 2009, becomes effective upon receipt.

Note 2: The subject of this AD is addressed in European Aviation Safety Agency AD No. 2009-0198-E, dated September 4, 2009.

FOR FURTHER INFORMATION CONTACT: DOT/FAA Southwest Region, Gary Roach, ASW-111, Aviation Safety Engineer, Rotorcraft Directorate, Regulations and Guidance Group, 2601 Meacham Blvd, Fort Worth, Texas 76137, telephone (817) 222-5130, fax (817) 222-5961.

Issued in Fort Worth, Texas, on September 16, 2009.

Larry M. Kelly,
Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.