[Federal Register Volume 76, Number 166 (Friday, August 26, 2011)]
[Rules and Regulations]
[Pages 53312-53314]
From the Federal Register Online via the Government Printing Office [www.gpo.gov]
[FR Doc No: 2011-21475]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0861; Directorate Identifier 2010-SW-092-AD; Amendment 39-16778; AD 2011-17-14]

RIN 2120-AA64

Airworthiness Directives; Agusta S.p.A. Model A109A and A109AII Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) for the specified Agusta S.p.A. (Agusta) helicopters with a certain tail rotor special hub plug (hub plug) installed. This action requires a one-time inspection to determine the tightening torque value of the hub plug, and depending on the inspection results, replacing certain parts or disassembling the tail rotor hub and blades assembly and inspecting for damage. If the tightening torque value is between 600 kgcm and 700 kgcm, the lock washer and o-ring must be replaced with airworthy parts, and no further action is required. If the tightening torque value is greater than 700 kgcm, the hub plug must be replaced with an airworthy part. Torque the new hub plug to the specified tightening torque between 600 and 700 kgcm. If the tightening torque value of the hub plug is less than 600 kgcm, the tail rotor hub and blades assembly must be disassembled and inspected for damage. If a part is found that is outside allowable damage tolerances, that part must be replaced with an airworthy part. This amendment is prompted by the discovery that a wrong tightening torque value for the hub plug was contained in a revision to the helicopter maintenance manual. The actions specified in this AD are intended to detect an improperly torqued hub plug that could lead to tail rotor failure and subsequent loss of control of the helicopter.

DATES: Effective September 12, 2011.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of September 12, 2011.

Comments for inclusion in the Rules Docket must be received on or before October 25, 2011.

ADDRESSES: Use one of the following addresses to submit comments on this AD:

- Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

You may get the service information identified in this AD from Agusta Westland, Customer Support & Services, Via Per Tornavento 15, 21019 Somma Lombardo (VA) Italy, ATTN: Giovanni Cecchelli; telephone 39-0331-711133; fax 39 0331 711180; or at http://www.agustawestland.com/technical-bullettins.

Examining the Docket: You may examine the docket that contains the AD, any comments, and other information on the Internet at http://www.regulations.gov, or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Operations office (telephone (800) 647-5527) is located in Room W12-140 on the ground floor of the West Building at the street address stated in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Sharon Miles, Aerospace Engineer, FAA, Rotorcraft Directorate, Regulations and Policy Group, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-5122; fax: (817) 222-5961.

SUPPLEMENTARY INFORMATION:

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Emergency AD No. 2010-0222-E, dated October 22, 2010 (EAD 2010-0222-E), to correct an unsafe condition for the specified Agusta model helicopters with a hub plug, part number (P/N) 109-0133-18-103, installed. EASA advises that a mistaken value of the tightening torque of the hub plug has been discovered in the maintenance manual of A109A and A109AII helicopters. The investigation carried out by Agusta has revealed that the wrong value of the tightening torque of the hub plug was introduced with Revision 9 of the A109A and A109AII Helicopter Maintenance Manual, dated June 15, 2009. EASA states that this condition could ultimately lead to a tail rotor malfunction. The actions specified in this AD are intended to detect an improperly torqued hub plug that could lead to tail rotor failure and subsequent loss of control of the helicopter.

Related Service Information

Agusta has issued Mandatory Alert Bollettino Tecnico No. 109-132, dated October 22, 2010 (BT), which specifies performing a one-time inspection of the hub plug to verify the right tightening torque value, and provides instruction to restore the correct installation. If the tightening torque value is at least 600 kgcm, the BT specifies removing the lock washer, P/N 109-0133-17-103, and the o-ring, P/N MS29561-119, and replacing each part with a new part. If the tightening torque value is lower than the minimum required 600 kgcm, the BT specifies instructions to inspect the tail rotor hub and blade assembly, P/N 109-0131-02 (all dash numbers), for damage. If a damaged part is found that is outside the allowable damage tolerances, the BT specifies replacing the part with a new part. The BT also specifies restoring the tightening torque value of the hub plug to between 600 kgcm and 700 kgcm. EASA classified this service bulletin as mandatory and issued EAD 2010-0222-E to ensure the continued airworthiness of these helicopters.

FAA's Evaluation and Unsafe Condition Determination

These helicopters 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 representative, has notified us of the unsafe condition described in the EASA 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 the same type design.

Differences Between This AD and the EASA AD

This AD uses the term "hours time-in-service" to describe compliance times, and the EASA AD uses the term "flight hours". This AD specifies compliance with the requirements of this AD within 5 hours time-in-service (TIS) or 8 days, whichever occurs first. The EASA Emergency AD specifies compliance within 5 hours TIS, but no later than November 30, 2010, whichever occurs first. This AD addresses corrective action if the tightening torque of the hub plug is greater than the required value of 700 kgcm.

FAA's Determination and Requirements of This AD

This unsafe condition is likely to exist or develop on other helicopters of the same type design. Therefore, this AD is being issued to detect an improperly torqued hub plug that could lead to tail rotor failure and subsequent loss of control of the helicopter. This AD requires within 5 hours TIS or 8 days, whichever comes first, the following:

- Determine if the tightening torque value of the hub plug, P/N 109-0133-18-103, is between 600 kgcm and 700 kgcm.
- If the tightening torque value of the hub plug is between 600 and 700 kgcm, replace the lock washer, P/N 109-0133-17-103, and the o-ring, P/N MS29561-119, with an airworthy part.
- If the tightening torque value of the hub plug is greater than 700 kgcm, replace the hub plug, P/N 109-0133-18-103 with an airworthy part. Torque the hub plug to the specified tightening torque between 600 and 700 kgcm.
- If the tightening torque value of the hub plug is less than the required minimum 600 kgcm, remove the tail rotor hub and blades assembly, P/N 109-0131-02 (all dash numbers), and inspect the broaching and bearing faces of the trunnion, P/N 109-0131-05 or 109-8131-33, for spalling, fretting, or wear. Inspect the hub plug, the spacers, P/N 109-0133-16-103 and 109-0130-89-1, and the static stop, P/N 109-0130-27-5, for damage or corrosion. Inspect the broaching of the output drive shaft, P/N 109-0445-08-3 or 109-0445-08-7, for fretting or wear. If a part is found that is outside allowable damage tolerances, remove the unairworthy part and replace it with an airworthy part.

Accomplish the actions by following specified portions of the service bulletin described previously. The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the structural integrity and controllability of the helicopter. Therefore, the actions specified in this AD are required within 5 hours TIS or 8 days, whichever occurs first, a very short compliance time, and this AD must be issued immediately.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Costs of Compliance

We estimate that this AD will affect about 63 helicopters of U.S. registry. We estimate the costs to accomplish the requirements of this AD as follows:

Action	Number of Work Hours X Labor Rate	Labor Cost	Parts Cost	Cost per Aircraft	Affected fleet size	Fleet Cost
Determine the tightening torque value of the hub plug (one-time inspection)	0.25 hrs X labor rate of $85	$21	0	$21	63	$1,323
Replace lock washer and O-ring	2.0 hrs X labor rate of $85	$170	$287	$457	56 (assume 89% of fleet)	$25,592
Replace hub plug	2.0 hrs X labor rate of $85	$170	$850	$1020	1 (assume 1% of the fleet	$1020
Replace Trunnion, Hub Plug, Spacers, Static Stop	5.0 hrs. X labor rate of $85	$425	$8,884	$9,309	7 (assume 10% of fleet)	$65,163
Total cost impact for this AD						$93,098

Comments Invited

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2011-0861; Directorate Identifier 2010-SW-092-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD. We will consider all comments received by the closing date and may amend the AD in light of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the docket Web site, you can find and read the comments to any of our dockets, including the name of the individual who sent the comment. You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD. See the AD docket to examine the economic evaluation.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends Part 39 of the Federal Aviation Regulations (14 CFR Part 39) as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for Part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

2011-17-14 AGUSTA S.p.A.: Amendment 39-16678; Docket No. FAA-2011-0861; Directorate Identifier 2010-SW-092-AD.

Applicability: Models A109A and A109A II helicopters, with tail rotor special hub plug (hub plug), part number (P/N) 109-0133-18-103; certificated in any category.

Compliance: Required within 5 hours time-in-service (TIS) or 8 days, whichever occurs first, unless accomplished previously.

To detect an improperly torqued hub plug that could lead to tail rotor failure and subsequent loss of control of the helicopter, accomplish the following:

(a) Determine if the tightening torque value of the hub plug is between 600 kgcm and 700 kgcm.

(b) If the tightening torque value of the hub plug is between 600 kgcm and 700 kgcm, remove and replace the lock washer, P/N 109-0133-17-103, and the o-ring, P/N MS29561-119, with airworthy parts.

(c) If the tightening torque value of the hub plug is greater than 700 kgcm, remove and replace the hub plug, P/N 109-0133-18-103 with an airworthy part. Torque the hub plug to the specified tightening torque between 600 and 700 kgcm.

(d) If the tightening torque value of the hub plug is less than the 600 kgcm, do the following:

(1) Remove the tail rotor hub and blades assembly, P/N 109-0131-02 (all dash numbers).

(2) Inspect the broaching faces (splined area "F") and bearing faces (area "D") of the trunnion, P/N 109-0131-05 or 109-8131-33, for spalling, fretting, or wear by reference to Figure 2 of Agusta Mandatory Alert Bollettino Tecnico No. 109-132, dated October 22, 2010 (BT). If there is spalling, fretting, or wear that is outside allowable damage tolerances specified in Figure 2 of the BT, replace the trunnion with an airworthy trunnion.

(3) Inspect the hub plug, the spacers, P/N 109-0133-16-103 and 109-0130-89-1, and the static stop, P/N 109-0130-27-5, for spalling, fretting, wear, or corrosion. If there is any spalling, fretting, wear, or corrosion, replace the part with an airworthy part.

(4) Inspect the broaching area "H" of the output drive shaft, P/N 109-0445-08-3 or 109-0445-08-7, of the tail rotor gearbox assembly, P/N 109-0440-01, for fretting, wear, or other damage by referring to Figure 3 of the BT. If there is any fretting, wear, or other damage of 0.07 mm or more in depth between loaded and unloaded areas, replace the output drive shaft with an airworthy output drive shaft.

(5) Reinstall the tail rotor hub and blade assembly, and tighten the torque on the hub plug to between 600 kgcm and 700 kgcm.

(6) Accomplish a flap axis play inspection, a flap hinge friction inspection, and a tail rotor dynamic balance.

(e) 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, Rotorcraft Directorate, Regulations and Policy Group, ASW-111, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-5122; fax: (817) 222-5961, for information about previously approved alternative methods of compliance.

(f) The Joint Aircraft System/Component (JASC) Code is 6500: Tail rotor drive system.

(g) The inspection shall be done in accordance with the specified portions of Agusta Mandatory Alert Bollettino Tecnico No. 109-132, dated October 22, 2010. The Director of the Federal Register approved this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

Copies may be obtained from Agusta Westland, Customer Support & Services, Via Per Tornavento 15, 21019 Somma Lombardo (VA) Italy, ATTN: Giovanni Cecchelli; telephone 39-0331-711133; fax 39 0331 711180; or at http://www.agustawestland.com/technical-bullettins. Copies may be inspected at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(h) This amendment becomes effective on September 12, 2011.

Note: The subject of this AD is addressed in the European Aviation Safety Agency (Italy), Emergency AD 2010-0222-E, dated October 22, 2010.

Issued in Fort Worth, Texas, on August 8, 2011.
Kim Smith,
Manager, Rotorcraft Directorate,
Aircraft Certification Service.