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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2017-0826; Product Identifier 2016-SW-084-AD; Amendment 39-19153; AD 2018-01-12]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are superseding Airworthiness Directive (AD) 2015-22-53 for Airbus Helicopters Model AS350B3 helicopters. AD 2015-22-53 required revising the rotorcraft flight manual (RFM) to perform the yaw load compensator check after rotor shut-down and to state that the yaw servo hydraulic switch must be in the “ON” position before taking off. Since we issued AD 2015-22-53, Airbus Helicopters developed a modification of the ACCU TST switch. This new AD retains the requirements of AD 2015-22-53 and requires modifying the yaw servo hydraulic switch (collective switch) and replacing the ACCU TST button. The actions of this AD are intended to address an unsafe condition on these products.

**DATES:** This AD is effective February 20, 2018.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of February 20, 2018.

**ADDRESSES:** For Airbus Helicopters service information identified in this final rule, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at [http://www.helicopters.airbus.com/website/en/ref/Technical-Support\\_73.html](http://www.helicopters.airbus.com/website/en/ref/Technical-Support_73.html). You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0826.

#### **Examining the AD Docket**

You may examine the AD docket on the internet at <http://www.regulations.gov> in Docket No. FAA-2017-0826; or in person at the Docket Management Facility between 9 a.m. and 5 p.m.,

Monday through Friday, except Federal holidays. The AD docket contains this AD, the European Aviation Safety Agency (EASA) AD, any incorporated-by-reference information, the economic evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** George Schwab, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email george.schwab@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to remove AD 2015-22-53, Amendment 39-18331 (80 FR 74982, December 1, 2015) and add a new AD. AD 2015-22-53 applied to Airbus Helicopters Model AS350B3 helicopters with a dual hydraulic system installed. AD 2015-22-53 required revising the pre-flight and post-flight procedures in the RFM to perform the yaw load compensator check (ACCU TST switch) after rotor shut-down instead of during preflight procedures and to state that the yaw servo hydraulic switch (collective switch) must be in the “ON” (forward) position before taking off.

The NPRM published in the Federal Register on September 8, 2017 (82 FR 42487). The NPRM was prompted by AD No. 2016-0220, dated November 4, 2016, issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Airbus Helicopters Model AS 350 B3 helicopters. EASA advises that further analysis resulted in the recognition that a pilot could forget to activate a switch despite the RFM changes and that altering the bistable push button (push-on, push-off) ACCU TST switch is necessary.

Accordingly, the NPRM proposed to retain the requirements of AD 2015-22-53 and also proposed to require, within 350 hours time-in-service, installing a timer relay for the yaw servo hydraulic switch, installing an additional light on the caution and warning panel, and replacing the bistable ACCU TST button with a monostable button. The proposed requirements were intended to prevent takeoff without hydraulic pressure in the tail rotor (T/R) hydraulic system, loss of T/R flight control, and subsequent loss of control of the helicopter.

### **Comments**

After our NPRM was published, we received comments from two commenters.

### **Requests**

The National Transportation Safety Board (NTSB) requested that the AD address the need for an alert when there is insufficient pressure in the T/R hydraulic system, which results in increased pedal loads. In support of this request, the NTSB stated that, for at least four events it investigated in which the yaw servo hydraulic switch was likely not returned to its correct position before takeoff, a salient alert could have cued the pilots of insufficient T/R hydraulic pressure.

We partially agree. We agree that an aural and visual alert to the pilot to indicate loss of T/R hydraulic pressure would address this unsafe condition. However, Airbus Helicopters has not developed an alteration that provides such an alert. The FAA has determined the requirements proposed by the NPRM are appropriate to address this unsafe condition at this time. Should an aural and visual alert to the pilot to indicate loss of T/R hydraulic pressure be developed and approved, we might consider additional rulemaking at that time. We did not change the AD based on this comment.

The NTSB also requested that we eliminate the requirement to move the yaw load compensator check (ACCU TST switch) to post-flight procedures instead of preflight procedures. In support of this request, the NTSB stated that performing this check post-flight does not ensure the yaw load compensator will remain functional for the next flight.

We disagree. We determined that requiring this check post-flight with the RFM procedure to have the yaw servo hydraulic switch in the “ON” position before takeoff, along with the alterations to the yaw servo hydraulic switch and replacement of the ACCU TST button, reduces the risk of takeoff with the switch in the incorrect position to an acceptable level. We did not change the AD based on this comment.

Eagle Copters requested we change the AD to address helicopters that have replaced the factory console with a Geneva Aviation P122 or P132 electrical console under Eagle Copters USA, Inc. Supplemental Type Certificate No. SH4747NM. In support of this request, Eagle Copters noted that operators of these helicopters will need to request an Alternative Method of Compliance to comply with the AD, because the Airbus Helicopters service information required for replacing the bistable ACCU TST button does not apply to these helicopters. Eagle Copters proposed adding a requirement to the AD to replace the HYD TEST/ACCU TEST ESN-11 switch on the console from the locking bistable toggle switch to a locking momentary (monostable) toggle switch part number (P/N) MS24658-16F.

We agree. We revised the AD to require helicopters with a P122 or P132 electrical console installed to replace the bistable ACCU TEST switch (which may be marked “HYD TEST”) with monostable toggle switch P/N MS24658-16F.

### **FAA's Determination**

We have reviewed the relevant information and determined that an unsafe condition exists and is likely to exist or develop on other helicopters of the same type design and that air safety and the public interest require adopting the AD requirements as proposed with the change previously described. This change is consistent with the intent of the proposals in the NPRM and will not increase the economic burden on any operator nor increase the scope of the AD.

### **Related Service Information Under 1 CFR Part 51**

We reviewed Airbus Helicopters Service Bulletin (SB) No. AS350-67.00.64, Revision 0, dated February 25, 2015. This service information specifies procedures to install a timer relay and an additional indicator light on the caution and warning panel. This modification provides an “OFF” status indication of the yaw servo hydraulic switch by flashing a newly installed “HYD2” indicator light on the caution and warning panel. Airbus Helicopters identifies performance of this SB as modification 074622. This modification was available when AD 2015-22-53 was issued; however, it was determined unnecessary to address the unsafe condition at that time.

We also reviewed Airbus Helicopters SB No. AS350-67.00.65, Revision 0, dated August 25, 2016. This service information specifies procedures to replace the bistable push button ACCU TST switch with a monostable push button switch. Airbus Helicopters identifies performance of this SB as modification 074719.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Other Related Service Information**

We reviewed Airbus Helicopters SB No. AS350-67.00.66, Revision 1, dated October 22, 2015. This service information specifies inserting specific pages of the SB into the rotorcraft flight manual. These pages revise the preflight and post-flight hydraulic checks by moving the T/R yaw load

compensator check from preflight to post-flight. These pages also revise terminology within the flight manuals for the different engine configurations.

### **Costs of Compliance**

We estimate that this AD affects 86 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD. Labor costs are estimated at \$85 per work-hour.

Revising an RFM would take about 0.5 work-hour for a cost of \$43 per helicopter and \$3,698 for the U.S. fleet. Installing a timer relay for the yaw servo hydraulic switch and an indicator light would take about 9 work-hours and parts would cost about \$2,224. Replacing the ACCU TST button would take about 1 work-hour and parts would cost about \$2,244.

Based on these figures, we estimate a total cost of \$5,361 per helicopter and \$461,046 for the U.S. fleet.

### **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.

### **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 this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that a regulatory, 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.

### **List of Subjects in 14 CFR Part 39**

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

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2015-22-53, Amendment 39-18331 (80 FR 74982, December 1, 2015), and adding the following new AD:



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**2018-01-12 Airbus Helicopters:** Amendment 39-19153; Docket No. FAA-2017-0826; Product Identifier 2016-SW-084-AD.

**(a) Applicability**

This AD applies to Model AS350B3 helicopters with a dual hydraulic system installed, certificated in any category.

Note 1 to paragraph (a) of this AD: The dual hydraulic system for Model AS350B3 helicopters is referred to as Airbus modification OP 3082 or OP 3346.

**(b) Unsafe Condition**

This AD defines the unsafe condition as lack of hydraulic pressure in a tail rotor (T/R) hydraulic system. This condition could result in loss of T/R flight control and subsequent loss of control of the helicopter.

**(c) Affected ADs**

This AD supersedes AD 2015-22-53, Amendment 39-18331 (80 FR 74982, December 1, 2015).

**(d) Effective Date**

This AD becomes effective February 20, 2018.

**(e) Compliance**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(f) Required Actions**

(1) Before further flight, insert a copy of this AD into the rotorcraft flight manual, Section 4 Normal Operating Procedures, or make pen and ink changes to the preflight and post-flight procedures as follows:

(i) Stop performing the yaw load compensator check (ACCU TST switch) during preflight procedures, and instead perform the yaw load compensator check during post-flight procedures after rotor shut-down.

(ii) The yaw servo hydraulic switch (collective switch) must be in the “ON” (forward) position before takeoff.

Note 2 to paragraph (f)(1)(ii) of this AD: The yaw servo hydraulic switch is also called the hydraulic pressure switch or hydraulic cut off switch in various Airbus Helicopters rotorcraft flight manuals.

(2) Within 350 hours time-in-service:

(i) Install a timer relay for the yaw servo hydraulic switch (collective switch) by following the Accomplishment Instructions, paragraph 3.B.2.b.1, 3.B.2.b.2, 3.B.2.b.3, 3.B.2.b.4, 3.B.2.b.5, or 3.B.2.b.6, as applicable to the configuration of your helicopter, of Airbus Helicopters Service Bulletin (SB) No. AS350-67.00.64, Revision 0, dated February 25, 2015 (AS350-67.00.64). If your helicopter has an automatic pilot system, also comply with paragraph 3.B.2.b.7 of AS350-67.00.64.

(ii) Install an indicator light on the caution and warning panel by following the Accomplishment Instructions, paragraph 3.B.2.c.1 or 3.B.2.c.2, as applicable to the configuration of your helicopter, of AS350-67.00.64.

(iii) For helicopters with a Geneva Aviation P122 or P132 electrical console installed, replace the ESN-11 HYD TEST (ACCU TST) switch with a monostable toggle switch part number MS24658-16F.

(iv) For helicopters without a Geneva Aviation P122 or P132 electrical console installed, replace the bistable ACCU TST button on the control panel with a monostable button as depicted in Figure 1 or Figure 3, as applicable to the configuration of your helicopter, of Airbus Helicopters SB No. AS350-67.00.65, Revision 0, dated August 25, 2016.

(3) After the effective date of this AD, do not install a bistable ACCU TST button on any helicopter.

### **(g) Special Flight Permits**

A special flight permit may be issued for paragraph (f)(2) of this AD only.

### **(h) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Safety Management Section, Rotorcraft Standards Branch, FAA, may approve AMOCs for this AD. Send your proposal to: George Schwab, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

### **(i) Additional Information**

(1) Airbus Helicopters SB No. AS350-67.00.66, Revision 1, dated October 22, 2015, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at [http://www.helicopters.airbus.com/website/en/ref/Technical-Support\\_73.html](http://www.helicopters.airbus.com/website/en/ref/Technical-Support_73.html). You may view a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

(2) The subject of this AD is addressed in European Aviation Safety Agency (EASA) AD No. 2016-0220, dated November 4, 2016. You may view the EASA AD on the internet at <http://www.regulations.gov> in Docket No. FAA-2017-0826.

### **(j) Subject**

Joint Aircraft Service Component (JASC) Code: 2910, Main Hydraulic System.

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Airbus Helicopters Service Bulletin No. AS350-67.00.64, Revision 0, dated February 25, 2015.

(ii) Airbus Helicopters Service Bulletin No. AS350-67.00.65, Revision 0, dated August 25, 2016.

(3) For Airbus Helicopters service information identified in this AD, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at [http://www.helicopters.airbus.com/website/en/ref/Technical-Support\\_73.html](http://www.helicopters.airbus.com/website/en/ref/Technical-Support_73.html).

(4) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference 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/cfr/ibr-locations.html>.

Issued in Fort Worth, Texas, on January 8, 2018.

Lance T. Gant,  
Director, Compliance & Airworthiness Division,  
Aircraft Certification Service.