

**FEDERAL AVIATION ADMINISTRATION
AIRWORTHINESS DIRECTIVES**

**SMALL AIRPLANES, ROTORCRAFT, GLIDERS,
BALLOONS, & AIRSHIPS**

BIWEEKLY 2017-02

1/9/2017 - 1/22/2017



Federal Aviation Administration
Continued Operational Safety Policy Section, AIR-141
P.O. Box 25082
Oklahoma City, OK 73125-0460

CHANGE OF ADDRESS NOTICE

Any change of address regarding the biweekly service must include the mailing label from a recent issue or your name and address printed exactly as they appear on the mailing label (including the computer number above the address).

Please allow one month for an address change.

MAIL YOUR ADDRESS CHANGE TO:

Superintendent of Documents
Government Printing Office
Mail List Branch SSOM
Washington, DC 20402

Telephone: (202) 512-1806
Facsimile: (202) 512-2250

SMALL AIRCRAFT, ROTORCRAFT, GLIDERS, BALLOONS, & AIRSHIPS

AD No.	Information	Manufacturer	Applicability
--------	-------------	--------------	---------------

Information Key: E - Emergency; COR - Correction; S – Supersedes; R - Replaces

Biweekly 2017-01

2016-24-51		Sikorsky Aircraft Corporation	S-92A
2016-25-13	S 2016-04-12	Safran Helicopter Engines, S.A.	Arriel 2B, 2B1, 2C, 2C1, 2C2, 2D, 2E, 2S1, and 2S2
2016-25-14		Airbus Helicopters Deutschland GmbH	BO-105LS A-3
2016-25-19	S 2010-21-07	Airbus Helicopters	AS350B3 and EC130B4
2016-25-20		Airbus Helicopters	EC130B4, EC130T2, AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP
2016-25-28		Airbus Helicopters	AS355NP
2016-26-01		AGUSTAWESTLAND S.P.A.	AB139 and AW139
2016-26-04		Robinson Helicopter Company	R44 and R44 II; R66
2016-26-08	R 2014-22-01	PILATUS AIRCRAFT LTD.	PC-12, PC-12/45, PC-12/47, and PC-12/47E
2016-26-09	S 2016-06-01	B-N Group Ltd.	BN-2, BN-2A, BN-2A-2, BN-2A-3, BN-2A-6, BN-2A-8, BN-2A-9, BN-2A-20, BN-2A-21, BN-2A-26, BN-2A-27, BN-2B-20, BN-2B-21, BN-2B-26, BN-2B-27, BN-2T-4R, BN-2T, BN2A MK. III, BN2A MK. III-2, and BN2A MK. III-3

Biweekly 2017-02

2017-01-12		Diamond Aircraft Industries GmbH	DA 42 airplanes
2017-02-51		Sikorsky Aircraft Corporation	S-92A helicopters



2017-01-12 Diamond Aircraft Industries GmbH: Amendment 39-18779; Docket No. FAA-2016-9317; Directorate Identifier 2016-CE-029-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective February 22, 2017.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Diamond Aircraft Industries GmbH DA 42 airplanes, serial numbers 42.004 through 42.427 and 42.AC001 through 42.AC151, that have a TAE 125-02-99 or TAE 125-02-114 engine installed, are equipped with an exhaust pipe, DAI part number (P/N) D60-9078-06-01, or Technify P/Ns 52-7810-H0001 02, 52-7810-H0001 03, or 52-7810-H0001 04, and are certificated in any category.

(d) Subject

Air Transport Association of America (ATA) Code 78: Engine Exhaust.

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as an uncommanded engine shutdown during flight due to failure of the propeller regulating valve caused by hot exhaust gases escaping from fractured engine exhaust pipes. We are issuing this AD to prevent failure of the propeller regulating valve, which could result in forced landing with consequent damage to the airplane.

(f) Actions and Compliance

Unless already done, do one of the actions in either paragraph (f)(1) or (2) of this AD. For the purpose of this AD, if the flight hours accumulated since first installation of an affected exhaust pipe is not known, use the total hours time-in-service (TIS) accumulated on the airplane.

Note 1 to paragraph (f) of this AD: The NPRM for this AD proposed to require both the installation of clamps and the replacement of the exhaust pipes. This AD only requires one or the other.

(1) At the following compliance times, install additional exhaust pipe clamps following section III.2 of the INSTRUCTIONS section of Diamond Aircraft Industries GmbH Work Instruction WI-MSB 42-120, dated June 24, 2016, as specified in the Accomplishments/Instructions paragraph of

Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB 42-120, dated June 24, 2016, or Diamond Aircraft

Industries GmbH Mandatory Service Bulletin MSB 42-120/1, dated November 10, 2016.

(i) If the affected exhaust pipe has 1,300 hours TIS or less since first installed on an airplane as of February 22, 2017 (the effective date of this AD): Before or upon accumulating 1,500 hours TIS since the affected exhaust pipe was first installed on an airplane.

(ii) If the affected exhaust pipe has more than 1,300 hours TIS since first installed on an airplane as of February 22, 2017 (the effective date of this AD): Within the next 200 hours TIS after February 22, 2017 (the effective date of this AD) or within the next 12 months after February 22, 2017 (the effective date of this AD), whichever occurs first.

(2) At the following compliance times, replace the exhaust pipes listed in paragraph (c) of this AD with an exhaust pipe DAI P/N D60-9078-06-01_01 or Technify P/N 52-7810-H0014 01 following section III.1 of the INSTRUCTIONS section of Diamond Aircraft Industries GmbH Work Instruction WI-MSB 42-120, dated June 24, 2016, as specified in the Accomplishments/Instructions paragraph of Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB 42-120, dated June 24, 2016, or Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB 42-120/1, dated November 10, 2016.

(i) If the affected exhaust pipe has 1,300 hours TIS or less since first installed on an airplane as of February 22, 2017 (the effective date of this AD): Before or upon accumulating 1,500 hours TIS since the affected exhaust pipe was first installed on an airplane.

(ii) If the affected exhaust pipe has more than 1,300 hours TIS since first installed on an airplane as of February 22, 2017 (the effective date of this AD): Within the next 200 hours TIS after February 22, 2017 (the effective date of this AD) or within the next 12 months after February 22, 2017 (the effective date of this AD), whichever occurs first.

(g) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email: mike.kiesov@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

(h) Related Information

Refer to MCAI European Aviation Safety Agency (EASA) AD No. 2016-0156, dated August 2, 2016, for related information. You may examine the MCAI on the Internet at <https://www.regulations.gov/document?D=FAA-2016-9317-0002>.

(i) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) 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 this AD specifies otherwise.

(i) Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB 42-120, dated June 24, 2016.

(ii) Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB 42-120/1, dated November 10, 2016.

(iii) Diamond Aircraft Industries GmbH Work Instruction WI-MSB 42-120, dated June 24, 2016.

(3) For Diamond Aircraft Industries GmbH service information identified in this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43 2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; Internet: <http://www.diamondaircraft.com>.

(4) You may view this service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148. In addition, you can access this service information on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9317.

(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 Kansas City, Missouri, on January 6, 2017.

Melvin Johnson,
Manager, Small Airplane Directorate,
Aircraft Certification Service.



DATE: January 13, 2017

AD #: 2017-02-51

This Emergency Airworthiness Directive (Emergency AD) 2017-02-51 is being sent to owners and operators of Sikorsky Aircraft Corporation (Sikorsky) Model S-92A helicopters.

Background

This Emergency AD was prompted by three reports of operators losing tail rotor (TR) control caused by a failed tail rotor pitch change shaft (TRPCS) assembly bearing. Following the first two reports, the FAA issued and subsequently published as a final rule Emergency AD 2016-24-51 (81 FR 95425, December 28, 2016). That AD applies to Sikorsky Model S-92A helicopters with a TRPCS assembly that has less than 80 hours time-in-service (TIS) with bearings that were manufactured prior to November 3, 2016. Emergency AD 2016-24-51 is intended to address an unsafe condition with low-time bearings by requiring removal of TRPCS assemblies that have less than 5 hours TIS and one-time inspections for certain conditions.

Actions Since Emergency AD 2016-24-51 Was Issued

Since Emergency AD 2016-24-51 was issued, a third report of an S-92A helicopter losing TR control was reported, and a preliminary investigation determined that the bearing failed despite having more than 80 hours TIS. We have determined that the unsafe condition can exist on TRPCS bearings regardless of hours TIS. Therefore, this Emergency AD applies to all TRPCS assemblies. This Emergency AD requires a one-time visual inspection and a repetitive borescope inspection of the TRPCS assembly bearing. The repetitive inspection is intended to detect bearing deterioration. The actions in this Emergency AD are intended to detect a binding bearing, prevent loss of TR control, and possible loss of control of the helicopter.

FAA's Determination

We are issuing this Emergency AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Related Service Information

We reviewed Sikorsky Alert Service Bulletin 92-64-011, Basic Issue, dated January 10, 2017 (ASB). The ASB describes procedures for inspecting the TRPCS and bearing assemblies for ratcheting, binding, and rough turning. The ASB also specifies periodic review of the health and usage monitoring system (HUMS) tail gearbox bearing energy tool.

Emergency AD Requirements

This Emergency AD requires, before further flight, removing the TRPCS assembly and inspecting the bearing. If the bearing does not rotate freely; the bearing sounds rough or chatters;

there is any purged grease with metal particles; a nick or dent; or if there is a cut, tear, or distortion in the bearing seal, before further flight, replacing the TRPCS assembly is required. This Emergency AD also requires, within 10 hours TIS, and thereafter at intervals not to exceed 10 hours TIS, inspecting the TRPCS assembly with a borescope. If the white Teflon seal or snap ring is missing, or if there is a rip, tear, or heat damage on the seal or if there is no gap in the snap ring, replacing the TRPCS assembly is required before further flight.

Differences Between This Emergency AD and the Service Information

This Emergency AD requires repetitive borescope inspections of the TRPCS; the ASB does not. The ASB specifies that operators review HUMS data in addition to the one-time inspection and specifies contacting Sikorsky if any discrepancies are found; this Emergency AD does not.

Interim Action

We consider this Emergency AD to be an interim action. If final action is later identified, we might consider further rulemaking then.

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.

Adoption of the Emergency Airworthiness Directive (AD)

We are issuing this Emergency AD under 49 U.S.C. Sections 106(g), 40113, and 44701 according to the authority delegated to me by the Administrator.

2017-02-51 **Sikorsky Aircraft Corporation:** Directorate Identifier 2017-SW-003-AD.

(a) Applicability

This Emergency AD applies to Sikorsky Aircraft Corporation (Sikorsky) Model S-92A helicopters, certificated in any category, with a tail rotor pitch change shaft (TRPCS) assembly part number (P/N) 92358-06303-041 or P/N 92358-06303-042 installed.

(b) Unsafe Condition

This Emergency AD defines the unsafe condition as a binding TRPCS bearing. This condition could result in loss of tail rotor (TR) control and possible loss of control of the helicopter.

(c) Effective Date

This Emergency AD is effective upon receipt.

(d) Compliance

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

(e) Required Actions

(1) Before further flight, unless already done, remove the TRPCS assembly and inspect the SB2310 angular contact bearing for free rotation, purged grease with metal particles, a nick or a dent, and any cut, tear, or distortion on the bearing seal. If the bearing does not rotate freely; the bearing sounds rough or chatters; there is any purged grease with metal particles; a nick or dent; or if there is a cut, tear, or distortion in the bearing seal, before further flight, replace the TRPCS assembly.

(2) Within 10 hours time-in-service (TIS), unless already done within the last 10 hours TIS, and thereafter at intervals not to exceed 10 hours TIS, on the TR side of the TRPCS bearing, remove the plug from the end of the TRPCS, insert the borescope into the TRPCS, and determine whether the white Teflon seal and snap ring are installed. If the white Teflon seal or snap ring is missing, or if there is a rip, tear, or heat damage on the seal or if there is no gap in the snap ring, before further flight replace the TRPCS assembly.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston Aircraft Certification Office, FAA, may approve AMOCs for this Emergency AD. Send your proposal to: Blaine Williams, Aerospace Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, 1200 District Avenue, Burlington, Massachusetts 01803; telephone (781) 238-7161; email blaine.williams@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 Emergency AD through an AMOC.

(g) Additional Information

(1) For further information contact: Blaine Williams, Aerospace Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, 1200 District Avenue, Burlington, Massachusetts 01803; telephone (781) 238-7161; email blaine.williams@faa.gov.

(2) For a copy of the service information referenced in this Emergency AD, contact: Sikorsky Aircraft Corporation, Customer Service Engineering, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email: wcs_cust_service_eng-gr-sik@lmco.com.

(h) Subject

Joint Aircraft Service Component (JASC) Code: 6720 Tail Rotor Control System.

Issued in Fort Worth, Texas, on January 13, 2017.

Lance T. Gant,
Manager, Rotorcraft Directorate,
Aircraft Certification Service.