FEDERAL AVIATION ADMINISTRATION
AIRWORTHINESS DIRECTIVES

SMALL AIRCRAFT, ROTORCRAFT, GLIDERS, BALLOONS, & AIRSHIPS

BIWEEKLY 2012-10

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U.S. Department of Transportation
Federal Aviation Administration
Engineering Procedures Office, AIR-110
P. O. Box 25082
Oklahoma City, OK 73125-0460

AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; - See AD for additional information;			
Biweekly 2012-01			
2010-19-06 R1	COR	Turbomeca	Engine: Arriel 1A, 1A1, 1B, 1C, 1C1, 1C2, 1D, 1D1, and 1S1 turboshaft
2011-26-10		Enstrom Helicopter Corporation	Rotorcraft: F-28C, F-28C-2, F-28F, 280C, 280F, 280FX, TH-28, 480, and 480B
2011-27-09		Socata	TBM 700
2012-01-01		Various Aircraft	See AD
2012-01-02		Schempp-Hirth Flugzeugbau	Glider: Discus 2cT
Biweekly 2012-02			
2011-18-12	S 82-13-05R1	Eurocopter France	Rotorcraft: AS350B, B1, B2, B3, BA, and D; and AS355E, F, F1, F2, and N
2011-27-08		Agusta S.p.A.	Rotorcraft: A109S and AW109SP
2011-27-51		Hawker Beechcraft	1900, 1900C, 1900C (Military), 1900D
2012-01-07		BRP-Powertrain GmbH	Engine: Rotax 914 F2, 914 F3, and 914 F4 reciprocating
2012-01-11		Cirrus Design	SR22T
2012-02-05		Thielert Aircraft Engines GmbH	Engine: TAE 125-02-99 and TAE-125-02-114 reciprocating
Biweekly 2012-03			
71-13-01R1		Lycoming Engines	Engine: TIO-540-A series
2012-01-03		Eurocopter France	Rotorcraft: AS332L2 and EC225LP
2012-02-02	S 2008-03-02	Cessna	172R and 172S
2012-02-06		Honeywell International	Engine: TPE331-10, -10AV, -10GP, -10GT, -10N, -10P, -10R, -10T, -10U, -10UA, -10UF, -10UG, -10UGR, -10UR, and TPE331-11U
2012-02-10	S 2011-07-13	CPAC	112, 112B, 112TC, 112TCA, 114, 114A, 114B, and 114TC
2012-02-13		Eurocopter France	Rotorcraft: EC130B4
2012-02-51	E	Bell Helicopter Textron Canada Limited	Rotorcraft: 206L, L-1, L-3, and L-4
2012-03-06	S 2011-15-10	Superior Air Parts, Lycoming Engines, and Continental Motors	Engine: Fuel injected reciprocating engines
2012-03-52	E	Mooney Aviation	M20TN and M20R
Biweekly 2012-04			
2012-03-01		Eurocopter Deutschland	Rotorcraft: EC135 helicopters
2012-03-07		Lycoming Engines	Engine: See AD
2012-03-11	S 2010-03-06	Turbomeca S.A.	Engine: Arriel 2B and 2B1 turboshaft engines
Biweekly 2012-05			
2010-11-09R1	R	Thielert Aircraft Engines GmbH	Engine: TAE 125-01 and TAE 125-02-99 reciprocating engines
2011-12-10	COR	Robinson Helicopter Company	R22, R22 Alpha, R22 Beta, and R22 Mariner helicopters; R44 and R44 II helicopters
2011-27-04	COR	Hawker Beechcraft Corporation	95-C55, D55, E55, 58, and 58A airplanes
2012-03-52		Mooney	M20R and M20TN airplanes
2012-04-03		BRP-Powertrain GmbH & Co. KG	912 S2 and 912 S3 reciprocating engines; 914 F2 reciprocating engines
Biweekly 2012-06			
2012-04-10		Burl A. Rogers	15AC and S15AC airplanes
2012-05-01		Eurocopter France	SA-365C, SA-365C1, SA-365C2, SA-365N, SA-365N1, AS-365N2, AS 365 N3, and SA-366G1 helicopters
2012-05-09	S 2012-03-52	Mooney Aviation	M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20L, M20M, M20R, M20S, and M20TN airplanes

AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; - See AD for additional information;			
Biweekly 2012-07			
2012-06-13		DG Flugzeugbau GmbH	Gliders: DG-500 Elan Orion, DG-500 Elan Trainer, DG-500/20 Elan, DG-500/22 Elan, DG-500M, and DG-500MB
2012-06-16		Pilatus Aircraft	PC-6, PC-6-Hl, PC-6-H2, PC-6/350, PC-6/350-Hl, PC-6/350-H2, PC-6/A, PC-6/A-Hl, PC-6/A-H2, PC-6/B-H2, PC-6/Bl-H2, PC-6/B2-H2, PC-6/B2-H4, PC-6/C-H2, and PC-6/Cl-H2
2012-07-01		Agusta S.p.A.	Rotorcraft: AB412
Biweekly 2012-08			
2011-18-52		Agusta S.p.A.	AB139 and AW139 helicopters
2012-02-51		Bell Helicopter Textron Canada Limited	206L, 206L-1, 206L-3, and 206L-4 helicopters
2012-06-15		DG Flugzeugbau GmbH	DG-500 Elan Orion, DG-500 Elan Trainer, DG-500/20 Elan, and DG-500/22 Elan sailplanes, DG-500M and DG-500MB powered sailplanes
2012-06-24		Sikorsky	S-92A helicopters
2012-07-09	S 2009-14-11	Turbomeca S.A.	Arrius 2F turboshaft engines
2012-08-01		Sikorsky	S-92A helicopters
Biweekly 2012-09			
2012-08-18		Turbomeca	Arriel 2B and 2B1 turboshaft engines
Biweekly 2012-10			
2012-10-02		Hawker Beechcraft	58, G58
2012-10-51	E	Eurocopter Dutschland Gmbh	EC135 P1, EC135 P2, EC135 P2+, EC135 T1, EC135 T2, and EC135 T2+ helicopters
2012-10-52	E	Hartzell Engine Technologies	Appliance: Turbocharger HET P/N 406610-0005 or P/N 406610-9005, P/N 406610-0005 or P/N 406610-9005, P/N 409836-0005
2012-10-53	E S 2012-10-51	Eurocopter Dutschland Gmbh	EC135 P1, EC135 P2, EC135 P2+, EC135 T1, EC135 T2, and EC135 T2+ helicopters

2012-10-02 Hawker Beechcraft Corporation: Amendment 39-17051; Docket No. FAA-2012-0218; Directorate Identifier 2012-CE-003-AD.

(a) Effective Date

This AD is effective June 21, 2012.

(b) Affected ADs

None.

(c) Applicability

(1) This AD applies to the following Hawker Beechcraft Corporation airplanes that are certificated in any category:

(i) Model 58, serial numbers TH-1931 through TH-2124, and

(ii) Model G58, serial numbers TH-2125 through TH-2281, TH-2283, and TH-2284.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 28; fuel.

(e) Unsafe Condition

This AD was prompted by installation of oversized clamps on fuel vapor return and/or fuel vent lines in the outboard sections of the left and right wings. We are issuing this AD to correct the unsafe condition on these products.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection

Within the next 50 hours time-in-service after June 21, 2012 (the effective date of this AD) or within the next 6 calendar months after June 21, 2012 (the effective date of this AD), whichever occurs first, inspect the fuel hose clamps for oversized or deformed clamps following Hawker Beechcraft Mandatory Service Bulletin No. SB 28-4039, Revision 1, dated October 2011.

Note 1 to paragraph (g) of this AD: If you have a scheduled inspection before the compliance time of this AD, the FAA recommends you comply with this AD at that time.

(h) Replacement

If any oversized or deformed clamps are found during the inspection required in paragraph (g) of this AD, before further flight, replace the clamps following Hawker Beechcraft Mandatory Service Bulletin No. SB 28-4039, Revision 1, dated October 2011.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Wichita Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

For more information about this AD, contact Thomas Teplik, Aerospace Engineer, Wichita ACO, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4196; fax: (316) 329-4090; email: thomas.teplik@faa.gov.

(k) Material Incorporated by Reference

(1) You must use Hawker Beechcraft Mandatory Service Bulletin No. SB 28-4039, Revision 1, dated October 2011, to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Hawker Beechcraft Corporation, B091-A04, 10511 E. Central Ave., Wichita, Kansas 67206; telephone: (800) 429-5372 or (316) 676-3140; fax: (316) 676-8027; email: tmdc@hawkerbeechcraft.com; or Internet: http://www.hawkerbeechcraft.com/customer_support/technical_and_field_support/.

(3) You may review copies of the referenced 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.

(4) You may also review copies of the 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 May 9, 2012.
Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.

FAA
Aviation Safety

EMERGENCY AIRWORTHINESS DIRECTIVE

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

DATE: May 15, 2012
AD #: 2012-10-51

This emergency airworthiness directive (EAD) 2012-10-51 is being sent to owners and operators of Eurocopter Deutschland GmbH (ECD) Model EC135 P1, EC135 P2, EC135 P2+, EC135 T1, EC135 T2, and EC135 T2+ helicopters.

Background

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD No. 2012-0041-E, dated March 12, 2012 (2012-0041-E), to correct an unsafe condition for the ECD Model EC 135 helicopters. EASA advises that during an inspection of an EC 135 helicopter, a crack was detected on the lower hub-shaft flange of a main rotor hub (MRH) shaft. Since issuing 2012-0041-E, two other lower hub-shaft flange cracks have been reported. ECD is investigating the cause of the cracks and may issue a revised service bulletin with further corrective action. We are issuing this EAD to detect a crack on the hub-shaft flange, which if not corrected could result in failure of the main rotor hub and subsequent loss of control of the helicopter.

FAA's Determination

These helicopters have been approved by the aviation authority of the Federal Republic of Germany (Germany) and are approved for operation in the United States. Pursuant to our bilateral agreement with Germany, EASA, its technical representative, has notified us of the unsafe condition described in the EASA AD. We are issuing this EAD 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.

Related Service Information

Eurocopter has issued Alert Service Bulletin EC135-62A-029, Revision 0, dated March 8, 2012, which describes procedures for conducting a check of the blade bolts and inspecting the upper and lower hub-shaft flanges; and Safety Information Notice No. 2450-S-62, Revision 0, dated May 7, 2012, which provides for a repetitive check of the upper and lower hub-shaft flanges.

EAD Requirements

This EAD requires the following:

- Before the first flight of each day, checking the lower hub-shaft flange for a crack and each blade attachment bolt safety pin for deformation. An owner/operator (pilot) may perform the visual check required by this EAD and must enter compliance with that paragraph into the helicopter maintenance records in accordance with 14 CFR §§ 43.9(a)(1)-(4) and 91.417(a)(2)(v). A pilot may perform this check because it involves only looking at the blade bolts and safety pins and can be performed equally well by a pilot or a mechanic. This check is an exception to our standard maintenance regulations.

- If a blade bolt safety pin is deformed, which may indicate a rotated blade bolt or a crack on a hub-shaft flange, before further flight, inspecting the upper and lower hub-shaft flanges for a crack.

- Within 5 hours time in service (TIS), removing the rotor-hub cap and inspecting the upper and lower hub-shaft flanges for a crack and the blade attachment bolts for deformed safety pins.

- If there is a crack, replacing the MRH shaft.

Differences Between This EAD and the EASA AD

The EASA AD requires the visual inspection to be accomplished within 100 flight-hours, while this EAD requires the inspection within 5 hours TIS. The EASA AD requires you to report the findings and send any cracked MRH to ECD, and this EAD does not.

Interim Action

We consider this EAD to be an interim action. The design approval holder is currently developing a modification that will address the unsafe condition identified in this EAD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

Costs of Compliance

We estimate that this EAD will affect 244 helicopters of U.S. Registry. We estimate inspecting the MRH flanges will require 1 hour at an average labor rate of $85 per work-hour, for a total cost per helicopter of $85 and a total cost to U.S. operators of $20,740. Replacing a cracked MRH will require about 8 hours at an average labor rate of $85 per work-hour, and required parts will cost $55,715, for a total cost per helicopter of $56,395.

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 (EAD)

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

2012-10-51 EUROCOPTER DEUTSCHLAND GMBH (ECD): Directorate Identifier 2012-SW-041-AD.

(a) Applicability.

This EAD applies to Model EC135 P1, EC135 P2, EC135 P2+, EC135 T1, EC135 T2, and EC135 T2+ helicopters, with a main rotor hub-shaft part number (P/N) L623M1006103 installed, certificated in any category.

(b) Unsafe Condition.

This EAD defines the unsafe condition as a crack in the flange of the main rotor hub-shaft, which could result in failure of the main rotor hub and subsequent loss of control of the helicopter.

(c) Effective Date.

This EAD is effective upon receipt.

(d) Compliance.

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

(e) Required Actions.

(1) Before further flight, and thereafter before the first flight of each day, check the lower hub-shaft flange for a crack and each blade attachment bolt for a deformed safety pin by reference to figures 1 and 2 of this EAD. The actions required by this paragraph may be performed by the owner/operator (pilot) holding at least a private pilot certificate, and must be entered into the aircraft records showing compliance with this EAD in accordance with 14 CFR §§ 43.9 (a)(1)-(4) and 14 CFR § 91.417(a)(2)(v). The record must be maintained as required by 14 CFR §§ 91.417, 121.380, or 135.439.

(2) If there is a deformed safety pin, before further flight, inspect the upper and lower hub-shaft flange in accordance with paragraph (e)(3)(i) and (e)(3)(ii) of this EAD.

(3) Within 5 hours time in service:

(i) Remove rotor-hub cap.

(ii) Clean the upper and lower hub-shaft flange as depicted in figure 3 of this EAD and visually inspect for a crack.

(iii) Inspect safety pins for deformation as shown in figure 1 of this EAD.

(4) If there is a crack in the upper or lower hub-shaft flange, before further flight, replace the main rotor hub-shaft.

Note to paragraph (e)(4): Replacing the main rotor hub-shaft with a main rotor hub-shaft having the same P/N does not constitute terminating action for the requirements of this EAD.

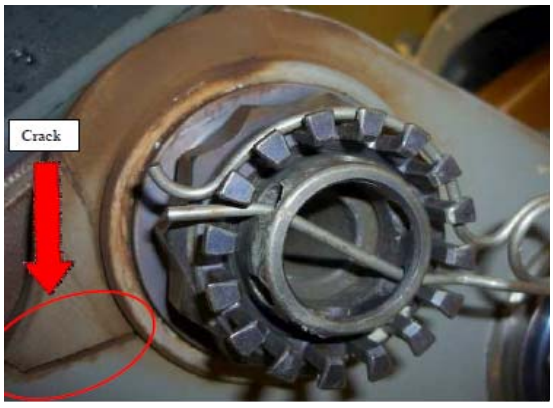


Figure 1

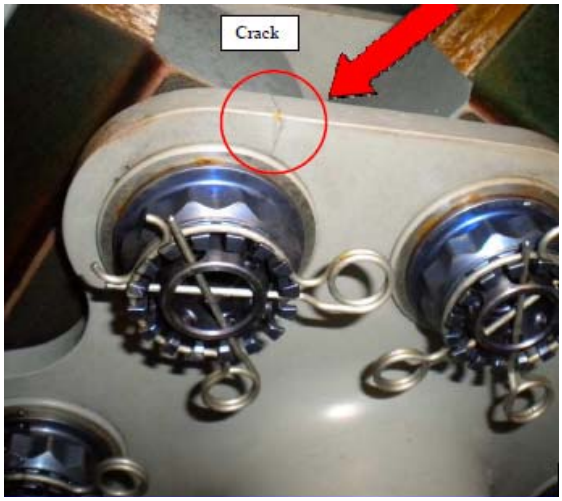
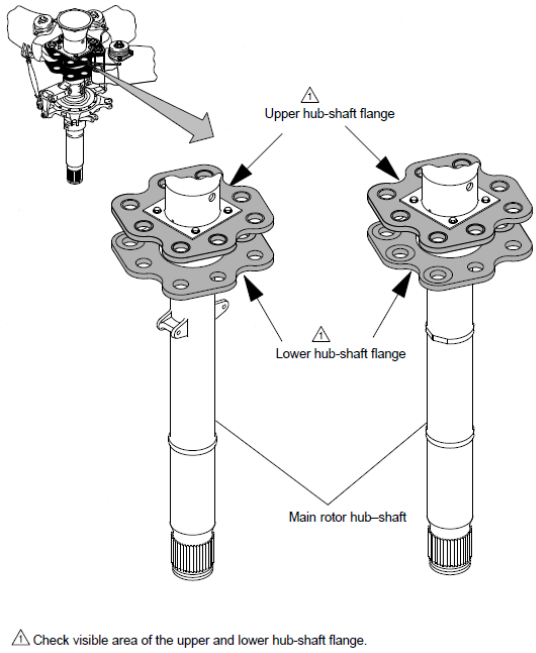


Figure 2



⚠ Check visible area of the upper and lower hub-shaft flange.

Figure 3

(f) Alternative Methods of Compliance (AMOCs).

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this EAD. Send your proposal to: Gary Roach, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email gary.b.roach@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 EAD through an AMOC.

(g) Additional Information.

(1) For further information contact: Gary Roach, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email gary.b.roach@faa.gov.

(2) For a copy of the service information referenced in this EAD, contact: American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at http://www.eurocopter.com/techpub.
(3) The subject of this EAD is addressed in European Aviation Safety Agency AD No. 2012-0041-E, dated March 12, 2012.

(h) Subject.

Joint Aircraft Service Component (JASC) Code: 6220: Main Rotor Head.

Issued in Fort Worth, Texas, on May 15, 2012.
Kim Smith,
Manager, Rotorcraft Directorate,
Aircraft Certification Service.

FAA
Aviation Safety

EMERGENCY AIRWORTHINESS DIRECTIVE

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

DATE: May 14, 2012
AD #: 2012-10-52

Emergency airworthiness directive (AD) 2012-10-52 is sent to owners and operators of Cessna 206, 207, and 210 airplanes with Hartzell Engine Technologies (HET) turbochargers, part numbers (P/Ns) 406610-0005 and 406610-9005, installed.

Background

This emergency AD was prompted by a report of an HET turbocharger causing an engine in-flight power rollback. Upon investigation, the turbocharger was found to have incorrectly located oil passages in the center housing, causing insufficient oil flow to the bearings. This condition, if not corrected, could result in turbocharger bearing seizure, failure of the turbocharger turbine shaft or wheel, and damage to the airplane.

Relevant Service Information

We reviewed Hartzell Engine Technologies Alert Service Bulletin (ASB) No. 047, dated May 8, 2012. The ASB indentifies the part numbers and serial numbers of affected turbochargers and describes procedures for removing them from service.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other turbochargers of the same design. We are evaluating whether the affected population needs to expand to include supplemental type certificate and parts manufacturer approval installations and may take further action.

AD Requirements

This AD requires removing the affected turbochargers from service before further flight.

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.

Presentation of the Actual AD

We are issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

2012-10-52 Hartzell Engine Technologies: Directorate Identifier 2012-NE-16-AD

(a) Effective Date

This Emergency AD is effective upon receipt.

(b) Affected ADs

None.

(c) Applicability

This emergency AD applies to the following Hartzell Engine Technologies (HET) turbochargers:

(1) Turbocharger HET P/N 406610-0005 or P/N 406610-9005 with serial numbers listed in Table 1 of HET Alert Service Bulletin No. 047, dated May 8, 2012.

(2) Turbochargers with P/N 406610-0005 or P/N 406610-9005 overhauled or repaired on or later than January 1, 2012, with the same turbocharger center housing P/N and date code H-0112.

(3) Turbocharger center housings P/N 409836-0005 sold as piece parts which are in field/distributor inventory with date code H-0112.

These turbochargers are installed on, but not limited to, Cessna 206, 207, and 210 airplanes with Continental Motors, Inc TSIO-520-C, -G, -H, -M, and –R reciprocating engines installed.

(d) Unsafe Condition

This AD was prompted by a report of an HET turbocharger causing an engine in-flight power rollback. Upon investigation, the turbocharger was found to have incorrectly located oil passages in the center housing, causing insufficient oil flow to the bearings. This condition, if not corrected, could result in turbocharger bearing seizure, failure of the turbocharger turbine shaft or wheel, and damage to the airplane. We are issuing this AD to prevent turbocharger bearing seizure, failed turbocharger components, and damage to the airplane.

(e) Compliance

Before further flight, remove from service the turbochargers identified in paragraph (c) of this emergency AD, unless already done.

(f) Special Flight Permit

Special flight permits are prohibited.

(g) Alternative Methods of Compliance (AMOCs)

The Manager, Chicago Aircraft Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(h) Related Information

(1) For further information about this AD, contact: Christopher Richards, Aerospace Engineer, Chicago Aircraft Certification Office, FAA, 2300 E. Devon Ave., Des Plaines, IL 60018; phone: 847-294-7156; fax: 847-294-7834; e-mail: christopher.j.richards@faa.gov.

(2) For copies of the service information referenced in this AD, contact: Hartzell Engine Technologies, LLC, 2900 Selma Highway, Montgomery, AL 36108, phone: 334-386-5400; fax: 334-386-5450; internet: http://www.hartzellenginetech.com/service_bulletins.html#turbos.

(3) You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on May 14, 2012.
Peter A. White,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

DATE: May 18, 2012
AD #: 2012-10-53

This emergency airworthiness directive (EAD) No. 2012-10-53 is being sent to owners and operators of Eurocopter Deutschland GmbH (ECD) Model EC135 P1, EC135 P2, EC135 P2+, EC135 T1, EC135 T2, and EC135 T2+ helicopters. This EAD supersedes EAD No. 2012-10-51, dated May 15, 2012 (EAD 2012-10-51).

Background

On May 15, 2012, we issued EAD 2012-10-51 for the ECD Model EC135 series helicopters to detect a crack on the main rotor hub (MRH) shaft flange. That EAD requires a pilot check of the lower MRH shaft flange for a crack or deformed blade attachment bolt safety pins before the first flight of each day, inspecting the upper and lower MRH shaft flanges for a crack within 5 hours time-in-service (TIS), and replacing the MRH shaft if there is a crack.

Since we issued EAD 2012-10-51, the European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD No. 2012-0085-E, dated May 17, 2012 (2012-0085-E), which superseded EASA AD No. 2012-0041R1, dated March 15, 2012 (2012-0041R1), to correct an unsafe condition for the ECD Model EC 135 helicopters. EASA advises that since issuing 2012-0041-R1, further cracks have been detected on two other helicopters during the pre-flight checks. These are the same two cracks that prompted our EAD. However, EASA also states that identification of deformed safety pins may not be sufficient to detect a crack on the MRH shaft flange. ECD is investigating the cause of the cracks and has developed new inspection procedures with further corrective actions. We are issuing this EAD to detect a crack on the MRH shaft flange, which if not corrected could result in failure of the MRH and subsequent loss of control of the helicopter.

In issuing this superseding EAD, we are including additional part-numbered MRH shafts that should have been included in EAD 2012-10-51, changing the daily checks to recurring checks at intervals not to exceed 6 hours TIS, adding a 10 hour-TIS recurring inspection on MRH shafts with 400 or more hours TIS, and removing the check of the blade attachment bolt safety pins for deformation.

FAA's Determination

These helicopters have been approved by the aviation authority of the Federal Republic of Germany (Germany) and are approved for operation in the United States. Pursuant to our bilateral agreement with Germany, EASA, its technical representative, has notified us of the unsafe condition described in the EASA EAD. We are issuing this EAD 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.

Related Service Information

Eurocopter has issued Alert Service Bulletin EC135-62A-029, Revision 2, dated May 17, 2012 (EC135-62A-029), which describes procedures for conducting a repetitive check of the visible area of the upper and lower MRH shaft flanges and a repetitive inspection of the area of the blade bolts lower MRH shaft flange.

EAD Requirements

This EAD requires the following:

Before further flight, and thereafter at intervals not to exceed 6 hours TIS, checking the lower MRH shaft flange and the visible area of the upper MRH shaft flange for a crack. An owner/operator (pilot) may perform the visual check required by this EAD and must enter compliance with that paragraph into the helicopter maintenance records in accordance with 14 CFR §§ 43.9(a)(1)-(4) and 91.417(a)(2)(v). A pilot may perform this check because it involves only looking at the visible area of the MRH shaft flanges and can be performed equally well by a pilot or a mechanic. This check is an exception to our standard maintenance regulations.

For a MRH shaft with 400 or more hours TIS, within 10 hours TIS, and thereafter at intervals not to exceed 10 hours TIS, removing the rotor-hub cap, inspecting the upper and lower hub-shaft flanges for a crack, and removing the blade attachment bolt safety pins, nut, and washer and inspecting the lower hub-shaft flange bolt attachment areas for a crack.

If there is a crack, replacing the MRH shaft.

Differences Between This EAD and the EASA AD

The EASA AD identifies EC135-62A-029, Revision 1, and this EAD references Revision 2. The EASA AD requires you to report the findings and send any cracked MRH to ECD, and this EAD does not. The EASA AD requires the initial check within 3 days, while this EAD requires the check before further flight.

Interim Action

We consider this EAD to be an interim action. The design approval holder is currently developing a modification that will address the unsafe condition identified in this EAD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

Costs of Compliance

We estimate that this EAD will affect 244 helicopters of U.S. Registry. We estimate inspecting the MRH shaft flanges will require 2.5 hours at an average labor rate of $85 per work-hour, for a total cost per helicopter of $212 and a total cost to U.S. operators of $51,850 per inspection cycle. Replacing a cracked MRH shaft will require about 8 hours at an average labor rate of $85 per work-hour, and required parts will cost $55,715, for a total cost per helicopter of $56,395.

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 (EAD)

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

2012-10-53 EUROCOPTER DEUTSCHLAND GMBH (ECD): Directorate Identifier 2012-SW-049-AD.

(a) Applicability.

This EAD applies to Model EC135 P1, EC135 P2, EC135 P2+, EC135 T1, EC135 T2, and EC135 T2+ helicopters, with a main rotor hub (MRH) shaft, part number (P/N) L623M1006101, L623M1206101, L623M1006102, L623M1206102, L623M1006103, or L623M1206103 installed, certificated in any category.

(b) Unsafe Condition.

This EAD defines the unsafe condition as a crack in the MRH shaft flange, which could result in failure of the MRH shaft and subsequent loss of control of the helicopter.

(c) Effective Date.

This EAD is effective upon receipt.

(d) Other Affected ADs.

This EAD supersedes EAD No. 2012-10-51, dated May 15, 2012.

(e) Compliance.

You are responsible for performing each action required by this EAD within the specified compliance time.

(f) Required Actions.

(1) Before further flight, and thereafter at intervals not to exceed 6 hours TIS, check the MRH shaft lower flange and the visible area of the MRH shaft upper flange for a crack. Figures 1 and 2 of this EAD are examples of cracks that have been discovered in the MRH shaft lower flange. The actions required by this paragraph may be performed by the owner/operator (pilot) holding at least a private pilot certificate, and must be entered into the aircraft records showing compliance with this EAD in accordance with 14 CFR §§ 43.9 (a)(1)-(4) and 14 CFR § 91.417(a)(2)(v). The record must be maintained as required by 14 CFR §§ 91.417, 121.380, or 135.439.

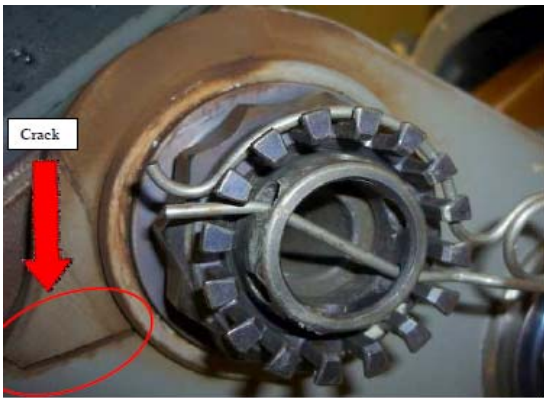


Figure 1

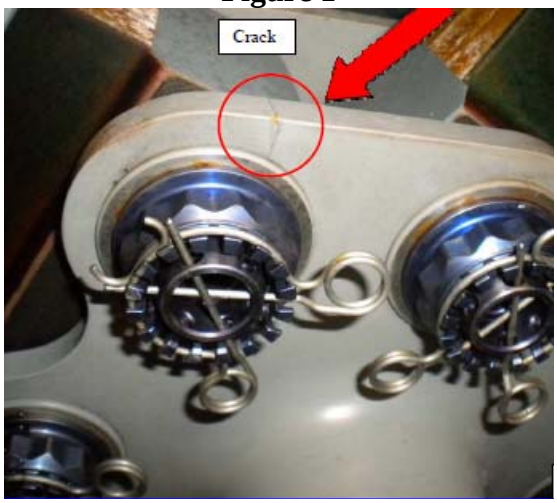


Figure 2

(2) For MRH shafts with 400 or more hours TIS, within 10 hours TIS, and thereafter at intervals not to exceed 10 hours TIS:

(i) Remove rotor-hub cap.

(ii) Clean the upper and lower MRH shaft flange as depicted in figure 3 of this EAD and visually inspect for a crack.

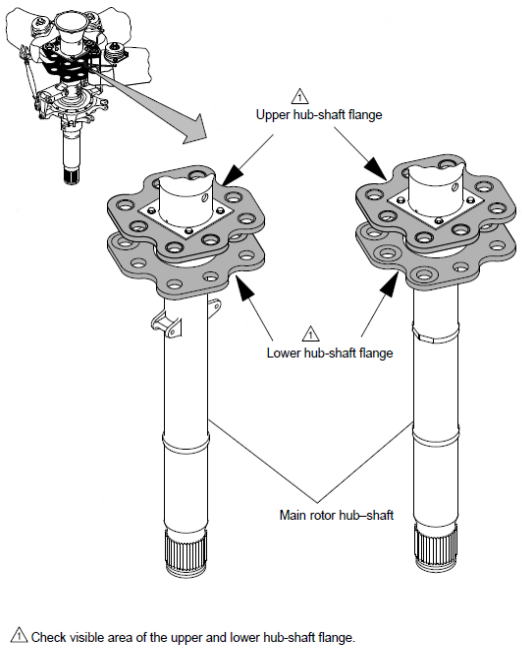


Figure 3

(iii) Remove the safety pins and nut from each blade bolt and the washers from the lower MRH shaft flange.

(iv) Clean the blade bolt attachment area.

(v) Using a 10X or higher power magnification, inspect all lower MRH shaft flange blade bolt attachment areas for a crack as shown in figure 4 of this EAD.

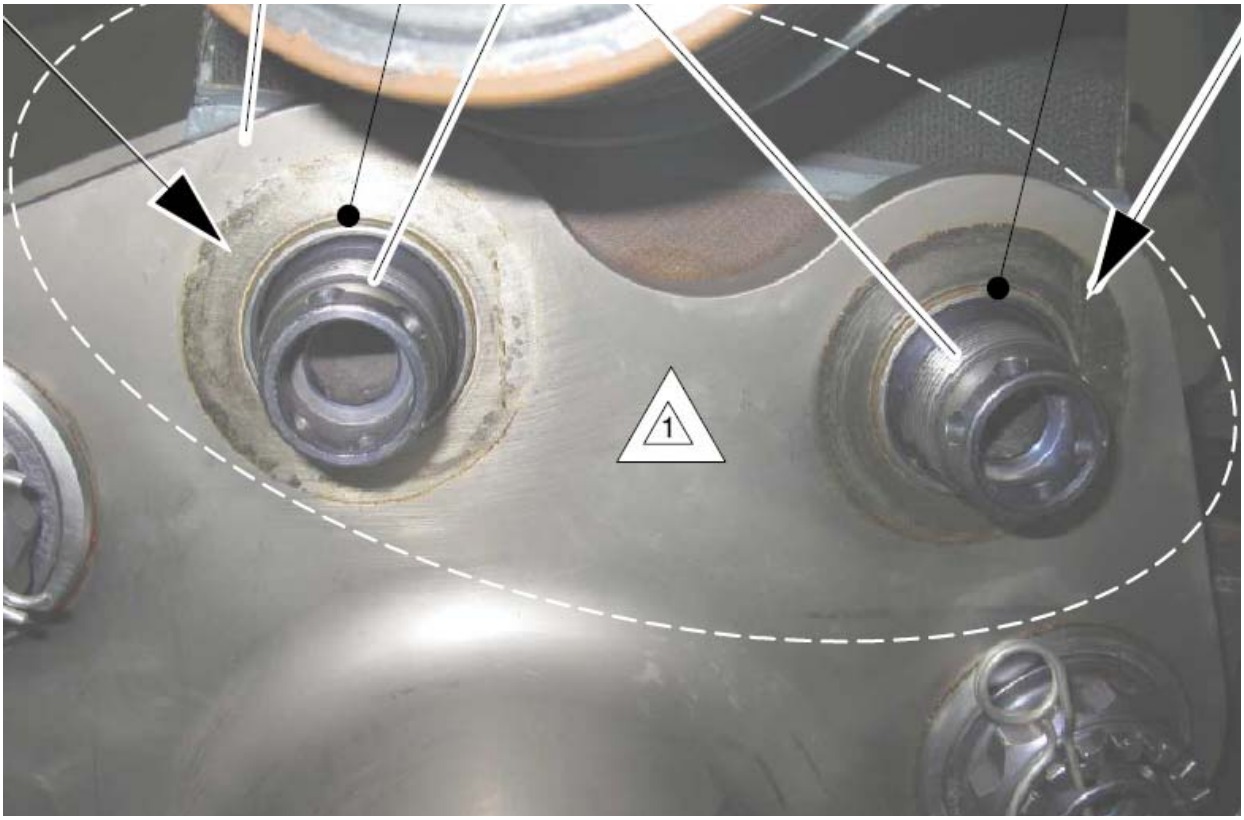


Figure 4

(3) If there is a crack in the upper or lower MRH shaft flange, before further flight, replace the MRH shaft.

Note to paragraph (f)(3): Replacing the MRH shaft with a MRH shaft having a part number listed in the applicability of this EAD does not constitute terminating action for the requirements of this EAD.

(g) Alternative Methods of Compliance (AMOCs).

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this EAD. Send your proposal to: Gary Roach, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email gary.b.roach@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 EAD through an AMOC.

(h) Additional Information.

(1) For further information contact: Gary Roach, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email gary.b.roach@faa.gov.

(2) For further information after normal office hours and weekends, contact the Southwest Region Operations Center at 817-222-5006.

(3) For a copy of the service information referenced in this EAD, contact: American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at http://www.eurocopter.com/techpub.

(3) The subject of this EAD is addressed in European Aviation Safety Agency AD No. 2012-0085-E, dated May 17, 2012.

(i) Subject.

Joint Aircraft Service Component (JASC) Code: 6220: Main Rotor Head.

Issued in Fort Worth, Texas, on May 18, 2012.
Kim Smith,
Manager, Rotorcraft Directorate,
Aircraft Certification Service.