



EASA Safety Information Notice

No.: 2007 - 28

Issued: 25 September 2007

Subject: Improper repair of Messier-Bugatti hydraulic pumps

Ref. Publication: DGAC France Emergency AD (CN) UF-2007-010


Introduction: DGAC France, the responsible authority of the State of Manufacturer for the affected type design, has received two reports of loss of the LH hydraulic power system on Eurocopter AS332 helicopters, as a result of incorrect positioning of the liner of the hydraulic pump compensating piston, causing the seals to deteriorate. This incorrect positioning of the liner is due to non-compliant application of the repair process by a repair station. To address and rectify this problem, DGAC France issued Emergency Airworthiness Directive UF-2007-010 on 24 August 2007, which has now been published as 'final' AD F-2007-010, as attached. That AD identifies the affected Messier-Bugatti hydraulic pumps by Part- and Serial number and requires the replacement of these units with airworthy parts.

According to Article 15(1) of Regulation (EC) No 1592/2002 of the European Parliament and of the Council of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, EASA has only taken over Member States obligations that are related to design approval. As a consequence, EASA is only authorised to issue ADs related to design approval. EASA has determined that the above referenced DGAC France Emergency AD is not related to design approval, as the unsafe condition is the result of improperly performed repairs and that the type design is not affected. However, this is a serious safety issue and this Safety Information has been issued accordingly. The National Aviation Authorities of the EU member states may adopt the above referenced Emergency AD under their State of Registry responsibility.

Applicability: EUROCOPTER (formerly Eurocopter France) Models AS 332 C, AS 332 C1, AS 332 L, AS 332 L1 and AS 332 L2 helicopters, all serial numbers, if fitted with Messier-Bugatti hydraulic pumps as identified in DGAC France AD F-2007-010, as attached.

Recommendation: This Safety Information Notice is for information only.

Contact: For further information contact the Airworthiness Directives, Safety and Research Section, Certification Directorate, EASA.
E-mail: ADs@easa.europa.eu.


	AIRWORTHINESS DIRECTIVE No F-2007-010	Distribution: A	Issue date: September 12, 2007	Page : 1/3
	Direction générale de l'aviation civile France GSAC publication	This Airworthiness Directive is published by the DGAC as the Airworthiness Authority of the State of Registry for the affected aircraft.		<i>Translation of « Consigne de Navigabilité » of same number. In case of difficulty, reference should be made to the French issue.</i>
No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive, unless otherwise agreed with the Authority of the State of Registry.				
Corresponding foreign Airworthiness Directive(s): Not applicable		Airworthiness Directive(s) replaced: UF-2007-010		
Person in charge of airworthiness: EUROCOPTER		Type(s): AS 332 and AS 332 L2 helicopters		
Type certificate(s) No. EASA.R.002 TCDS No EASA.R.002				
ATA chapter: 29	Subject: Hydraulic power - Hydraulic pump - Check/Replacement			

This AD having for origin a defective maintenance operation, it does not comply with the current EASA scope of responsibility. It is up to each national authorities to decide to take into account this AD by the statutory means, judged appropriate.

1. EFFECTIVITY:

EUROCOPTER AS 332 C, AS 332 C1, AS 332 L, AS 332 L1 and AS 332 L2 helicopters, all serial numbers, fitted with Messier-Bugatti hydraulic pumps Part Nos. C24160-X, C24160-XXX, C241600XX, C241600XX-X and C241600XX-XXX whose serial numbers are listed in the table below and not marked with the letter "V".

S/N	S/N	S/N	S/N	S/N
H0963	M065	M672	U109	U460
H0972	M1121	M673	U137	U461
H0983	M1140	M750	U145	U463
H0997	M1154	M772	U164	U472
H1000	M1294	M776	U-18	U486
H1014	M1348	M797	U195	U494
H1079	M1351	M868	U201	U519
H1081	M1353	M869	U206	U551
H1175	M1391	M897	U224	U596
H1281	M1431	M902	U264	U61
H741	M1465	M912	U265	U662
H755	M1466	M919	U297	U669
H776	M203	M933	U303	U671
H782	M222	M940	U362	U676
H841	M264	M943	U398	U678
H843	M292	M949	U419	
H855	M323	M962	U422	
H900	M355	M982	U426	
H908	M388		U444	
H915	M450		U446	
H916	M496		U453	

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2. REASONS:

This Airworthiness Directive (AD) is issued following two cases of LH hydraulic power system loss on two AS332 helicopters. In both cases, the pilot received the "low level" hydraulic failure alarm. The investigations conducted on the two helicopters revealed a hydraulic fluid leak from the hydraulic pump casing.

In both cases, incorrect positioning of the liner of the compensating piston had caused the seals to deteriorate. This incorrect positioning of the liner is due to non-compliant application of the repair process by a repair station.

Deterioration of hydraulic pumps causes:

- The loss of the RH and LH hydraulic power systems in the event of a substantial hydraulic fluid leak from both hydraulic pumps during a given flight.
- The loss of the hydraulic system concerned, in the event of a substantial hydraulic fluid leak from only one pump.

The purpose of this AD is to:

- Prohibit flights for all helicopters fitted with two hydraulic pumps whose serial numbers are listed in paragraph 1 above and not marked with the letter "V".
- Require that the hydraulic pumps concerned be returned to have them made compliant with the definition.

3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

The following measures are mandatory from the effective date of this AD:

3.1. Installed equipment:

No later than within 15 flying hours, check the part number and serial number of the hydraulic pumps.

3.1.1. Interpretation of the results:

If both the hydraulic pumps installed on a given helicopter are listed in paragraph 1 above and not marked with the letter "V":


- Suspend flights until at least one of the pumps is replaced with a pump that is not concerned by this EAD, in compliance with the instructions given in paragraph 2.B. of EUROCOPTER AS332 Alert Service Bulletin (ASB) No. 01.00.73 referenced below.

3.1.2. From December 31, 2008, flights with hydraulic pumps listed in paragraph 1 above and not marked with the letter "V" are prohibited. These pumps must be removed in compliance with the instructions given in paragraph 2.B. of the ASB referenced below.

3.2. Non-installed equipment:

3.2.1. Before installing a hydraulic pump held in your spare part stores, check its part number and serial number to avoid installing a pump listed in paragraph 1 above and not marked with the letter "V", on a helicopter already fitted with a hydraulic pump concerned by this AD.

3.2.2. Return the hydraulic pumps held in your spare part stores and concerned by this AD, in compliance with the instructions given in paragraph 3.E. of the ASB referenced below, to have them made compliant with the definition.

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4. REFERENCE PUBLICATION:

Alert Service Bulletin (ASB) EUROCOPTER AS 332 n°0 1.00.73.

5. EFFECTIVE DATE:

August 24, 2007.

6. REMARK:

6.1. This AD has been the subject of an Emergency diffusion on August 24, 2007.

6.2. For questions concerning the technical contents of this AD's requirements, contact:

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