	<b>AIRWORTHINESS DIRECTIVE</b> <b>No F-2005-181</b>	Distribution: <b>A</b>	Issue date: <b>November 09, 2005</b>	Page : <b>1/3</b>
<b>Direction générale de l'aviation civile France</b>  <b>GSAC publication</b>	This Airworthiness Directive is published by the DGAC on behalf of EASA, Airworthiness Authority of the State of Design for the affected product, part or appliance.		<i>Translation of « Consigne de Navigabilité » of same number. In case of difficulty, reference should be made to the French issue.</i>	
	<p align="center"><b>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.</b></p>			
Corresponding foreign Airworthiness Directive(s): <b>Not applicable</b>		Airworthiness Directive(s) replaced: <b>F-2004-182 and F-2004-194 cancelled by their Revision 1</b>		
Person in charge of airworthiness: <b>EUROCOPTER</b>		Type(s): <b>EC 155 B and B1 helicopters</b>		
Type certificate(s) No. <b>86</b> TCDS No <b>159</b>				
ATA chapter:  <b>05, 63</b>	Subject: <b>Main rotor drive - Check of the main gearbox (MGB) planet gear carrier</b>			

### 1. EFFECTIVITY:

EC 155 B and B1 helicopters, all serial numbers, equipped with main gearboxes, all part numbers.

**Note:** this Airworthiness Directive (AD) is intended for maintenance personnel and crews.

### 2. REASONS:

This AD is issued following two cases of cracks which were discovered in the web of an MGB planet gear carrier. The cracks were discovered upon removal of the MGBs subsequent to the detection of metal chips at the magnetic plug.

Then, a case of a crack was discovered in the planet gear carrier of an EC 155 helicopter during a borescope inspection of an MGB.

The failure of the planet gear carrier web can lead to MGB jamming.


This new AD:

- Incorporates the requirements of AD F-2004-182 and AD F-2004-194 which are cancelled by their Revision 1.
- Covers EUROCOPTER EC 155 Alert Service Bulletin (ASB) No. 05A007 which supersedes EC 155 Alert Telexes No. 05A007 and No. 63A008, respectively, with no change to the compliance and accomplishment instructions.

### 3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

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

- 3.1.** Main gearboxes having logged less than 50 operating hours since new or major overhaul, and which are fitted with a planet gear carrier that has logged less than 250 operating hours.

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**3.1.1.** At the latest when the planet gear carrier has logged 265 operating hours, then at intervals not exceeding 50 flying hours, carry out a borescope inspection for absence of cracks in the planet gear carrier, in compliance with the instructions given in § 2.B.2. of the ASB referenced below.

**3.1.2.** After the MGB has logged 50 operating hours:

In the event of chip warning light illumination, comply with the instructions given in § 2.B.1. of the ASB referenced below, at the latest before resuming flights.

**3.2.** Main gearboxes having logged less than 50 operating hours since new or major overhaul, and which are fitted with a planet gear carrier that has logged more than 250 operating hours.

**3.2.1.** No later than within the next 15 flying hours as from December 17, 2004, then at intervals not exceeding 50 flying hours, comply with the instructions given in § 2.B.2. of the ASB referenced below.

**3.2.2.** After the MGB has logged 50 operating hours:

In the event of chip warning light illumination, comply with the instructions given in § 2.B.1. of the ASB referenced below, at the latest before resuming flights.

**3.3.** Main gearboxes having logged 50 operating hours or more since new or major overhaul, and which are fitted with a planet gear carrier that has logged less than 250 operating hours.

**3.3.1.** At the latest when the planet gear carrier has logged 265 operating hours, then at intervals not exceeding 50 flying hours, comply with the instructions given in § 2.B.2. of the ASB referenced below.

**3.3.2.** In the event of chip warning light illumination, comply with the instructions given in § 2.B.1. of the referenced ASB, at the latest before resuming flights.

**3.4.** Main gearboxes having logged 50 operating hours or more since new or major overhaul, and which are fitted with a planet gear carrier that has logged more than 250 operating hours:

**3.4.1.** No later than within the next 15 flying hours as from December 17, 2004, then at intervals not exceeding 50 flying hours, comply with the instructions given in § 2.B.2. of the ASB referenced below.

**3.4.2.** In the event of chip warning light illumination, comply with the instructions given in § 2.B.1. of the ASB referenced below, at the latest before resuming flights.


**3.5.** Before installing a used MGB held as spares, equipped with a planet gear carrier having logged more than 215 operating hours, comply with the instructions given in § 2.B.3. of the ASB referenced below.

#### **4. REFERENCE PUBLICATION:**

EUROCOPTER EC 155 Alert Service Bulletin No. 05A007.  
(Any subsequent approved revision to this ASB is acceptable).

#### **5. EFFECTIVE DATE:**

November 19, 2005.

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#### 6. REMARKS:

For any questions concerning the technical content of the requirements in this AD, please contact:

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#### 7. APPROVAL:

This AD is approved under EASA reference No 2005-6390 dated November 02, 2005.

**SUPERSEDED**