EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2007- 0071R2 **Date: 15 March 2011** Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

Type Approval Holder's Name :	**Type/Model designation(s) :**
CEAPR	DR 400 series aeroplanes

TCDS Number :	DGAC France No.121
Foreign AD :	Not applicable
Revision:	This AD revises EASA AD 2007-0071R1 dated 16 March 2009.

ATA 57	**Wings - Main spar and fabric covering - Reinforcement / Modification / Inspection**
Manufacturers:	Centre Est Aéronautique, Avions Pierre Robin, Constructions Aéronautiques de Bourgogne, APEX Industries.
Applicability:	DR 400 series aeroplanes, all models except the DR 400/500, with a serial number from 924 up to 2443 inclusive, except aeroplanes listed in the paragraph (§) A hereunder, but including aeroplanes listed in the following § B; <u>A. Aeroplanes not concerned by the present Airworthiness Directive (AD)</u> - serial numbers 2014, 2021, 2433 and 2438, and - aeroplanes which have been released to service after implementing AD F-2001-194 except those listed in § B hereunder, and - aeroplanes which have been released to service after implementing AD F-2001-570 original issue, and - aeroplanes concerned by AD F-2000-224 or one of its revisions for which the operational limitation has been cancelled after inspection/repair, except serial numbers listed in § B hereunder. <u>B. Aeroplanes already inspected which must apply the present AD.</u> - serial numbers: 1015, 1066, 1410, 1515, 1661, 1669, 1731, 1851, 1910, 2001, 2012, 2013, 2015 to 2020, 2023, 2024, 2026, 2027, 2029, 2030, 2033, 2034, 2036, 2046, 2052, 2058, 2059, 2125, 2183, 2338, and 2403. and All DR 400 series aeroplanes for which the main wing has been replaced by a new wing delivered before 01 February 2000 or overhauled one.
Reason:	The superseded AD F-2003-348 was issued following an accident of a DR 400 airplane whose wing broke in flight on year 1997. Through this AD, a

	strengthening of the main spar was introduced. Moreover, the superseded EASA AD 2006-0347-E was issued following two tears of the wing lower surface patched fabric and introduced repetitive inspections of this wing lower surface patched fabric after implementing AD F-2003-348 (DR 400 Main Spar reinforcement) and/or F-1999-460R1, F-2000-224 R3, F-2001-194,and F-2001-570, as applicable. Based on the results of inspections required by AD 2006-0347-E, APEX Aircraft issued Technical Instructions (IT) No.1000851 issue D (superseding issue A) and No.1001846 issue F that are to be opted while implementing IT No. 1001047 to embody the main spar reinforcement. This AD introduces a new Technical Instruction (IT No.1001846) for the wing lower surface repair after the main spar strengthening. In addition it clarifies the mandatory repetitive inspections. Revision 1 of the AD clarifies the applicability for DR400 for which a new wing has been installed in service. Revision 2 of this AD introduces the possibility for the pilot owner to perform required action described in paragraph (4) of this AD.
Effective Date:	Revision 2: 29 March 2011 Revision 1: 16 March 2009 (issue date) Original issue: 30 March 2007
Required Actions and Compliance Times:	Required as indicated, unless accomplished previously: RESTATEMENT OF F-2003-348 From 27 September 2003 (effective date of AD F-2003-348) (1) <u>For aeroplanes on which the main wing has been replaced :</u> Contact APEX AIRCRAFT to determine, based on the main wing spar manufacturing date, if they must comply with § 2 or 3 of the present AD. (2) <u>For aeroplanes fitted with a main wing spar manufactured between 1987 and 1993 (see Table1), except aeroplanes listed in applicability § B. of this AD:</u> No later than June 30th, 2005 or within the next 1,000 Flight Hours (FH) from the 27 September 2003, whichever occurs first; Reinforce the main wing spar in accordance with the APEX INDUSTRIES IT No. 1001047 issue H. NEW STATEMENT OF THIS AD <u>(3) For aeroplanes fitted with a main wing spar manufactured before 1987 or after 1993 (see Table1), and all serial numbers listed in applicability § B. of this AD:</u> No later than June 30th, 2008 or within the next 2,250 FH from the 27 September 2003, whichever occurs first; Reinforce the main wing spar in accordance with the APEX INDUSTRIES IT No. 1001047 issue H (irrespective of IT No.1000851 Issue A) and either IT No.1000851 issue D or IT No.1001846 issue F. Accomplishment of the wing spar reinforcement in accordance with the APEX INDUSTRIES IT No. 1001047 issue H before 30 March 2007 is considered acceptable for compliance with the requirements of paragraph 3. of this AD. **Note 1**: to comply with the § 2. or § 3. of this AD, a 2 month or a 30 FH tolerance is allowed to match a scheduled maintenance programme. (4) <u>For all aeroplanes modified per the APEX AIRCRAFT IT No 1000851 issue A (wing lower surface repair patch),</u> Perform within the next 55 FH from the effective date of this AD and thereafter at intervals not to exceed 55 FH, a visual and tactile inspection to check the bonding of the covering strips all over the patch perimeter. Check for bubbles, disbonded zones & possible localized fraying. If any defect if found, before further flight, repair the aeroplane in accordance

with an approved method.

Note 2 : A pilot-owner is authorized under M.A.803 and appendix VIII of Part M, to perform the inspection as required by paragraph (4) of this AD, provided that:

- He has performed the task at least once, under the supervision of a certifying staff in an approved organisation and/or holding an appropriate maintenance licence, and
- The previous inspection was performed by a certifying staff in an approved organisation and/or holding an appropriate maintenance licence (i.e. the pilot owner may not perform two consecutive inspections)

(5) For all aeroplanes modified per the APEX AIRCRAFT IT No 1000851 issue D or No.1001846 (wing lower surface repair) Perform within the next 110 FH from the effective date of this AD and thereafter at intervals not to exceed 110 FH, a visual and tactile inspection to check the bonding of the covering strips all over the patch perimeter. Check for bubbles, disbonded zones & possible localized fraying.

If any defect if found, before further flight, repair the aeroplane in accordance with an approved method.

Main wing spar manufacturing year	Aeroplanes serial numbers
1987	1756, 1766 to 1767, 1771 to 1808, 1810 to 1814, 1817, 1818, 1820, 1821, 1825.
1988	1809, 1815, 1816, 1819, 1822 to 1824, 1826 to 1876, 1879 to 1887, 1889, 1891 to 1893, 1895, 1896, 1898.
1989	1877, 1878, 1888, 1890, 1894, 1897, 1899 to 1952, 1954 to 1961, 1965
1990	1953, 1962 to 1964, 1966 to 2040, 2045 to 2048, 2050, 2052
1991	2049, 2051, 2053 to 2080, 2082 to 2117, 2119 to 2130, 2132 to 2136, 2138, 2140, 2141
1992	2118, 2131, 2137, 2139, 2142 to 2145, 2147 to 2153, 2155 to 2171, 2173 to 2182, 2184 to 2203, 2205 to 2207, 2209 to 2211, 2213, 2230, 2231
1993	2204, 2208, 2214 to 2229, 2232, 2233, 2235 to 2239, 2242 to 2244, 2246, 2250, 2254, 2255, 2268, 2348

Table 1

Note 3: For airplanes that have been modified, repaired or altered so that the performance of the requirements of this AD is affected, the owner/operator must request through the Type Certificate Holder an approval for an alternative method to comply.

Note 4: Requirements of this AD shall be carried out by persons entitled to work on wood and fabric aeroplanes per their national authority.

Ref. Publications:

APEX AIRCRAFT Technical Instruction No 1001047 issue H;

APEX AIRCRAFT Technical Instructions No.1000851 issue D and No.1001846 issue F;

The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.

Remarks :	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication. 3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Request Section, Certification Directorate, EASA. E-mail ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact: CEAPR, Bureau de Navigabilité, 1 route de Troyes, 21121, Dartois, France, Téléphone : +33 380 35 25 22 Fax : +33 380 35 25 25 E-mail : info@ceapr.com.