EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2011-0093 **Date: 20 May 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].

Approval Holder's Name :	**Type/Model designation(s) :**
Chelton Limited	P/N 21-41 ( ) series Tri-Band ELT antennas

Approval Number :	United Kingdom National Equipment Approval, issued under Paragraph 5.3 of CAP553, BCAR Section A, Chapter A4-8.
Foreign AD :	Not applicable
Supersedure :	None

ATA 25	**Equipment / Furnishings – Emergency Locator Transmitter (ELT) Antenna – Modification / Replacement**
Manufacturer(s):	Chelton Limited (trading as Cobham Antenna Systems), formerly Chelton (Electrostatics) Limited.
Applicability:	Tri-Band ELT antennas, Part Number (P/N) 21-41 ( ) series, all serial numbers (s/n) up to 12999 inclusive, which are used in combination with a large variety of ELT units without electro-static discharge (ESD) protection. ESD protection is identified by a declaration of category A of section 25 of RTCA, Inc. DO160 version D change 3 (or later version) or EUROCAE ED-14D (or later version); see also Note below. Chelton P/N 21-41 ( ) series antennas installed in combination with the following ELT units are not affected by this AD: • Chelton Avionics, Inc DBA Wulsberg Electronics (formerly ARTEX) ELT model C406-N HM, P/N 453-5061, • Chelton Avionics, INC DBA Wulsberg Electronics (formerly ARTEX) ELT model C406-N, P/N 453-5060, and • ELTA ELT model ADT406²AF/AP-H, P/N 01N65901 rev. (x) The affected antennas are known to be installed on, but not limited to, Eurocopter (formerly Eurocopter France, Aerospatiale) AS 350, EC 155 and AS 332 series helicopters. It is also possible that the antenna is installed on fixed wing aircraft. **Note**: For the definition of ELT, refer to the types of ELT in EUROCAE ED-62A paragraph 1.2 or in RTCA DO-204 paragraph 2.1. The definition includes all four basic types: ELT (AF) - Automatic Fixed, ELT (AP) - Automatic Portable, ELT (S) - Survival, and ELT (AD) - Automatic Deployable.

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Reason:	Analysis has shown that there is a potential for electrostatic charge build up on the outside surface of the Chelton P/N 21-41 antenna. When connected with an ELT, this electrostatic charge can be conducted via the radiating element to the transceiver. In such a case, the ELT could not function as intended. Although these events have been observed on these antennas when fitted to KANNAD 406 ELT installations, it can likely occur when the antenna is fitted to another ELT unit. This condition, if not detected and corrected, could adversely affect the survivability of aircraft occupants during an actual emergency situation. For the reasons described above, this AD requires repetitive pre-flight testing of the ELT unit interconnected with the antenna, modification of the affected antenna or replacement with a modified unit, and a post-modification test to ensure the airworthy condition of the onboard ELT installation.
Effective Date:	03 June 2011
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) Within 3 days after the effective date of this AD and thereafter before each first flight of the day, perform a self-test of the ELT unit interconnected with the P/N 21-41 series antenna, in accordance with the instructions of the ELT manufacturer. This self-test can be performed by the flight crew as part of the normal pre-flight checks. **Note 1:** Increasing the frequency of self-tests will significantly reduce the lifetime of the battery, compared to the performance documented in the ELT manual. The instructions of the ELT manufacturer must be followed to prevent false distress alerts. (2) If, during any of the tests as required by paragraph (1) of this AD, the installation fails the test, before next flight, modify the P/N 21-41 series antenna in accordance with the instructions of Chelton Ltd Service Bulletin (SB) 02/2011 Issue 1, or replace the antenna with a modified P/N 21-41 series antenna, or with a P/N 21-41 series antenna with a s/n of 13000 or higher. **Note 2**: A modified P/N 21-41 series antenna exhibits an extended black heatshrink protective cap on the tip of the antenna. See Figure 1 in Chelton Ltd SB 02/2011 Issue 1. (3) Within 6 months after the effective date of this AD, unless already accomplished as required by paragraph (2) of this AD, modify the P/N 21-41 series antenna in accordance with the instructions of Chelton Ltd SB 02/2011 Issue 1, or replace the antenna with a modified P/N 21-41 series antenna, or with a P/N 21-41 series antenna with a s/n of 13000 or higher. (4) Before next flight after modification or replacement of the P/N 21-41 series antenna as required by paragraph (2) or paragraph (3) of this AD, as applicable, perform a self-test of the ELT unit interconnected with the P/N 21-41 series antenna, in accordance with the instructions of the ELT manufacturer. This self-test can be performed by the flight crew as part of the normal pre-flight checks. If the installation fails the post-modification self-test, replace the ELT unit with a serviceable unit and repeat the self-test until the installation passes the test. (5) When an installation on an aircraft passes the self-test as required by paragraph (4) of this AD, that constitutes terminating action for the repetitive self-tests as required by paragraph (1) of this AD for that aircraft. (6) From the effective date of this AD, do not install an affected P/N 21-41 series antenna with a s/n below 13000 on an aircraft, unless it has been modified in accordance with the instructions of Chelton Ltd SB 02/2011 Issue 1.

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Ref. Publications:	Chelton Limited (trading as Cobham Antenna Systems) SB 02/2011 Issue 1 dated 18 April 2011. The use of later approved revisions of this document 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. This AD was posted on 19 April 2011 as PAD 11-042 for consultation until 17 May 2011. The Comment Response Documents can be found at http://ad.easa.europa.eu/. 3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research 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: Mr. J. Burke, Service Manager, Chelton Limited, trading as Cobham Antenna Systems, The Cobham Centre, Fourth Avenue, Marlow, Buckinghamshire SL7 1TF, The United Kingdom, Telephone: +44 (0)1628 498021 or +44 (0)1628 472072, Fax: +44 (0)1628 482255, E-mail james.burke2@cobham.com, or visit the Cobham Website.

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