

#	Para	Comment Provider	Comment / Justification	Response	Resulting Text
1	-	TMA	Proposal is acceptable without change	<u>Noted</u>	No changes
2	-	AAA	Proposal is acceptable without change	<u>Noted</u>	No changes
3	-	Manta	Proposal is acceptable without change	<u>Noted</u>	No changes
4		IASL	The proposal is not acceptable but would be acceptable if the following changes were made:	<u>See responses below</u>	See subsequent rows below
4.1	11		<p>1. Para 11, Annual Testing and Inspection: Self-test is required to be carried out, at every 6 months (Para 11, Self-Test), as per manufacture instructions ensuring serviceability, thus a need for carrying out an annual test of transmitted power and frequency is not recognized. Further there is no manufacturer requirement to check g-switch operation and carrying out these checks in-house will be very difficult. Hence instead of the annual test and inspection given in this Para, we propose to change it to a detailed visual inspection of the ELT.</p>	<p><u>Not accepted</u></p> <p>1.1. The self-test at every six month replaces the current functional check interval of 90 days so this is not an additional requirement.</p> <p>1.2. The ELT OEMs does explain how to carry out the annual testing and inspection as this requirement already exists in FAA and Transport Canada regulations. . We have looked at the maintenance data produced by ELT manufacturers for those ELT types used in Maldives and we found that clear instructions on how to carry out the annual test and inspections are described in the manual.</p> <p>DHC-8-200 and DHC-8-300 MRBR tasks 2560/03 & 2560/15 is operational check of ELT with G-switch. The interval given is 24 months or vendor requirements. Dash-8 AMM describes the procedure for G-switch test and it states, "The microprocessor in the ELT unit checks the G-switch, the 406.025 MHz transmitter for correct RF output, and the battery pack."</p> <p>Airbus 320/1 MRBR tasks (MSI ref.25.65.35) requires to remove ELT for in shop operational check of acceleration sensor (G-switch). The interval is 72 months</p>	Text changed to state that if the aircraft type certificate holder gives different intervals for the tests and inspections mentioned in para 11, then the type certificate holder interval can be followed.

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				<p>EASA Safety Information Bulletin (SIB) No.: 2019-09 dated 17 June 2019 states “ELT and PLB are passive and dormant devices, whose status is unknown until they are required to perform their intended function. The performance is highly dependent on the beacon reliability, on proper installation and post-installation testing”. The third recommendation on the SIB states “EASA recommends that all affected operators accomplish, in accordance with the terms and conditions laid down in the relevant provisions of Regulation (EU) 1321/2014, as revised, a visual inspection of the ELT(AF) and ELT(AP) combined with an annual test and inspection in accordance with the Appendix 1 of this SIB”.</p> <p>Paragraph 11b of ASC M-3 is taken from Appendix 1 of EASA SIB.</p> <p>FAA AC 91-44A CHG 1 Feb 1, 2018 states “Each ELT required by § 91.207(a) must be inspected within 12 calendar-months after the last inspection for proper installation, battery corrosion, operation of controls and sensors, and radiated signal strength. Due to the variety of ELTs and the different ways they can be installed, the ELT owner’s manual should be followed when performing a system inspection.”</p> <p>Transport Canada describes ELT Operational Test and Performance Test in Part V – Standard 571 Appendix G (https://tc.canada.ca/en/corporate-services/acts-regulations/list-regulations/canadian-aviation-regulations-sor-96-433/standards/part-v-standard-571-appendix-g-maintenance-emergency-locator-transmitters-elts)</p>	

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				ATSB report, A review of the effectiveness of ELT in accidents states "It was found that ELTs only activated normally in about 40 to 60 per cent of the high g-force accidents, supporting previous anecdotal evidence that ELTs were often not activating. ELT/PLBs are directly responsible for saving an average of four lives per year."	
4.2	13		<p>2. Para 13, Beacon registration: As per Para 13(a) all ELTs and aviation-use PLBs, even if not fitted to an aircraft are required to be registered, The stored ELTs are not coded to specific aircraft and as per the CAA Form ELT, aircraft specific data is required as well . Hence we propose to change the Para as follows:</p> <ul style="list-style-type: none"> □ Register with operator details excluding Aircraft Data for stored ELT/PLB; or □ Keep the stored ELT/PLB in a shielded room or a shielded bag. 	<p><u>Not accepted</u></p> <p>if a beacon that is stored is to be registered with CAA, paragraph 7 (Aircraft data) can be left blank and in paragraph 8 (Remarks), it can be stated that the beacon is stored.</p> <p>UK AIC P 053/2018 dated 7th June 2018 states "Too many beacons are inadvertently activated when in storage or transit, and these false alerts invariably result in Search and Rescue (SAR) action if the owner cannot be identified and questioned."</p> <p>A meeting was held among personnel from MNDF Coastguard, MACL ATC, Maldives Transport Authority, Communication Authority of Maldives (CAM) and CAA. During the meeting MACL ATC stated that "Most distress alerts received in the past are false alerts (i.e. not real distress)"</p> <p>Therefore, we see the wisdom behind registering ELT and aviation use PLB, even stored ones.</p> <p>If the owner wants to keep stored ELT/PLB in a shielded room or a shielded bag, then that can be done as the regulation does not prevent this.</p>	No changes

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4.3	16		<p>3. Para 16, effectivity:</p> <ul style="list-style-type: none"> □ IASL ELTs are coded to include the country code of Maldives and requires more time to check if the transmitted message meets any of the coding options given in the NPRM. □ IASL PLBs transmitted message needs to be checked to see if it meets any of the coding options given in the NPRM. □ IASL currently does not have in-house capability to do coding. <p>IASL needs more time to properly check and if required re-code the beacons. This cannot be achieved before 10 January 2021, especially due to the impact of Covid-19. Hence we propose to change effective date for point (c) to 31 Dec 2021.</p>	<p><u>Not accepted</u></p> <p>Your beacon's 15 character Hex ID uniquely identifies your 406 MHz beacon and is encoded in the message your beacon transmits to search and rescue services if your beacon is activated. The complete beacon identification code includes the: protocol flag, protocol code, country code, and other identification data, all of which are encoded in the first protected data field (PDF-1) of the 406 MHz message. Identification data is encoded together with the country code and other information in the beacon message in binary format. The beacon 15 Hex ID is derived from a 406 MHz message by presenting every 4 bits of a beacon message, starting from bit 26 to bit 85, as a hexadecimal character: "0000" = Hex 0 up to "1111" = Hex F.</p> <p>The country code is part of every beacon identification data. This code is the 3-digit decimal number allocated to each country/territory by the International Telecommunication Union (ITU) and listed as Maritime Identification Digits (MID) in Appendix 43 of the ITU Radio Regulations. The country code is encoded in binary notation in bits 27 to 36 of the message. The country code indicates the administration maintaining the beacon registration data base. As per COSPAS-SARSAT guidelines, if the appropriate registration database exists, the country code should always match the flag of the vessel or aircraft.</p> <p>COSPAS-SARSAT allows various coding options for beacons. These coding options fall into two broad groups of protocols: User Protocols and Location Protocols. Under each group there are various options. Refer paragraph</p>	No changes

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				<p>4.3 of Appendix 3 – Background to the Proposal (NPRM 2020-05) for more information.</p> <p>Every shop/AMO that codes ELT or PLB will provide the 15 Hex code. This Hex code can be decoded at COSPAS-SARSAT website given below: https://www.cospas-sarsat.int/en/beacon-decode-program</p> <p>Therefore, even for a fleet of 60 aircraft, to identify the protocol applied to the beacon at hand and to check whether correct country code is encoded, it will not take a long time. Please also note that every ELT or PLB (aviation use) shall have country code in the message irrespective of the coding protocol applied and the country for Maldivian registered aircraft shall be 455 (ITU allocated code for Maldives).</p>	
5		Villa Air	The proposal is not acceptable but would be acceptable if the following changes were made:	<u>See responses below</u>	See subsequent rows below
5.1	10		Para 10 states “Live testing of the 406 MHz transmission is not permitted at any time.” Villa Air propose to remove the above statement. Currently live testing allowed by manufacturer and live testing for less than 50 seconds will not be considered a distress signal. Hence, Villa Air proposes to allow live testing with strict time frame rather than utilizing option 2 (ii)	<p><u>Partially accepted</u></p> <p>Cospas-Sarsat 406 MHz beacons are used in different environments and for a variety of applications such as EPIRBs and Ship Security Alert System (SSAS) beacons that service the maritime environment, ELTs (aviation) or PLBs (personal use).</p> <p>According to COSPAS-SARSAT website “406-MHz beacons are designed with a self-test capability that is activated by a separate test switch or switch-position setting for evaluating key performance characteristics. Initiating the beacon self-test function will not generate a distress alert in the Cospas-</p>	Para 10 changed as follows: 10 (a) changed to “Live testing of the 406 MHz transmission which will result in sending a distress signal to COSPAS-SARSAT satellites is not permitted at any time.”

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				<p>Sarsat System, and the self-test can be performed at any time (i.e., it is not restricted to certain times during an hour).</p> <p>According to Irish Aviation Authority circular dated 18 Oct 2017 “The volume of ELTs being installed in aircraft and marine vehicles is now so great that the Search and Rescue organisations and the distress and diversion cells distributed throughout the world are no longer able to deal with requests for live testing. As a consequence of this live testing of ELTs is now prohibited.”</p> <p>The number of seconds allowed during ELT test varies between aircraft type certificate holder instructions. ATR 72-212A allows no more than 50 secs, Dash-8-200/300 allows no more than 47 secs while Airbus A320/1 allows no more than 150 secs. The main point is that a distress signal is not sent to the satellite.</p>	10 (b) changed to “ Therefore, testing while adhering to the warnings, cautions and instructions of the aircraft type certificate holder and / or beacon manufacturer is permitted. ”
5.2	11		<p>Para 11 is about annual testing and inspection.</p> <p>Villa Air propose to change the interval. All ELTs currently installed on Villa Air aircraft fleet has a manufacturer specified interval of 5 years for the above mentioned tasks (MRBR: 256500-10). We have had not a failed ELT during these checks, hence suggest to keep this in manufacturer specified interval rather than annual.</p>	<p><u>Accepted</u></p> <p>The interval varies among difference aircraft manufacturers and ELT manufacturers.</p>	Text changed to state that if the aircraft type certificate holder gives different intervals for the tests and inspections mentioned in para 11, then the type certificate holder interval can be followed.

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5.3	14		<p>Para 14 is about beacon coding. Unclear of the coding protocol specified. Villa Air proposes the following method in coding and being specified in rule: Coding method User protocol with ELT serial number and Aircraft Operator Designator ONLY (Will be in compliance with ICAO Annex 10, Volume III). Notification will be sent to CAA as to what SN ELT installed on which registration. This should also apply to those ELT in stock and informed to CAA that these are kept in stock.</p>	<p><u>Partially agreed</u></p> <p>Agreed that any change to ELT registration details (e.g. swapping ELT between aircraft) need to be informed to CAA.</p> <p>Cannot agree to limit the coding options allowed as proper registration of beacon details (e.g. aircraft owner, 24h contact...etc) with CAA, and then CAA giving access to this information to SAR services will help positively identify the important information connected to any distress signal, whatever the protocol used for coding the beacon.</p> <p>Further, the owner/operator does not have to stick to a single option to programme all ELTs used by the operator. The key is that is coded properly and registered with CAA properly so SAR services get correct information promptly.</p> <p>The specification of the distress signal characteristics (Cospas-Sarsat document C/S T.001), which ensures that all 406 MHz beacons are compatible with the Cospas-Sarsat Space Segment, is applicable to all types of beacons. To satisfy these requirements, the Cospas-Sarsat specification provides for various coding options which are divided in two groups of coding protocols:</p> <ul style="list-style-type: none"> • User Protocols; and • Location Protocols. <p>The user protocols can be used for encoding the beacon identification and other data in the digital message transmitted by a 406 MHz distress beacon, but do not allow for encoding beacon position data. User protocol options are shown below:</p>	<p>Information added to the tables given under para 14(a) so that it is clear that regulation provide options to choose from.</p>

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				<table><tr><th colspan="3">Figure 1 List of Available Coding Options for User Protocols</th></tr><tr><th>Application</th><th>Identification data</th><th>Protocols</th></tr><tr><td rowspan="4">ELT</td><td>Unique ELT Serial Number*</td><td>Serial User</td></tr><tr><td>Aircraft Operator Designator & Serial Number*</td><td>Serial User</td></tr><tr><td>Aircraft 24-bit Address</td><td>Serial User</td></tr><tr><td>Aircraft Registration Marking</td><td>Aviation user</td></tr><tr><td>PLB</td><td>Unique PLB Serial Number*</td><td>Serial User</td></tr></table> <p>Note: (*) Serial number means a unique number assigned by an administration or a beacon manufacturer.</p>	Figure 1 List of Available Coding Options for User Protocols			Application	Identification data	Protocols	ELT	Unique ELT Serial Number*	Serial User	Aircraft Operator Designator & Serial Number*	Serial User	Aircraft 24-bit Address	Serial User	Aircraft Registration Marking	Aviation user	PLB	Unique PLB Serial Number*	Serial User	
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ELT	Unique ELT Serial Number*	Serial User																					
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	Aircraft 24-bit Address	Serial User																					
	Aircraft Registration Marking	Aviation user																					
PLB	Unique PLB Serial Number*	Serial User																					

Terminology

Accepted	The CAA agrees with the comment and any proposed amendment is wholly transferred to the revised text
Partially accepted	The CAA either agrees partially with the comment, or agrees with it but the proposed amendment is only partially transferred to the revised text.
Noted	The CAA acknowledges the comment but no change to the existing text is considered necessary.
Not Accepted	The comment or proposed amendment is not shared by the CAA.