

AERONAUTICAL CIRCULAR CIVIL AVIATION AUTHORITY – MACAO, CHINA

SUBJECT:

Location of an Aeroplane in Distress

EFFECTIVE DATE:

29 December 2022

CANCELLATION:

Nil.

GENERAL:

The President of Civil Aviation Authority, in exercise of his power under article 35 of the Statutes of Civil Aviation Authority approved by the Decree-Law 10/91/M and paragraph 89 of the Air Navigation Regulation of Macao (ANRM), established this Aeronautical Circular.

1. Introduction

- 1.1. Following the adoption of amendment 48 to Annex 6 Part I to the Convention on International Civil Aviation by the International Civil Aviation Organization (ICAO) updating the provision related to the equipage for tracking the location of an aeroplane in distress, this AC is published to effect promulgation of the relevant requirements.

2. Amendment to the ANRM

- 2.1. Scale HH in paragraph 5 of the Fifth Schedule to the ANRM is amended as follows:

Scale HH.

- (i) As of 1 January 2025, all aeroplanes of a maximum certificated take-off mass of over 5,700 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2024, shall be equipped with robust and automatic means to autonomously transmit information from which a position can be determined by the operator at least once every minute when in distress.
- (ii) An aeroplane in distress shall automatically activate the transmission of information from which its position can be determined by the operator and the position information shall contain a time stamp. It shall also be possible for this transmission to be activated manually.

The system used for the autonomous transmission of position information shall be capable of transmitting that information in the event of aircraft electrical power loss, at least for the expected duration of the entire flight.

- (iii) An aircraft is in a distress condition when it is in a state that, if the aircraft behaviour event is left uncorrected, can result in an accident. Autonomous transmission of position information shall be active when an aircraft is in a distress condition. This will provide a high probability of locating an accident site to within a 6 NM radius. The operator shall be alerted when an aircraft is in a distress condition with an acceptable low rate of false alerts. In case of a triggered transmission system, initial transmission of position information shall commence immediately or no later than five seconds after the detection of the activation event.

Note 1: Aircraft behaviour events can include, but are not limited to, unusual attitudes, unusual speed conditions, collision with terrain and total loss of thrust/propulsion on all engines and ground proximity warnings.

Note 2: A distress alert can be triggered using criteria that may vary as a result of aircraft position and phase of flight. Further guidance regarding in-flight event detection and triggering criteria may be found in the EUROCAE ED-237, Minimum Aviation System Performance Specification (MASPS) for Criteria to Detect In-Flight Aircraft Distress Events to Trigger Transmission of Flight Information.

- (iv) When autonomous transmission of position information has been activated, it shall only be able to be deactivated using the same mechanism that activated it.
- (v) The accuracy of position information shall, as a minimum, meet the position accuracy requirements established for ELTs.

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