



ICAO

## INTERNATIONAL CIVIL AVIATION ORGANIZATION

**Twenty seventh Meeting of the Africa-Indian Ocean Planning and Implementation Regional Group (APIRG/27) and Tenth Meeting of the Regional Aviation Safety Group for the Africa-Indian Region (RASG-AFI/10), Joint sessions**

**4 and 8 November 2024**

**Agenda Item 3: APIRG and RASG-AFI Coordination**

**3.4. AFI Airspace Monitoring**

**MINIMUM MONITORING REQUIREMENTS**

*(Presented by ARMA)*

<b>SUMMARY</b>	
This working paper presents the general requirements for height monitoring in the RVSM airspace.	
The action by the Meeting is in <b>paragraph 3</b>	
<b>Strategic Objectives</b>	This working paper relates to the Strategic Objective - <b>A- Aviation Safety</b>
<b>Reference</b>	- Regional Monitoring Agency (RMA) Manual, ICAO Doc. 9937

**1 INTRODUCTION**

- 1.1. The Regional Monitoring Agency (RMA) Manual (ICAO Doc. 9937; 1st ed. 2010) prescribes ongoing quality control checks of operator fleets, also known as Long-Term Height Monitoring (LTHM) requirements. The instrument which best describes these requirements is the **Minimum Monitoring Requirements** (MMR) chart, which does appear in the RMA Manual but is also revised when necessary, during the RMA Coordination Group meeting.
- 1.2. The MMR continues to be maintained outside of the RMA Manual, so that any developments such as new aircraft, new avionics, and new insights into improvement or failure in achieving the goals in the MMR can be addressed without engaging the requisite cost and slowness of a publishing cycle for the Manual. All RMAs have access to the MMR via a Knowledge Sharing Network (KSN) available only to RMAs.

## 2 DISCUSSION

### 2.1. New entrants to the Civilian MMR

- a) Gulfstream Model GVIII-G700 (G700), ICAO code GA7C, manufacturer serial number beginning with 87001, are added as a new Monitoring Group GLF8. These additional changes to the MMR were brought forward to the group by Europe Regional Monitoring Agency (EUR RMA) and the North America Approvals Registry and Monitoring Agency (NAARMO).

### 2.2. Changes to existing Monitoring Groups in the Civilian MMR

- a) *Additional defining criteria for existing Monitoring Groups:* Some NAARMO processes refer to aircraft in the GL5T Monitoring Group and the GLEX Monitoring Group using their manufacturer's type code instead of the ICAO code. The code for GL5T is BD700 (BD700-1A11) and the code for GLEX is BD700 (BD-700-1A10). For clarity these codes should be added as additional defining criteria for the GL5T and GLEX.

- b) *Existing Monitoring Groups to be removed:* The certification of the Boeing 737-MAX7 (or B37M), as well as the certification of the Boeing 777X (or B779), are both delayed. For the time being the B37M Monitoring Group and the B779 Monitoring Group can both be removed from the current MMR.

- c) *Existing Monitoring Group to be changed:* Embraer investigated the non-compliant performance of the E135-145 Monitoring Group. It is proposed to split this Monitoring Group into three new Monitoring Groups as shown below. For more information please refer to the MMR document as Attachment to this paper.

- i. The new E135-145 Monitoring Group will contain only the EMB-135, EMB-140, and EMB-145 aircraft types.
- ii. The new E135BJ1 Monitoring Group will contain all EMB-135BJ (E35L) aircraft, except for those specified in the new E135BJ2 Monitoring Group.
- iii. The E135BJ2 Monitoring Group will contain EMB-135BJ (E35L) aircraft with serial number 586, 1144, 1193, 1219, 1220, 1223 thru 1227, 1229 and on; and any other E35L aircraft that incorporates Service Bulletin SB145LEG-34-0039.

- 2.3. Existing Monitoring Groups investigated to determine if it is appropriate to change their current monitoring category. It is accepted practice to place new aircraft types, or variants, in Category 2 until sufficient data is available to confirm overall group compliance as well as long term Altimetry System Error (ASE) stability. This period is generally accepted to be a minimum of two years. It is also possible to demote aircraft groups from Category 1 to Category 2, however this should only be considered if there are clearly identified generic performance problems, with sufficient representative monitoring data to confirm non-compliance with group performance requirements. In these circumstances a formal investigation should first be initiated with the appropriate certification authority as well as the airframe manufacturer.

- a) At the present time there are no aircraft in Category 1 which are being considered for moving to Category 2.
- b) Boeing requested that the B38M Monitoring Group be changed from Category 2 to Category 1 of the MMR. Along with the category change, it is also proposed that the 737-MAX8-200 (B8200 Monitoring Group), as a variant of the 737-MAX8, can be merged into the B38M Monitoring Group. Additionally, Boeing requested that the B39M Monitoring Group also be changed from Category 2 to Category 1.

### **3 ACTION BY THE MEETING**

- 3.1 The meeting is invited to:
  - a) Note the information contained in the WP; and
  - b) Endorse the new MMR update.