RVSM Monitoring Groups

Andrew Lewis
Manager EUR RMA
EUROCONTROL

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The Role of an RMA

An RMA has 3 principle roles:

- Conducting safety assessments to ensure that the Target Level of Safety is satisfied
- Verification of the RVSM approval status of aircraft operating in RVSM airspace
- Conducting a monitoring program to verify the height keeping performance of individual airframes and generic aircraft types

RVSM Monitoring Groups

- An RVSM Monitoring Group consists of aircraft that are built to the same design, have identical avionics, static source error and height keeping performance characteristics
- Collision risk assessments are based on analyzing representative samples of each group and extrapolating the results for the entire airspace population and total flight hours
- RVSM Monitoring Groups are placed in one of three categories which define the Minimum Monitoring Requirements (MMR)

RVSM Monitoring Groups

- Category I consists of all groups which have had a representative sample of airframes monitored and which have demonstrated good and stable ASE characteristics over a minimum of 2 years

- The monitoring requirements for operators flying aircraft in Category I equate to the minimum monitoring requirements defined in ICAO Annex 6, i.e. 2 airframes each 2 years or 1,000 flight hours

RVSM Monitoring Groups

- Category II consists of all groups which have yet to have a representative sample of airframes monitored and/or which have not yet demonstrated good and stable ASE characteristics over a minimum of 2 years
- The recommended monitoring requirements for operators flying aircraft in Category II is 60% of the fleet monitored each 2 years or 1,000 flight hours
- New aircraft types or derivatives are normally placed in Category II until they have satisfied the requirements to be promoted to Category I

RVSM Monitoring Groups

- Category III consists of all aircraft which are built and approved on an individual basis. These are termed Non-Group aircraft.
- The monitoring requirements for operators flying Non-Group aircraft in Category III is 100% each 2 years or 1,000 flight hours.
- In the event that an RVSM Monitoring Group performs so poorly as to be considered a threat to safety it could be placed in Category III

RVSM Monitoring Groups

- The RVSM Monitoring Group definitions are a unique configuration for the assessment of safety in RVSM airspace and are primarily used by RMAs
- The accuracy of annual collision risk assessments rely on the complete and accurate definitions of RVSM Monitoring Groups
- Non-Group aircraft which are not monitored contribute an unknown risk to the safety of operations in RVSM airspace

Group Aircraft

Same Group?

Maintaining the RVSM Monitoring Groups

- The RVSM Monitoring Group definitions are maintained and updated by NAARMO (FAA) and EUR RMA (EUROCONTROL)

- There is not a single common source for the information required to determine RVSM Monitoring Group constitution

- Neither of these 2 RMAs hold the necessary resources or expertise to evaluate technical performance specifications to determine RVSM Group content

Importance of maintaining the RVSM Monitoring Groups

- Accuracy of RVSM safety assessments
- Accurate monitoring of compliance with certification requirements
- In service verification of STCs TC amendments etc.

Updating MMR

- Previously the MMR tables were maintained through collaboration with industry representatives through the ICAO NAT OPS/AIR group which no longer exists

- The MMR is becoming increasingly non-representative of the true definitions of RVSM Monitoring Groups, particularly for small business jets and Non-Group aircraft

Options for future support of the MMR

- Identify other existing working groups or panels which include the correct experts and organizations
- Establish a new working group under ICAO supervision
- Amend FAA/EUROCONTROL Action Plan 03 to include coordination with industry
- Informal remote coordination with designated POC

Conclusion

It is in the interest of all operators, airworthiness authorities, manufacturers and RMAs to ensure that the RVSM Monitoring Group definitions are correct. The RMAs can provide valuable data to assist manufacturers and operators to track the performance of aircraft, monitor component life span and confirm the efficacy of continued airworthiness procedures. In return the RMAs should expect the cooperation of these same organizations to support them to maintain the RVSM Monitoring Groups in whichever form or structure develops in the future