MMR

- Table of Minimum Monitoring Requirements for Aircraft Monitoring Groups
- Aims to reduce monitoring burden on operators by reducing the frequency of required monitoring for Monitoring Groups where possible

Examples of Monitoring Groups

- Monitoring Group A380: includes all Airbus A380
- Monitoring Group A320: includes Airbus A319, A320, A321
<table>
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<tr>
<th>1</th>
<th>GROUP APPROVED: AIRCRAFT WHICH DEMONSTRATE LONG TERM CONFIDENCE IN COMPLYING WITH RVSM MASPS</th>
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<tr>
<th>2</th>
<th>GROUP APPROVED: AIRCRAFT WHICH HAVE YET TO DEMONSTRATE CONFIDENCE IN LONG TERM PERFORMANCE</th>
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<tr>
<th>3</th>
<th>NON-GROUP: RESERVED FOR AIRCRAFT WHICH ARE PRESENTED FOR RVSM APPROVAL ON AN INDIVIDUAL BASIS (i.e. NON-GROUP APPROVED AIRCRAFT)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>A225, AN12, AN26, B190, B462, B463, B720, B74S-SOFIA, BA11, BE9L, GSPN, H25A, L29A, PAY3, R721, R722, SJ30, STAR</td>
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Monitoring Categories

- **Category I**
  - Aircraft which demonstrate long-term stable ASE
  - Least frequent monitoring schedule
  - Fewer airframes of each operator need to be monitored

- **Category II**
  - Aircraft which have yet to demonstrate stable ASE
  - Not enough data has been collected for evaluation
  - More frequent monitoring schedule
  - More airframes of each operator need to be monitored

- **Category III**
  - Non-group aircraft, experimental or test aircraft
  - Most frequent monitoring schedule
  - All airframes of each operator need to be monitored
New Monitoring Groups in the MMR

- All new Monitoring Groups to be initially placed in Category II
  - More airframes in each operator’s fleet will be required to be monitored
  - More data will be collected to ensure proper ASE performance
- Minimum of two years in Category II
  - Ensures long-term stable ASE
- Evaluate moving the Monitoring Group to Category I
  - Group exhibits long-term stable ASE which complies with RVSM requirements
  - Reduce monitoring burden on operators
  - Require less frequent monitoring
Definition of a Monitoring Group; Placement of a Monitoring Group in the MMR

- Subject to change, should monitoring data indicate it
- Embraer E170-E190
  - Initially separate Monitoring Groups
  - Embraer illustrated why these Groups could be combined
  - ASE data were evaluated along with the manufacturer's statement, and the E170-E190 aircraft were combined into one Monitoring Group
- Bombardier GL5T
  - Bombardier requested we investigate long-term ASE performance with the goal of relocating the GL5T Monitoring Group from Category II to Category I
  - Similar GLEX Group was already found in Category I
  - ASE data were evaluated and the GL5T was relocated to Category I
Evaluating Monitoring Groups and MMR Monitoring Categories

- Historically Monitoring Group definitions and placement into the MMR were infrequently reviewed
- Need to regularly investigate and bring findings to RMACG
  - RMAs should review Monitoring Groups of interest
  - Review definitions of Monitoring Groups and placement in the MMR
  - Goal is to move Category II Groups to Category I if possible and supported by data
- Operators and manufacturers are encouraged to contact their RMA to initiate an investigation of these areas
MMR Updates

• Continue to review assignment of Monitoring Groups to MMR Monitoring Categories
  ✦ Boeing 787, in service since 2011, still in Category II
• ADS-B may lessen the importance of the MMR
  ✦ ADS-B equipped aircraft will be frequently monitored
  ✦ ADS-B will reduce monitoring burden
Conclusion

• MMR serves to reduce monitoring burden
• Monitoring Group Categories are subject to change if indicated by data
• Requests to investigate particular Groups are welcome
• ADS-B should reduce monitoring burden and the importance of the MMR in the future