

# Airline XYZ's Application for RVSM Authority for Aircraft Type ABC

March 29, 2004  
Revision 4

## Example Operator Application For Approval

### To Operate in RVSM Airspace

**Introduction.** This document provides an EXAMPLE of an operator application for authority to conduct RVSM operations. It shows a suggested format and content for such an application.

**IT IS PROVIDED FOR EXAMPLE PURPOSES ONLY!!! The airline responses are for example purposes only. Operators must provide responses that are complete and correct for their aircraft and operation.**

**Primary Source of Policy/Procedures Information.** For operators and FAA inspectors, the primary source of documents and information on RVSM operator and aircraft approval is the **RVSM Documentation Webpage**. Applicable regulations, guidance and related operations and airworthiness policy documents are published there. The FAA RVSM Homepage is at: [www.faa.gov/ats/ato/rvsm1.htm](http://www.faa.gov/ats/ato/rvsm1.htm). The RVSM Documentation Webpage is linked to the Homepage.

**Regulations.** Part 91 Section 91.180 regulates RVSM operations within the U.S. Part 91 Section 91.706 regulates RVSM operations for U.S. operators outside the U.S. Part 91 Appendix G contains standards for aircraft RVSM compliance, RVSM maintenance and operations.

**Application Checklist.** The “Getting Started” section of the RVSM Documentation Webpage contains an “RVSM Approval Checklist” that outlines the content of an operator RVSM application. It provides references to applicable documents including Guidance 91-RVSM references contained in this application.

**Tailoring the Application for Initial RVSM Authority.** The initial operator application should be tailored to address the area(s) of operations where the operator intends to initially conduct RVSM operations. The initial application could be tailored to address:

- Domestic U.S. RVSM Operations Only
- North American RVSM Operations (U.S., Canada, Mexico)
- Domestic U.S. RVSM Operations, Oceanic Operations and Operations in Other Continental Airspace (e.g., Europe, Middle East, South America)

**Starting RVSM Operations in Areas New-to-the Operator.** Under “Documents Applicable to All RVSM Approvals” on the RVSM Documentation Webpage, the document “Starting Operations in New-to-the Operator Area of Operations” explains policies for this situation. Basic principles are:

- Operators holding Operations Specifications (OpSpecs) must add RVSM authority (OpSpecs paragraph B046) to the appropriate areas of operations in paragraph B050 (Authorized Areas of En Route Operations. Limitations and Provisions). In this situation, 91-RVSM paragraph 11d states that the application can be tailored to address only those items unique to the new area of operations.

**Starting RVSM Operations New-to-the Operator (continued).**

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- Part 91 operators are not required to obtain a revised Letter of Authorization (LOA) to start operations in a new-to-them area of operations, but are required by regulation to comply with policies and procedures applicable to the new area.

This example has been reviewed by specialists in the Flight Technologies and Procedures Division (AFS-400) and the Aircraft Maintenance Division (AFS-300) at FAA Headquarters in Washington. We believe it provides a useful aid for operators preparing material to submit to FAA Flight Standards District Offices (FSDO) and Certificate Management Offices (CMO).

For questions or comments on this Example Application or to the RVSM Documentation Webpage, please contact one of the following:

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# Airline XYZ's Application for RVSM Authority for Aircraft Type ABC

## SAMPLE COVER LETTER TO THE APPLICATION

Mr. Joe POI, FAA  
Principal Operations Inspector for XYZ Airlines  
POI's Office Number  
POI's Address  
City, State ZIP

Date:

Subject: Application for Approval of XYZ Airline's Reduced Vertical Separation Minimum (RVSM) Program for Aircraft Type ABC

References: Title 14, Code of Federal Regulations (14 CFR) Part 91 Section 91.180 (domestic U.S. operations) and 91.706 (RVSM operations outside the U.S.).

FAA "Guidance Material on the Approval of Operators/Aircraft for RVSM Operations", Change 2. (Guidance 91-RVSM) (2/10/04)

FAA Airworthiness Inspector's Handbook (FAA Order 8300.10), Vol. 2, Chap. 5 (Evaluate Operator's Application for Flight in Airspace Where RVSM Is Applied) (5/21/03)

FAA Air Transportation Operations Inspector Handbook, Air Transportation Handbook Bulletin (HBAT) 03-06 (RVSM Airspace) (9/8/03)

Dear Mr. POI:

Airline XYZ respectfully requests FAA approval to conduct flight operations in RVSM airspace at or above flight level (FL) 290 using aircraft type ABC. XYZ has tailored this application to gain authority to conduct RVSM operations in the following areas of operation:

- Domestic U.S. and Canada
- North Atlantic
- Europe

In support of this request, we have prepared the attached approval package. This document has been developed in accordance with the requirements of the referenced guidance material. In addition, it will satisfy FAA inspector requirements established in the FAA inspector handbooks cited above. This document will satisfy all requirements for issuance of approved Operations Specifications [FAR Part 121, 125, 135 operators] or Letter of Authorization (LOA) [FAR Part 91 operators] authorizing RVSM operations utilizing ABC type aircraft.

Your review and approval of our attached application for RVSM operations with aircraft ABC is requested. If you have any questions, or require any additional information, please contact our RVSM Project Lead (Mr. RVSM) at (999) 999-9999.

Sincerely,

Mr. Operator  
Officer's Title

# Airline XYZ's Application for RVSM Authority for Aircraft Type ABC

## SAMPLE OPERATOR APPLICATION FOR RVSM AUTHORITY

Airline XYZ Application For Authority to Operate in RVSM Airspace

Based On FAA "Guidance Material On The Approval Of Operators/Aircraft For RVSM Operations", Change 2 (2/10/04)

**Use of Reference Paragraphs:** in the application material that follows, Guidance 91-RVSM reference paragraphs on aircraft RVSM airworthiness documents, RVSM continued airworthiness (maintenance) and RVSM operations are addressed.

**FAA Airworthiness Inspector's Handbook References.** In Part 1 (**Aircraft Compliance With RVSM Standards**) and Part 2 (**Continued Airworthiness/Maintenance**) of the application, reference paragraphs are also cited from the **FAA Airworthiness Inspector's Handbook (FAA Order 8300.10), Volume 2, Chapter 5, Section 2.** The following paragraphs are referenced:

- Section 2 (Procedures), paragraph 5A (**Determination of Aircraft Compliance**) is referenced under "Aircraft Compliance With RVSM Standards".
- Section 2 (Procedures), paragraph 5B (**Evaluation and Approval of Operator's RVSM Maintenance Program**) is referenced under "Continued Airworthiness/Maintenance" paragraphs.

Note: in the FAA order, Section 1 of Chapter 5 provides policy background.

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# **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

## **Part 1 Requirement: Aircraft Compliance With RVSM Standards (RVSM Airworthiness Approval)**

### **Reference 1: 91-RVSM, paragraphs 9a and 9d.**

9a. General. Obtaining RVSM airworthiness approval is a 2 step process. First, the manufacturer or design organization develops the data package through which airworthiness approval should be sought, and submits the package to the appropriate Aircraft Certification Office (ACO) for approval. Once the ACO approves the data package, the operator applies the procedures defined in the package to obtain approval from the FSDO or CMO (as appropriate) to utilize its aircraft to conduct flight in RVSM airspace. Paragraph 9b specifically addresses the data package requirements.

9d. RVSM Airworthiness Approval. The approved data package should be used by the operator to demonstrate compliance with RVSM performance standards.

### **Reference 2: FAA Airworthiness Inspector's Handbook (FAA Order 8300.10), Vol. 2, Chapter 5, Section 2 (Procedures), Paragraph 5A (Determination of Aircraft Compliance).** Inspector will:

1. Determine if the aircraft meets the requirements of part 91, appendix G, section 2 and is RVSM-compliant.
2. Review the aircraft documentation to identify references to RVSM capability. For in-service aircraft, ensure that all required elements of the Aircraft Certification Office (ACO) approved data package through which RVSM airworthiness approval is sought have been applied. This data package may consist of Service Bulletins (SBs), Service Letters (SLs), or Supplemental Type Certificates (STCs). For in-production or new-production aircraft, either the aircraft Type Certificate Data Sheet (TCDS) or Airplane Flight Manual (AFM) will state RVSM compliance.
3. If sufficient documentation is available, a determination of compliance may be made entirely through the examination of documents and/or data. Physical inspection of an airframe may not be required.

**FAA Author's Note:** in the sample paragraph below, the reference to Aircraft Certification Office (ACO) approved documents for in-service aircraft could be Service Bulletins (SB), Service Letters, Supplemental Type Certificates (STC) or another form of ACO approved document. For aircraft manufactured RVSM-compliant, the reference could be the Airplane Flight Manual and/or the Type Certificate Data Sheet.

### **Airline XYZ Response**

Paragraph 9 of the Guidance Material (Airworthiness Approval) specifies the requirements for airworthiness approval of an RVSM data package. This requirement has been complied with by the aircraft manufacturer and is documented in Aircraft Type ABC Service Bulletin (SB) XXXX, dated X-XX-XX.

This SB meets the requirements for the manufacturer's data package, as specified in Paragraph 9 of the FAA "Guidance Material on the Approval of Operators/Aircraft for RVSM Operations", Change 2 (dated 2/10/04) and has been FAA-approved. Airline XYZ will meet the requirements of this SB.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

A copy of this SB is included as Appendix I. Airline XYZ has complied with this SB on our ABC aircraft in accordance with Airline XYZ Engineering Authorization (EA) 1-11111-11, dated X-XX-XX. A copy of this EA is included as Appendix II.

# Airline XYZ's Application for RVSM Authority for Aircraft Type ABC

## **Part 2 Requirements: Continued Airworthiness - Maintenance**

### **Part 2 Requirement: 91-RVSM Paragraph 10a.**

#### 10a. General:

(1) The integrity of the design features necessary to ensure that altimetry systems continue to meet RVSM standards should be verified by scheduled tests and/or inspections in conjunction with an approved maintenance program. The operator should review its maintenance procedures and address all aspects of continuing airworthiness which are affected by RVSM requirements.

(2) Each person or operator should demonstrate that adequate maintenance facilities are available to ensure continued compliance with the RVSM maintenance requirements.

**Reference 2: FAA Order 8300.10, Vol. 2, Chap 5, Section 2 (Procedures), paragraph 5B.** Review the RVSM maintenance program to ensure that it contains the following:

- 1. RVSM Critical Components and Structural Areas.** Identification of components considered to be RVSM critical and identification of structural areas noted as RVSM critical areas.
- 2. Responsible Office or Individual.** The name or title of the responsible person who will ensure that the aircraft is maintained in accordance with the approved program.
- 3. Personnel Training and Qualification.** The method the operator will use to ensure that all personnel performing maintenance on the RVSM system are properly trained, qualified, and knowledgeable of that specific system.
- 4. Crew Notification of Aircraft RVSM Status.** The method the operator will use to notify the crew if the aircraft has been restricted from RVSM but is airworthy for an intended flight.
- 5. Test Equipment.** The method the operator will use to ensure conformance to the RVSM maintenance standards, including the use of calibrated and appropriate test equipment and a quality assurance program for ensuring continuing accuracy and reliability of test equipment, especially when outsourced.
- 6. Parts and Component Eligibility.** The method the operator will use to verify that components and parts are eligible for installation in the RVSM system, as well as to prevent ineligible components or parts from being installed.
- 7. Return To Service.** The method the operator will use to return an aircraft to service after maintenance has been performed on an RVSM component/system or after the aircraft was determined to be non-compliant.
- 8. Maintenance and Inspection Procedures.** Periodic inspections, functional flight tests, and maintenance and inspection procedures with acceptable maintenance practices for ensuring continued compliance with the RVSM aircraft requirements.
  - These elements may be listed in detail or described by reference to an acceptable program that is identified and controlled by revision or issue number
  - The need for functional flight tests may be limited to only after repairs or modifications that are deemed to warrant such testing and may be accomplished through monitoring height-keeping performance
- 9. Instructions for Continued Airworthiness Contained in ACO Approved Data Package.** The maintenance requirements listed in Instructions for Continued Airworthiness (ICA) associated with any RVSM associated component or modification.
- 10. Any Other Requirements for Continued RVSM Compliance.** Any other maintenance

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

requirement that needs to be incorporated to ensure continued compliance with RVSM requirements.

### **Airline XYZ Response:**

Airline XYZ conducts operations as a flag air carrier in accordance with FAR 121. XYZ maintains its aircraft under an FAA-approved continuous airworthiness maintenance program in accordance with FAR 121 and FAR 43, and in accordance with FAA-approved Operations Specifications, Part D, "Aircraft Maintenance". FAA oversight of Airline XYZ's continuous airworthiness maintenance program and Operations Specifications is provided by the FAA, Flight Standards District Office (FSDO), FSDO Number ##.

Airline XYZ's approved maintenance program contains all the elements identified in FAA Order 8300.10, Volume 2, Chapter 5, Section 2, Paragraph 5B. A table citing the RVSM maintenance program elements identified in FAA Order 8300.10 and identifying the location of that element in Airline XYZ's maintenance program is provided in Appendix III.

Airline XYZ's current approved maintenance program contains the maintenance practices and requirements outlined in the ABC aircraft manufacturer and component manufacturer maintenance manuals.

In addition, Airline XYZ has revised the appropriate maintenance documents to incorporate the requirements of Aircraft Type ABC Service Bulletin XXXX, dated X-XX-XX.

Specific information related to Airline XYZ's maintenance procedures and continuous airworthiness maintenance for RVSM is contained in subsequent sections in this application.

Airline XYZ operates sufficient maintenance facilities for its ABC aircraft to ensure continued compliance with RVSM requirements. Airline XYZ's primary maintenance base is located at [Airport Name] Airport, in City, State. Additional maintenance support is provided by an extensive network of hangar and line maintenance at various stations throughout the Airline XYZ system.

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### **Part 2 Requirement: 91-RVSM Paragraph 10b.**

10b. Maintenance Program Approval Requirements: Each operator requesting RVSM operational approval should submit a maintenance and inspection program which includes any maintenance requirements defined in the approved data package (paragraph 9) as part of a continuous airworthiness maintenance program approval or an equivalent program approved by the FAA. Although air carriers operating aircraft subject to a continuous airworthiness maintenance program do not have to comply with the provisions of FAR Section 91.411 pertaining to altimeter system and altitude reporting equipment test and inspections, an effective maintenance and inspection program will, typically, incorporate these provisions as a requirement for maintenance program approval.

**FAA Order 8300.10, Vol. 2, Chap 5, Section 2 (Procedures), paragraph 5B.** Review the RVSM maintenance program to ensure that it contains the following:

**9. Instructions for Continued Airworthiness Contained in the ACO Approved RVSM Data Package.** The maintenance requirements listed in Instructions for Continued Airworthiness (ICA) associated with any RVSM associated component or modification.

### **Airline XYZ Response:**

The following pages list aircraft components required for RVSM, together with scheduled maintenance requirements for that equipment. A copy of Aircraft Type ABC Service Bulletin (SB) XXXX, dated 1-1-11, which outlines maintenance requirements for RVSM equipment, is included as Appendix I.

The Aircraft Type ABC Maintenance Manual has been updated with the Instructions for Continued Airworthiness (ICA) contained in Aircraft Type ABC Service Bulletin XXXX. The ICA require:

- Verification every 12 months that corner markings identifying the RVSM Critical Region be discernible and in good condition and if necessary, the markings replaced or reworked.
- Replacement of Pitot-static probe type XX every three years
- At 24 month intervals, an accuracy test of the altimeter system, as described in Section XX of the Service Bulletin.
- At 24 month intervals, an in-flight check of the automatic altitude control system be performed, as described in Section XX of the SB .

See draft revisions to the Maintenance Manual in the appendices.

- No scheduled maintenance requirements are outlined for the altitude alert module.
- Periodic checks of the ATC/MODE C Transponder shall be performed per FAR 43, Appendix F, as required by FAR 91.413, at 24 month intervals. Airline XYZ conducts a functional check of the Air Traffic Control System (ATC) at intervals not to exceed 24 months per routine operation 1234.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 2 Requirement: 91-RVSM Paragraph 10c.**

10c. Maintenance Documents Requirements: The following items should be reviewed as appropriate for RVSM maintenance approval:

- (1) Maintenance Manuals. (MM)
- (2) Structural Repair Manuals. (SRM)
- (3) Standards Practices Manuals.
- (4) Illustrated Parts Catalogs. (IPC)
- (5) Maintenance Schedule.
- (6) MMEL/MEL.

**FAA Order 8300.10, Vol. 2, Chap 5, Section 2 (Procedures), paragraph 5B.** Review the RVSM maintenance program to ensure that it contains the following:

- 1. RVSM Critical Components and Structural Areas.** Identification of components considered to be RVSM critical and identification of structural areas noted as RVSM critical areas.
- 2. Responsible Office or Individual.** The name or title of the responsible person who will ensure that the aircraft is maintained in accordance with the approved program.

### **Airline XYZ Response:**

The Aircraft Type ABC Maintenance Manual will be revised to incorporate Aircraft Type ABC Service Bulletin XX required ICA's. Revised pages are included in the Part 4 Appendix X..

Airline XYZ will revise the Aircraft ABC SRM to identify the area around the pitot-static probes as RVSM-critical, and to require the Airline XYZ Structures Engineer to be contacted for specific repair instructions in this area. A draft SRM revision is enclosed.

Airline XYZ's Standard Practice Manual will be revised in accordance with the enclosed draft revision. This manual will outline Airline XYZ's standard practices for the necessary RVSM maintenance requirements.

Airline XYZ will revise the aircraft ABC IPC in accordance with Airline XYZ's Engineering Authorization (EA) 22222 (draft copy enclosed) to identify RVSM-critical equipment. This equipment will also be identified as required inspection items (RIIs), requiring work on this equipment to be subject to a "buy-back" inspection per FAR 121.369 and FAR 121.371.

No change to the aircraft ABC maintenance schedule is required for RVSM. Please refer to Page 3-1 for additional information on the required maintenance schedules (reference Interim Guidance Material, Paragraph 10.b: "Continued Airworthiness (Maintenance Requirements) - Maintenance Program Approval Requirements").

Please refer to application page XX for the discussion of Minimum Equipment List changes.

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### **Part 2 Requirement: 91-RVSM Paragraph 10d. Maintenance Practices:**

(1) If the operator is subject to an ongoing approved maintenance program, that program should contain the maintenance practices outlined in the applicable aircraft and component manufacturer's maintenance manuals for each aircraft type. The following items should be reviewed for compliance for RVSM approval and if the operator is not subject to an approved maintenance program the following items should be followed:

(i) All RVSM equipment should be maintained in accordance with the component manufacturer's maintenance requirements and the performance requirements outlined in the approved data package.

(ii) Any modification, repair, or design change which in any way alters the initial RVSM approval, should be subject to a design review by persons approved by the approving authority.

(iii) Any maintenance practices which may affect the continuing RVSM approval integrity, e.g., the alignment of pitot/static probes, dents, or deformation around static plates, should be referred to the approving authority or persons delegated by the authority.

(iv) Built-in Test Equipment (BITE) testing is not an acceptable basis for system calibrations, (unless it is shown to be acceptable by the airframe manufacturer with the approval authorities agreement) and should only be used for fault isolation and troubleshooting purposes.

(v) Some aircraft manufacturers have determined that the removal and replacement of components utilizing quick disconnects and associated fittings, when properly connected, will not require a leak check. While this approach may allow the aircraft to meet static system certification standards when properly connected, it does not always ensure the integrity of the fittings and connectors, nor does it confirm system integrity during component replacement and reconnections. Therefore, a system leak check or visual inspection should be accomplished any time a quick disconnect static line is broken.

(vi) Airframe and static systems should be maintained in accordance with the airframe manufacturer's inspection standards and procedures.

(vii) To ensure the proper maintenance of airframe geometry for proper surface contours and the mitigation of altimetry system error, surface measurements or skin waviness checks should be made if needed to ensure adherence to the airframe manufacturer's RVSM tolerances. These tests and inspections should be performed as established by the airframe manufacturer. These checks should also be performed following repairs, or alternations having an effect of airframe surface and airflow.

(viii) The maintenance and inspection program for the autopilot should ensure continued accuracy and integrity of the automatic altitude control system to meet the height-keeping standards for RVSM operations. This requirement will typically be satisfied with equipment inspections and serviceability checks.

(ix) Where the performance of existing equipment is demonstrated as being satisfactory for RVSM approval, it should be verified that the existing maintenance practices are also consistent with continued RVSM approval integrity. Examples of these are:

(A) Altitude alert.

(B) Automatic altitude control system.

(C) ATC altitude reporting equipment (transponders FAR 91.215).

(D) Altimetry systems.

**FAA Order 8300.10, Vol. 2, Chap 5, Section 2 (Procedures), paragraph 5B.** Review the RVSM

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maintenance program to ensure that it contains the following:

- 1. RVSM Critical Components and Structural Areas.** Identification of components considered to be RVSM critical and identification of structural areas noted as RVSM critical areas.
- 4. Crew Notification of Aircraft RVSM Status.** The method the operator will use to notify the crew if the aircraft has been restricted from RVSM but is airworthy for an intended flight.
- 6. Parts and Component Eligibility.** The method the operator will use to verify that components and parts are eligible for installation in the RVSM system, as well as to prevent ineligible components or parts from being installed.
- 7. Return To Service.** The method the operator will use to return an aircraft to service after maintenance has been performed on an RVSM component/system or after the aircraft was determined to be non-compliant.
- 8. Maintenance and Inspection Procedures.** Periodic inspections, functional flight tests, and maintenance and inspection procedures with acceptable maintenance practices for ensuring continued compliance with the RVSM aircraft requirements.
  - o These elements may be listed in detail or described by reference to an acceptable program that is identified and controlled by revision or issue number
  - o The need for functional flight tests may be limited to only after repairs or modifications that are deemed to warrant such testing and may be accomplished through monitoring height-keeping performance
- 9. Instructions for Continued Airworthiness.** The maintenance requirements listed in Instructions for Continued Airworthiness (ICA) associated with any RVSM associated component or modification.

### **Airline XYZ Response:**

The Continued Airworthiness program elements identified in 91-RVSM paragraph 10d and FAA Order 8300.10 have been verified as part of Airline XYZ's approved program. Aircraft Type ABC Service Bulletin XX ICA requirements are addressed in draft manual revisions shown in Appendices XX, XX and XX.

All RVSM equipment will be identified in the IPC as RVSM-critical, and will be identified as required inspection items, requiring work on this equipment to be subject to a "buy-back" inspection per FAR 121.369 and FAR 121.371. Please refer to Page 4-1 of this application for details on this subject (reference Interim Guidance Material, Paragraph 10.c: "Continued Airworthiness (Maintenance Requirements) - Maintenance Documents Requirements").

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### **Part 2 Requirement: 91-RVSM Paragraph 10e.**

**10e. Maintenance Practices for Noncompliant Aircraft:** Those aircraft positively identified as exhibiting height-keeping performance errors which require investigation as specified in paragraph 11I(1) should not be operated in airspace where RVSM is applied until the following actions have been taken:

- (1) The failure or malfunction is confirmed and isolated by maintenance action and,
- (2) Corrective action is carried out as required to comply with paragraph 9b(5)(iv)(F) and verified to ensure RVSM approval integrity.

**FAA Order 8300.10, Vol. 2, Chap 5, Section 2 (Procedures), paragraph 5B.** Review the RVSM maintenance program to ensure that it contains the following:

**7. Return To Service.** The method the operator will use to return an aircraft to service after maintenance has been performed on an RVSM component/system or after the aircraft was determined to be non-compliant.

### **Airline XYZ Response:**

See the draft Standard Practice manual revision in Appendix XX that outlines responsibilities for RVSM. This manual details the requirements for noncompliant aircraft, including notification of Airline XYZ's Maintenance Coordination Center (MCC) and aircraft ABC Fleet Team. The MCC and fleet team will coordinate appropriate action, including:

- adding flight plan remarks to prevent aircraft operation in RVSM airspace until corrective action is accomplished;
- implementing corrective action, and ;
- if required, advising Airline XYZ's FAA Liaison section to report the height-keeping performance error to FAA within 72 hours, along with initial analysis of causal factors and measures to prevent further events (refer to Page 23-1 for additional information)

A draft copy of this manual is enclosed in Appendix XX of this application (reference Interim Guidance Material, Paragraph 10.c: "Continued Airworthiness (Maintenance Requirements) - Maintenance Documents Requirements").

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### **Part 2 Requirement: 91-RVSM Paragraph 10f**

**10f. Maintenance Training Requirements:** It is expected that new training requirements will be introduced by the RVSM approval processes. Areas that may need to be highlighted for initial and recurrent training of shop and line personnel are:

- (1) Aircraft geometric inspection techniques.
- (2) Test equipment calibration/usage techniques.
- (3) Any special documentation or procedures introduced by RVSM approval.

**FAA Order 8300.10, Vol. 2, Chap 5, Section 2 (Procedures), paragraph 5B.** Review the RVSM maintenance program to ensure that it contains the following:

**3. Personnel Training and Qualification.** The method the operator will use to ensure that all personnel performing maintenance on the RVSM system are properly trained, qualified, and knowledgeable of that specific system.

### **Airline XYZ Response:**

Airline XYZ's initial maintenance training will be revised to: highlight the importance of the area surrounding the pitot-static probe; emphasize that any defects in the fuselage skin around the probe can affect the accuracy of the altimetry system, and; require inspection of the area around the probe whenever a probe is replaced. Additionally, general RVSM awareness information will be added to the training.

Airline XYZ will conduct recurrent maintenance training at 12-month intervals. The above information for initial training will also be included in a Maintenance Bulletin for all mechanics who have completed initial training prior to the aforementioned initial training program revision.

Test equipment calibration/usage techniques are currently taught by Avionics coordinators in the Avionics Maintenance area, as "on-the-job training" (OJT). We believe our current training of test equipment calibration/usage techniques is sufficient, and no changes are warranted.

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### **Part 2 Requirement: 91-RVSM Paragraph 10g.**

#### **10g. Test Equipment**

(1) General: The test equipment should have the capability to demonstrate continuing compliance with all the parameters established for RVSM approval in the initial data package or as approved by the approving authority.

(2) Standards: Test equipment should be calibrated utilizing reference standards whose calibration is certified as being traceable to the national standard. It should be calibrated at periodic intervals as agreed by the approving authority. The approved maintenance program should encompass an effective quality control program which includes the following:

(i) Definition of required test equipment accuracy.

(ii) Regular calibrations of test equipment traceable to a master in-house standard. Determination of calibration interval should be a function of the stability of the test equipment. The calibration interval should be established on the basis of historical data so that degradation is small in relation to the required accuracy.

(iii) Regular audits of calibration facilities both in-house and outside.

(iv) Adherence to acceptable shop and line maintenance practices.

(v) Procedures for controlling operator errors and unusual environmental conditions which may affect calibration accuracy.

**FAA Order 8300.10, Vol. 2, Chap 5, Section 2 (Procedures), paragraph 5B.** Review the RVSM maintenance program to ensure that it contains the following:

5. **Test Equipment.** The method the operator will use to ensure conformance to the RVSM maintenance standards, including the use of calibrated and appropriate test equipment and a quality assurance program for ensuring continuing accuracy and reliability of test equipment, especially when outsourced.

#### **Airline XYZ Response:**

The calibration and accuracy of test equipment used in the Avionics instruments shop are verified in accordance with the requirements outlined in the Component Maintenance Manual and by the equipment manufacturers. The calibration of individual components is performed at periodic intervals, and can be traced to the national standard.

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## **Part 3 Requirements: Operational Approval**

### **Part 3 Requirement: 91-RVSM Paragraph 11b.**

11b. General. The FAA should ensure that each operator can maintain high levels of height-keeping performance.

\* (2) The FAA should be satisfied that operational programs are adequate. Flightcrew training/pilot knowledge as well as operations manuals should be evaluated. Approval should be granted for each individual operator.

(3) Approval should be granted for each individual aircraft group and each individual aircraft to be used by the operator in RVSM operations. Each aircraft should receive airworthiness approval in accordance with paragraph 9 prior to being approved for use by the operator. (Aircraft group is defined in paragraph 9b(2)).

(4) Aircraft Approval for Worldwide RVSM Operations. Aircraft that have been approved for RVSM can be used in RVSM operations worldwide. This includes RVSM operation in continental areas such as Europe and the U.S.. Aircraft equipage and altitude-keeping performance requirements were developed using the highest density traffic counts in the world so that aircraft could receive one-time approval for worldwide operations.

(5) Operational Approval for New RVSM Areas of operation. Operators that are starting RVSM operations in an RVSM area of operations that is new to them should ensure that their RVSM programs incorporate any operations or continued airworthiness requirements unique to the new area of operations. (See Paragraph 11g for information on the form of RVSM authority for new areas of operations).

### **Airline XYZ Response:**

This application is submitted for approval of RVSM operations with the Aircraft Type ABC aircraft only. As detailed on Page XX of this application, and in the Aircraft ABC Service Bulletin contained in Appendix III, the aircraft has been found to meet the airworthiness requirements contained in Paragraph 9 of the FAA Interim Guidance Material.

Additionally, Airline XYZ' various operational programs are scrutinized by the FAA, Flight Standards District Office (FSDO), FSDO number ##. Flightcrew and aircraft dispatcher training programs are FAA-approved. Operations manuals are accepted.

Specific information relating to operational programs, manuals, and training for RVSM can be found in the subsequent sections of this application. Please refer to the Table of Contents in this application for a listing of the discrete elements of this application.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: 91-RVSM Paragraph 11c**

11c. Pre-application Meeting: A pre-application meeting should be scheduled between the operator and the CMO or FSDO. The intent of this meeting is to inform the operator of FAA expectations in regard to approval to operate in a RVSM environment. The content of the operator RVSM application, FAA review and evaluation of the application, validation flight requirements, and conditions for removal of RVSM authority should be basic items of discussion.

### **Airline XYZ Response:**

Airline XYZ has arranged for a preapplication meeting with the FAA/Flight Standards District Office, FSDO Number ##, to be conducted on [date], at [location]. The purpose of this meeting will be to review Airline XYZ's proposed RVSM application for Aircraft type ABC aircraft.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: 91-RVSM Paragraph 11d**

\* 11d. Content of Operator RVSM Application. The following paragraphs describe the material which an operator applying for RVSM authority should provide to the FAA for review and evaluation at least 60 days prior to the intended start of RVSM operations. **Part 121, 125, and 135 operators applying for authority to conduct operations in an RVSM area of operations that is new to them may modify the application content to address those items unique to the new area of operations.** Part 91 operators, and Part 125 operators holding a deviation that allows operation under Part 91 that have obtained an LOA for RVSM operations are not required to obtain a separate LOA for individual areas of operation where RVSM is applied. (See Paragraph 11g).

### **Airline XYZ Response**

Airline XYZ intends to start RVSM operations in the Domestic U.S., Canada, the North Atlantic and Europe on XX-XX-XX. The following paragraphs have been developed to obtain Operations Specifications approval to conduct RVSM operations in those areas with Aircraft Type ABC.

In the future Airline XYZ may begin RVSM operations in the Pacific Ocean. The appropriate operations manuals will be updated to address operational policies and procedures unique to the Pacific area of operations at that time.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: Content of Application, Paragraph 11d(1)**

\* 11d(1) Airworthiness Documents. Sufficient documentation should be available to show that aircraft comply with RVSM standards.

\* (i) In-service aircraft. Documents that contain the inspections and/or modifications that are required to make an in-service aircraft RVSM compliant can take the form of approved Service Bulletins, Aircraft Service Changes, Supplemental Type Certificates or any other format the FAA finds acceptable. Maintenance records document completion of required inspections and/or modifications.

(ii) In-production or New-production aircraft. For such aircraft, statements of eligibility to conduct RVSM operations can be included in the Airplane Flight Manual. Also, Type Certification Data Sheets can be used to show RVSM eligibility by describing RVSM related avionics configurations and continued airworthiness criteria or providing reference to FAA approved documentation in the form of a report. Eligibility can be shown in any other format found acceptable to the FAA.

### **Airline XYZ Response:**

See Part 1 of this application and the related appendices.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: Content of Application, Paragraph 11d(2)**

11d(2) Description of Aircraft Equipment. The applicant should provide a configuration list which details all components and equipment relevant to RVSM operations. (Paragraph 8 discusses equipment for RVSM operations).

### **Airline XYZ Response:**

The following pages list aircraft components required for RVSM, together with scheduled maintenance requirements for that equipment.

This equipment will be identified in the IPC as RVSM-critical components. Additionally, this equipment will be identified as "Required Inspection Items" (RIIs), and will be subject to "buy-back" inspection procedures outlined in FAR 121.369 and FAR 121.371. Please refer to Page XX for additional information on the IPC and RIIs (reference Application Part 2, 91-RVSM Paragraph 10c).

Aircraft Type ABC SB XXXX requires replacement of pitot-static probes that have been in service for more than three (3) years. Airline XYZ's aircraft ABC Fleet Team will monitor this requirement, and ensure that pitot-static tubes that have been in service for three or more years are replaced before the aircraft is operated in RVSM operations. However, we anticipate that certification activities currently underway by Pitotstatic Company (the manufacturer of the probes) will result in a plated probe that will have unlimited service life, and will not require replacement after three years of service. We plan to install these probes on our ABC aircraft when the probes are available.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: Content of Application, Paragraph 11d(3)**

\* 11d(3) Operations Training Programs and Operating Practices and Procedures. Practices and procedures in the following areas should be standardized using the guidelines of Appendix 4: flight planning, preflight procedures at the aircraft for each flight, procedures prior to RVSM airspace entry, inflight procedures, and flightcrew training procedures. Appendix 4, paragraph 7 contains special emphasis items for flightcrew training. Also, pilots and, where applicable, dispatchers should be knowledgeable on contingency and other procedures unique to specific areas of operation. (See Appendix 4 for sources of information on such procedures. Also, Appendix 5 contains guidance on oceanic contingency procedures).

(i) 14 CFR Part 121, 125 and 135 Operators. Such operators should submit training syllabi and other appropriate material to the FAA to show that the operating practices and procedures and training items related to RVSM operations are incorporated in initial and, where warranted, recurrent training programs. (Training for dispatchers should be included, where appropriate).

\* (ii) 14 CFR Part 91 Operators and Part 125 Operators holding a deviation that allows operation under Part 91. These operators should show the FAA that pilot knowledge of RVSM operating practices and procedures will be adequate to warrant granting of approval to conduct RVSM operations. The following are acceptable means for the operator to show the FAA that its pilots will have adequate knowledge of the RVSM operating practices and procedures: the FAA may accept 14 CFR part 142 training center certificates without further evaluation; may accept certificates documenting completion of a course of instruction on RVSM policy and procedures; may accept an operator's in-house training program or may evaluate a training course prior to accepting a training certificate.

### **Airline XYZ Response:**

Airline XYZ has reviewed the following material and incorporated it into training programs:

- 91-RVSM Appendix 4 (Contains basic policy/procedures for RVSM operations)
- 91-RVSM Appendix 4, paragraph 7 (Special Emphasis Items for Flightcrew Training)
- 91-RVSM Appendix 5 (Contingency procedures for oceanic airspace)
- Area of Operations Specific Information and Operational Policies/Procedures on the FAA RVSM Documentation Webpage

Initial training: RVSM will be introduced to Airline XYZ aircraft dispatchers and flight crewmembers during the 2004 recurrent training classes, commencing in January 2004 using the enclosed training syllabi. These same syllabi will be added to, and become a standard part of, the initial flight training for flight crewmembers, and the international initial class curriculum for new aircraft dispatchers.

Recurrent Training: In 2004 and subsequent recurrent classes, a review of RVSM operations and any new or changed procedures will become a standard part of the curriculum.

Our operating practices and procedures will be standardized in accordance with the enclosed syllabi.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: Content of Application Paragraph 11d(4)**

\* 11d(4) Operations Manuals and Checklists. Manuals and checklists should be submitted for FAA review as part of the application process. Generally operations manuals are accepted by the FAA. The FAA generally approves only those documents that are required by regulation to be approved. The appropriate manuals and checklists should be revised to include information/guidance on standard operating procedures detailed in Appendix 4 and in the appendices that address area of operations unique procedures (e.g., Appendix 5). Appropriate manuals should include a statement of the airspeeds, altitudes and weights considered in RVSM aircraft approval to include identification of any operations restrictions established for that aircraft group (see paragraph 7c(4)(iii)).

### **Airline XYZ Response:**

Airline XYZ has reviewed the following material and incorporated it, as necessary, into pilot and dispatcher manuals:

- 91-RVSM Appendix 4 (Contains basic policy/procedures for RVSM operations)
- 91-RVSM Appendix 4, paragraph 7 (Special Emphasis Items for Flightcrew Training)
- 91-RVSM Appendix 5 (Contingency procedures for oceanic airspace)
- Area of Operations Specific Information and Operational Policies/Procedures on the FAA RVSM Documentation Webpage

Four (4) manuals will need to be updated with information about RVSM: the Flight Department Manual (FDM), the Dispatcher's Training Manual (DTM), the Airline XYZ Airway Manual (AM), and the Aircraft ABC Pilot's Manual (PM).

Airline XYZ has reviewed the "Area of Operations Specific Information on the FAA RVSM Documentation Webpage and RVSM policies and procedures unique to the Domestic U.S., Canada, the North Atlantic and Europe have been incorporated in the appropriate manuals.

Flight Department Manual: The operations section will be revised to include background and general guidance information for RVSM operations. Additionally, there exists a separate section within the FDM for aircraft dispatchers, called the dispatcher's supplement (DS). In this section, a brief description of RVSM will be inserted, following the general outlines of the aircraft dispatcher's RVSM training syllabus.

Dispatcher's Training Manual: In this new manual, the description of the international initial and recurrent classes will include references to RVSM training, down to the level of detail on aircraft dispatcher's RVSM training syllabus, if appropriate.

Airline XYZ Airway Manual: The route information section will be revised to include specific RVSM operational procedures applicable to Domestic U.S., Canada, the North Atlantic and Europe.

Aircraft ABC Pilot's Manual: The procedures section will be revised to include appropriate contingency procedures outlined on the flight crewmembers initial training syllabus.

Note: Copies of the aircraft dispatchers and flight crewmember RVSM training syllabi referred to on this page can be found in Appendices XX of this application.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: Content of Application, Paragraph 11d(5)**

11d(5) Past Performance. An operating history should be included in the application. The applicant should show any events or incidents related to poor height keeping performance which may indicate weaknesses in training, procedures, maintenance, or the aircraft group intended to be used.

### **Airline XYZ Response:**

The flightcrew operating report system was reviewed for the previous 12 months. No incidents of height-keeping performance errors were noted for the aircraft ABC fleet.

A review of the Equipment Removal History will be conducted for the previous 12 months, to determine if any failures have been detected on RVSM equipment. This review will examine the RVSM equipment identified on Page 12-1 of this application (reference Interim Guidance Material, Paragraph 11.d.(2): "Operational Approval - Content of Operator RVSM Application - Aircraft Equipment").

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: Content of Application, Paragraph 11d(6)**

\* 11d(6) Minimum Equipment List. The following applies to operators that conduct operations under a minimum equipment list (MEL). An MEL, adopted from the master minimum equipment list (MMEL), should include items pertinent to operating in RVSM airspace.

### **Airline XYZ Response:**

Airline XYZ will modify its MEL to conform to Global Change 59 posted on the RVSM Documentation Webpage.

The current Airline XYZ aircraft ABC Minimum Equipment List (MEL) requires the primary altimeters, flight control computer, and altitude hold systems to be operational for dispatch. The Airline XYZ aircraft ABC MEL will be revised to require the Altitude Alert System (AAS) to be operative for flights in RVSM airspace.

The draft revision is in Appendix XX.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: Content of Application, Paragraph 11d(7)**

11d(7) Maintenance. The operator should submit a maintenance program for approval in accordance with paragraph 10 at the time the operator applies for operational approval.

### **Airline XYZ Response:**

See Part 2 of this application (Continued Airworthiness – Maintenance) and the related appendices.

## Airline XYZ's Application for RVSM Authority for Aircraft Type ABC

### **Part 3 Requirement: Content of Application, Paragraph 11d(8)**

\* 11d(8) Plan for participation in RVSM Monitoring Programs. The operator should provide a plan for participation in the RVSM monitoring program. This program should normally entail a check of at least a portion of the operator's aircraft by an independent height-monitoring system. Guidance on monitoring programs for specific areas of operation can be found on the FAA RVSM Documentation website. Access the RVSM Homepage ([www.faa.gov/ats/ato/rvsm1.htm](http://www.faa.gov/ats/ato/rvsm1.htm)) and then click on "RVSM Documentation". (See paragraph 11h for further discussion of RVSM monitoring programs).

### **Airline XYZ Response:**

**FAA Author's Note:** monitoring options and dates are for example purposes only.

**Sources of Information.** Airline XYZ has reviewed the "Monitoring Requirements and Procedures" section of the FAA RVSM Documentation Webpage. We reviewed:

- Paragraph 1a: "Monitoring Requirements" instructions
- Paragraph 1b: "Monitoring Procedures for US Operators" document
- Paragraph 2: CSSI and ARINC contacts for GPS-based Monitoring Units (GMU)
- Paragraphs 3, 6 and 10: Monitoring Requirements Charts for the North America/Domestic US, North Atlantic and Europe.

**Monitoring Requirements.** Airline XYZ reviewed the "Minimum Monitoring Requirements" charts for the Domestic U.S./North America, the North/West Atlantic and Europe. Aircraft Type ABC falls into Category 1 on all three charts. Of the three charts, the European chart requires the highest number of aircraft to be monitored. It requires "10% or a minimum of 2 airframes (whichever is greater)" to be monitored. Airline has 40 Aircraft Type ABC aircraft. The minimum monitoring requirement that will meet the requirement of all three charts is **four** airframes.

**Scheduling.** The North Atlantic and European charts require that monitoring be completed within six months of the operator being granted RVSM authority (operational approval). The Domestic U.S. chart requires that monitoring requirements be completed within 6 months of operational approval being granted or 6 months after the start of North American RVSM operations, whichever occurs later.

Airline XYZ plans to complete all requirements to be issued Operations Specification paragraphs B046 and D092 on December 20, 2004 and start operations to Europe on Jan 10, 2005. We have contracted with (ARINC or CSSI) to have two airframes monitored with a GPS-based Monitoring Unit (GMU) in February 2005. We will plan for two additional airframes to overfly a Height Monitoring Unit (HMU) in Canada, the U.K or Europe in March 2005.

**Monitoring Procedures.** In accordance with "Monitoring Procedures for U.S. Operators" on the RVSM Documentation Webpage, Airline XYZ:

1. Completed the "US Operator Application for RVSM Monitoring" in Appendix 1 of "Monitoring Procedures for U.S. Operators" document

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

2. Faxed it to the "US Operator/Aircraft RVSM Monitoring Coordinator" at the FAA Technical Center. Also, faxed a copy to the (ARINC or CSSI) GPS-based Monitoring Support Contractor.
3. Reviewed Appendix 2 (GMS Procedures) and will monitor two aircraft with the GMS in accordance with the guidance provided.
4. Reviewed Appendix 4 (Basic Monitoring Procedures for Europe: HMU's and GMU's) and will monitor two aircraft with a European HMU in accordance with the guidance provided.

# Airline XYZ's Application for RVSM Authority for Aircraft Type ABC

## **Part 3 Requirement: 91-RVSM Paragraph 11e**

### 11e. FAA Review and Evaluation of Applications.

(1) Once the application has been submitted, the FAA will begin the process of review and evaluation. If the content of the application is insufficient, the FAA will request additional information from the operator.

(2) When all the airworthiness and operational requirements of the application are met, the authority will proceed with the approval process.

### **Airline XYZ Response:**

Airline XYZ requests review, evaluation, and approval of this application for aircraft ABC RVSM operations.

Airline XYZ believes the content of this application is sufficient. However, if additional information is requested from FAA, Airline XYZ will provide it in a timely manner.

Airline XYZ RVSM Points of Contact are:

### **Airline XYZ RVSM Coordinators**

NAME	TITLE	Phone Number
NAME	TITLE	Phone Number

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: 91-RVSM Paragraph 11f**

\* 11f. Validation Flight(s) for Part 91, Part 121, Part 125 and 135 operators. In some cases, the review of the RVSM application and programs may suffice for validation purposes. However, the final step of the approval process may be the completion of a validation flight. The FAA may accompany the operator on a flight through airspace where RVSM is applied to verify that operations and maintenance procedures and practices are applied effectively. If the performance is adequate, operational approval for RVSM airspace should be granted. If performance is not adequate, then approval should be delayed.

### **Airline XYZ Response:**

Airline XYZ believes that the FAA review of Airline XYZ RVSM program documentation should suffice to justify the issuance of Operations Specifications (OpSpecs) paragraph B046 and D092. Airline XYZ does not believe an FAA observed validation flight is necessary for the following reasons:

- Airline XYZ has provided adequate documentation to show that it is capable to operate and maintain ABC type aircraft in RVSM operations. Documentation includes:
  1. Airline XYZ Application for Authority To Conduct RVSM Operations
  2. Documentation of Airline XYZ, Aircraft Type ABC compliance with RVSM standards
  3. RVSM required revisions to continued airworthiness programs and manuals
  4. RVSM required revisions to operations programs and manuals
  5. Airline XYZ commitment to complete the requirements of the RVSM monitoring program
- Airline XYZ operates in accordance with an FAA-approved continuous airworthiness maintenance program in accordance with FAR 121 and FAR 43, and in accordance with FAA-approved Operations Specifications, Part D, "Aircraft Maintenance"
- Airline XYZ has operated and maintained ABC aircraft since [date];
- Airline XYZ's crew training and operational programs are FAA-approved, and;
- A review of the Airline XYZ flightcrew operating report system for the previous 12 months revealed no height-keeping performance errors.

Accordingly, we do not believe a validation flight is necessary.

If FAA requires a validation flight, we propose to accomplish such a flight in conjunction with a scheduled Airline XYZ revenue operation (i.e., a revenue validation flight).

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: 91-RVSM Paragraph 11g**

#### 11g. Form of Authorizing Documents.

(1) 14 CFR Part 121, Part 125, and Part 135 Operators. Approval to operate in RVSM airspace should be granted through the issuance of an operations specifications paragraph from Part B (En route Authorizations, Limitation, and Procedures) and Part D (Aircraft Maintenance). Each aircraft type group for which the operator is granted authority should be listed in OpSpecs. Approval to conduct RVSM operations in an RVSM area of operations that is new to the operator should be granted by adding the part B RVSM OpSpecs paragraph number to the appropriate area of operations in the Part B paragraph: "Authorized Areas of En Route Operation. Limitations and Provisions".

\* (2) 14 CFR Part 91 Operators and Part 125 operators holding a deviation to operate under Part 91. Operators that conduct operations under Part 91 should be issued an initial letter of authorization (LOA) when the initial approval process has been completed. Part 91 operators are not required to obtain a new or amended LOA to operate in individual areas of operation where RVSM is implemented. For example, an operator that has obtained an LOA and is conducting RVSM operations in the North Atlantic is not required to obtain another LOA to conduct RVSM operations in the domestic United States. LOA's have a 24-month validity period.

### **Airline XYZ Response:**

Airline XYZ requests that Operations Specification paragraphs be issued to provide authority for Airline XYZ to conduct RVSM operations using Aircraft Type ABC in North America (U.S. and Canada), the North Atlantic and Europe. Airline XYZ requests the following OpSpecs action:

- B046 (Operations in RVSM Airspace): initial issue.
- D092 (Maintenance Program Authorization for Airplanes Used for Operations in Designated RVSM Airspace): initial issue.
- B050 (Authorized Areas of En Route Operation. Limitations and Provisions): update to add B046 RVSM authority for the appropriate U.S., Canadian, North Atlantic and European areas of operation.

Note that paragraph 11.g.(2) above relates to Part 91 operators and does not apply to Airline XYZ.

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: 91-RVSM Paragraph 11h**

\* 11h. RVSM Monitoring Programs. A program to monitor or verify aircraft height-keeping performance is considered a necessary element of RVSM implementation. RVSM monitoring programs have the primary objective of observing and evaluating aircraft height-keeping performance to gain confidence that airspace users are applying the airplane/operator approval process in an effective manner and that an equivalent level of safety will be maintained when RVSM is implemented. It is anticipated that the necessity for such programs may be diminished or possibly eliminated after confidence is gained that RVSM programs are working as planned.

\* *Note: A height-monitoring system based on Global Positioning Satellites or an earth-based system may fulfill this function. See "Monitoring Requirements and Procedures" on the RVSM Documentation Webpage.*

### **Airline XYZ Response:**

Please refer to the Airline XYZ response related to 91-RVSM paragraph 11.d.(8): "Plan for Participation in Monitoring Programs".

## **Airline XYZ's Application for RVSM Authority for Aircraft Type ABC**

### **Part 3 Requirement: 91-RVSM Paragraph 11i**

#### **11i. Conditions for Removal of RVSM Authority**

(1) The incidence of height-keeping errors which can be tolerated in an RVSM environment is very small. It is incumbent upon each operator to take immediate action to rectify the conditions which caused the error. The operator should also report the event to the FAA within 72 hours with initial analysis of causal factors and measures to prevent further events. The requirement for follow-up reports should be determined by the FAA. Errors which should be reported and investigated are: TVE equal to or greater than +300 ft (+90 m), ASE equal to or greater than +245 ft (+75 m), and AAD equal to or greater than +300 ft (+90 m).

(2) Height-keeping errors fall into two broad categories: errors caused by malfunction of aircraft equipment and operational errors. An operator which consistently commits errors of either variety may be required to forfeit authority for RVSM operations. If a problem is identified which is related to one specific aircraft type, then RVSM authority may be removed for the operator for that specific type.

(3) The operator should make an effective, timely response to each height-keeping error. The FAA may consider removing RVSM operational approval if the operator response to a height-keeping error is not effective or timely. The FAA should also consider the operator's past performance record in determining the action to be taken. If an operator shows a history of operational and/or airworthiness errors, then approval may be removed until the root causes of these errors are shown to be eliminated and RVSM programs and procedures are shown to be effective. The FAA will review each situation on a case-by-case basis.

### **Airline XYZ Response:**

An Airline XYZ Standard Practice manual section will outline the responsibilities for monitoring Airline XYZ's RVSM program. A draft copy of this manual is enclosed with Page 4-1 of this application (reference Guidance Material, Paragraph 10.c: "Continued Airworthiness (Maintenance Requirements) - Maintenance Documents Requirements").

A revision to the Airline XYZ Airway Manual will describe flight crewmember reporting functions for any suspected RVSM height-keeping performance errors. The Aircraft ABC program manager will be responsible for monitoring the flight crew operating report system, and notifying appropriate departments (Aircraft ABC Fleet Team, Maintenance Coordination Center (MCC), etc.) of any height-keeping errors. The MCC and fleet team will coordinate appropriate action, including:

- adding flight plan remarks to prevent aircraft operation in RVSM airspace until corrective action is accomplished;
- implementing corrective action, and ;
- advising Airline XYZ's FAA Liaison section to report the height-keeping performance error to FAA within 72 hours, along with initial analysis of causal factors and measures to prevent further events.

**PART 4. APPENDICES**

**APPENDIX I (Aircraft Type ABC Service Bulletin)**

**Aircraft ABC Service Bulletin XXXX, dated 1-1-11**

“Initial Qualification of Aircraft ABC Airplanes for  
Reduced Vertical Separation Minimum (RVSM) Operation”

**APPENDIX II (Engineering Authorization)**

**Airline XYZ's Engineering Authorization (EA) 1-11111-11, dated 1-1-11**

“Structural Inspection to Allow  
Reduced Vertical Separation Minimum (RVSM) Operation”

## APPENDIX III

### CONTINUED AIRWORTHINESS APPENDICES (Possible Appendices)

**Explanation.** Appendices could include submissions or revisions to the following documents related to operator continued airworthiness programs:

1. Maintenance Manuals
2. Structural Repair Manuals
3. Standards Practices Manuals
4. Illustrated Parts Catalogs
5. Maintenance schedule
6. Minimum Equipment List
7. Table showing location of FAA Order 8300.10 RVSM Maintenance Program elements in Airline XYZ's maintenance program (See pages 9-10)

## APPENDIX IV

### OPERATIONS APPENDICES (Possible Appendices)

**Explanation.** Appendices could include submissions or revisions of the following:

1. Pilot Initial and Recurrent Training Syllabi
2. Dispatcher Initial and Recurrent Training Syllabi
3. Flight Operations Manual
4. Pilot Bulletin on RVSM Policy/Procedures

**Possible Divisions to Operations Documents.** Possible divisions are:

- RVSM Operations – General Discussion
- RVSM Policy/Procedures Applicable to All RVSM Operations
- RVSM Policy/Procedures Applicable to Specific Areas of Operation  
For example:
  - U.S. Domestic
  - Canada
  - North Atlantic
  - Europe