

FAA B046 RVSM LOA Job Aid

Purpose.

1. Provides core RVSM reference documents for operators seeking authorization under the provisions of 14 CFR part 91 Appendix G, Section 3 (RVSM Authorization), and needing a B046 Letter of Authorization (LOA). This document has been updated to reference FAA Advisory Circular 91.85B, Authorization of Aircraft and Operators for Flight in Reduced Vertical Separation Minimum (RVSM) Airspace.
2. This document should be used in conjunction with the RVSM Decision Matrix, AC 91-85B - Appendix F and Chapter 5. An information sheet package has been developed to assist Part 91 Operators in submitting an application for RVSM authorization. This Information Sheet package can be found on the RVSM Documentation Webpage in the "B046 Operations Specifications/Management Specifications/Letters of Authorization" Section.

Core FAA References.

1. 14 CFR part 91, § 91.180, *Operations within airspace designated as Reduced Vertical Separation Minimum airspace.*
2. 14 CFR part 91, Appendix G, *Operations in Reduced Vertical Separation Minimum (RVSM) Airspace.*
3. 14 CFR part 91, § 91.703, *Operations of civil aircraft of U.S. registry outside of the United States.*
4. 14 CFR part 91, § 91.706, *Operations within airspace designated as Reduced Vertical Separation Minimum Airspace.*
5. FAA Advisory Circular (AC) 91-85 (current edition), *Approval of Aircraft and Operators for flight in Reduced Vertical Separation Minimum Airspace.*
6. FAA Order 8900.1 (FSIMS), Volume 4, Chapter 1, Section 5, *Special Navigation Areas of Operation.*
7. FAA Order 8900.1 (FSIMS), Volume 4 Chapter 10, Section 1 and Section 2, *Operator's Application to Conduct Flight in Reduced Vertical Separation Minimum Airspace.*
8. FAA Order 8900.1 (FSIMS), Volume 3, Chapter 18, Section 4, *Part B Operations Specifications – En Route Authorizations and Limitations.*
9. FAA Order 8900.1 (FSIMS), Volume 3, Chapter 18, Chapter 2, Section 2, *Responsibility for Part 91 Letters of Authorization.*

References for specific operating areas.

1. *Domestic RVSM: Aeronautical Information Manual, Chapter 4, Section 6, Operational Policy/Procedures for Reduced Vertical Separation Minimum (RVSM) in the Domestic U.S., Alaska, Offshore Airspace and San Juan FIR.*

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Operator Exhibits/Documents Submissions.

Exhibit or Document		Reference Paragraphs AC 91-85Band Other Documents	Verify	When to Submit	Where Found in Application	Inspector Status
A	1. Operator letter requesting service addressed to the servicing CHDO Manager.	FAA AC 91-85B, Para. 5.8 FAA Order 8900.1, Vol4, Ch10, Sect 1 Para. 4-1233 D-5	<input type="checkbox"/> Included	Always		
B	Currently held Part 91 RVSM Letter of Authorization, if applicable.	FAA AC 91-85B, Para. 5.8 FAA Order 8900.1, Vol4, Ch10 Sec 1	<input type="checkbox"/> Included or <input type="checkbox"/> N/A	Amending a current authorization (Authorization Group I)		
C	Aircraft RVSM-compliance Documents (RVSM Airworthiness Documents) 1. For in-service aircraft: As applicable: Service Bulletin (SB), Supplemental Type Certificate (STC), Aircraft Service Change (ASC) or Service Letter (SL) (Documents normally accompanied by corresponding AFM Revision or AFM Supplement). 2. For aircraft manufactured RVSM-compliant: AFM, AFM Supplement and/or Type Certificate Data Sheet (TCDS)	FAA AC 91-85B, Para.5.5 FAA AC 91-85B, Para. 5.5.1 FAA AC 91-85B, Para. 5.5.1	<input type="checkbox"/> Included or <input type="checkbox"/> See Compliance Statement	When requesting a new authorization (Authorization Group III or a new Authorization and any equipment from the originally approved design has changed. (Authorization Group II)		
D	For In-service Aircraft. Documentation of Aircraft Inspection and/or Modification: Maintenance records documenting completion of aircraft system modification and/or inspection (e.g., Major Repair and Alteration (FAA Form 337, manufacturers compliance letter, maintenance log entries)	FAA AC 91-85B, Para. 5.5.1	<input type="checkbox"/> Included or <input type="checkbox"/> See Compliance Statement	When requesting a new authorization (Authorization Group III or a new Authorization and any RVSM equipment from the originally approved design has changed. (Authorization Group II)		

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Exhibit or Document		Reference Paragraphs AC 91-85Band Other Documents	Verify	When to Submit	Where Found in Application	Inspector Status
E	MEL (only for operators operating under an MEL): MEL or MMEL that complies with GC 059 – (MEL pages applicable to RVSM required systems) Note: Many MMELs have been revised to incorporate Global Change (GC) 059.	FAA AC 91-85B, Para. 5.8.6.1	<input type="checkbox"/> Included or <input type="checkbox"/> N/A	As applicable		
F	Reserved					

Exhibit or Document		Reference Paragraphs AC 91-85Band Other Documents	Verify	When to Submit	Where Found in Application	Inspector Status
G	1. Method of Pilot Training/Knowledge (e.g., Part 142 training center, course of instruction, in-house training; record of course completion). 2. Pilot Training/Knowledge Syllabus: <u>if requested by the inspector.</u>	FAA AC 91-85B, Para. 5.5.2 FAA Order 8900.1, Vol4, Ch1, Sec5, Para. 4-109; Vol4, Ch10, Sec1, Para. 4-1236	<input type="checkbox"/> Included or <input type="checkbox"/> See Compliance Statement	Anytime flight crew members have changed from originally approved LOA or when requesting a new LOA. (Authorization group II or III)		
H	Operational Policy & Procedures Documents or Manuals. Stand-alone RVSM Operations Manual or section of operator’s application documenting RVSM operational policy & procedures. Note: Operators must be cognizant of RVSM policies and procedures in the area of intended operations.	FAA AC 91-85B, Para. 5.5.2 Appendix B and C. FAA Order 8900.1, Vol4, Ch10 Sec, Para. 4-1236	<input type="checkbox"/> Included or <input type="checkbox"/> See Compliance Statement	Whenever operating procedures change or aircraft will begin operations in a new RVSM area of operation. (Authorization Group II and III)		

	RVSM Operational Elements					
	(1) Plan for reporting altitude-keeping errors	FAA AC 91-85B, Para. 5.10.1				
	Flight Planning					

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	(1) Verify aircraft approved for RVSM operations	FAA AC 91-85B, Appendix B, Para. B.3.1.1	
	(2) Minimum equipment requirements pertaining to height-keeping systems	FAA AC 91-85B, Appendix B, Para. B.3.1.4	
	(3) Reported and forecast weather conditions on the route of flight. Sources of observed and forecast information that can help the pilot ascertain the possibility of MWA or severe turbulence are: Forecast Winds and Temperatures Aloft (FD), Area Forecast (FA), SIGMETS and PIREPS.	FAA AC 91-85B, Appendix B, Para. B.3.1.3	
	(4) Annotating the flight plan to be filed with the ATS Provider to show that the aircraft and operator are approved for RVSM operations.	FAA AC 91-85B, Appendix B, Para. B.3.1.2	
	(5) If required for the aircraft, accounting for any RVSM required aircraft operating restrictions.	FAA AC 91-85B, Appendix B, Para.B.3.1.6	
Preflight Procedures at the Aircraft			
	(1) Review maintenance logs and forms. Ensure maintenance action has been taken to correct defects of required equipment.	FAA AC 91-85B, Appendix B, Para. B.3.2.1	
	(2) During the external inspection of the aircraft, particular attention should be paid to the condition of the static sources etc.	FAA AC 91-85B, Appendix B, Para. B.3.2.2	
	(3) Before takeoff, The aircraft altimeters should be set to the local altimeter atmospheric pressure at nautical height (QNH) setting and should display a known elevation (e.g., field elevation) within the limits specified in aircraft operating manuals. The difference between the known elevation and the elevation displayed on the altimeters should not exceed 75 ft. The two primary altimeters should also agree within limits specified by the aircraft operating manual/Airplane Flight Manual (AFM), as applicable. An alternative procedure using	FAA AC 91-85B, Appendix B, Para. B.3.2.3	

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	atmospheric pressure at field elevation (QFE) may also be used.		
	(4) Before takeoff, equipment required for flight into RVSM airspace should be operational and malfunctions resolved.	FAA AC 91-85B, Appendix B, Para. B.3.2.4	
	Procedures Prior to RVSM Airspace Entry		
	1) List RVSM equipment that must be operational prior to RVSM airspace entry.	FAA AC 91-85B, Appendix B, Para. B.3.3	
	2) Operating Transponder. The operator should ascertain the requirement for an operating transponder in the airspace where operating.	FAA AC 91-85B, Appendix B, Para. B.3.3	
	In-flight Procedures		
	(1) Flightcrew should comply with aircraft operating restrictions related to RVSM airworthiness approval (if applicable) .	FAA AC 91-85B, Appendix B, Para. B.3.4.1	
	(2) Emphasis should be placed on promptly setting the sub-scale on all primary and standby altimeters to 29.92 in. Hg/1013.2 hPa when passing through the Transition Altitude and rechecking the proper altimeter setting when reaching the initial cleared flight level (CFL).	FAA AC 91-85B, Appendix B, Para. B.3.4.2	
	(3) In level cruise it is essential that the aircraft is flown at the CFL. Clearances must be fully understood and followed.	FAA AC 91-85B, Appendix B, Para. B.3.4.3	
	(4) During cleared transition between levels, the aircraft should not be allowed to overshoot or undershoot the CFL by more than 150 ft. (45m).	FAA AC 91-85B, Appendix B, Para. B.3.4.4	
	(5) Unless circumstances dictate otherwise, an automatic altitude control system must be operative and engaged during cruise, etc.	FAA AC 91-85B, Appendix B Para. B.3.4.5	
	(6) An altitude alerting system must be operational.	FAA AC 91-85AB, Appendix B, Para. B.3.4.6	
	(7) At intervals of approximately one hour, cross-checks between the primary altimeters and the standby altimeter should be made. A minimum of two primary altimeters must agree within 200 ft. or a lesser value if specified in the aircraft operating manual.	FAA AC 91-85B, Appendix B, Para. B.3.4.7, B.3.4.8	

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	(8) The difference between the primary and standby altimeters should be noted for use in contingency situations. At least the initial altimeter crosscheck should be recorded.	FAA AC 91-85B, Appendix B, Para. B.3.4.8	
	(9) Normally the altimeter system being used to control the aircraft should be selected to provide the input to the altitude reporting transponder that is transmitting the information to ATC.	FAA AC 91-85B, Appendix B, Para. B.3.4.9	
	(10) If the pilot is notified by ATC of an assigned altitude deviation (AAD) error, which exceeds 300 ft., then the pilot should take action to return to the CFL as quickly as possible.	FAA AC 91-85B, Appendix B, Para. B.3.4.10	
	(11) Contingency Procedures after entering RVSM airspace. The pilot should notify ATC of contingencies, which affect the ability to maintain the CFL and coordinate a plan of action.	FAA AC 91-85B, Appendix B, Para. B.3.6	
Post flight Procedures			
	(1) In making maintenance log book entries against malfunctions in height keeping systems, the pilot should provide sufficient detail to enable maintenance to effectively troubleshoot and repair the system.	FAA AC 91-85B, Appendix B, Para. B.3.7	

Exhibit or Document	Elements for Authorization	Reference Paragraphs AC 91-85 and Other Documents	Operator Inclusion	When to Submit	Where found in Application	Inspector Status
I	<p>RVSM Monitoring: method and schedule to complete RVSM height monitoring</p> <ol style="list-style-type: none"> 1. Method and schedule or... 2. Monitoring results <p>*Note: OpSpec/MSpec/LOA holders may use ADS-B Out methodology for height monitoring when equipped. Request ADS-B monitoring at: https://www.faa.gov/air_traffic/separation_standards/naarmo/naarmo_documents/ADSB_Height_Monitoring_Request_Form.pdf</p>	<p>FAA AC 91-85B, Appendix E</p> <p>FAA AC 91-85B, Paragraph 4.3.3</p> <p>FAA Order 8900.1, Vol4, Ch1, Sec5, Para. 4-109-H</p>	<input type="checkbox"/> Included	<p>When adding a new aircraft to an existing authorization.</p> <p>When a change of RVSM compliant Design occurs.</p> <p>When requesting a new LOA.</p>		