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# FOCA Certification Leaflet (CL)

## Reduced Vertical Separation Minima

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14.09.2016	2	1	Legal references for occurrence reporting in civil aviation adapted
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## List of Abbreviations

The following abbreviations are within this Certification Leaflet:

<b>Abbreviation</b>	<b>Definition</b>	<b>Abbreviation</b>	<b>Definition</b>
AAD	Assigned Altitude Deviation	SSR- Transponder	Secondary Surveillance Radar Transponder
AFM	Aircraft Flight Manual	TC	Training Captain
AOC	Air Operator Certificate	Tech-Log	Technical Log System
ASE	Altimeter System Deviation	TRE	Type Rating Examiner
ATC	Air Traffic Control	TRI	Type Rating Instructor
ATL	Aircraft Technical Log	TVE	Total Vertical Error
CAME	Continuing Airworthiness Management Exposition	WATRS	Western Atlantic Route System
CBT	Computer Based Training		
CL	Certification Leaflet		
D-RVSM	Domestic United States		
EASA	European Aviation Safety Agency		
EUR	Europe		
FOCA	Federal Office of Civil Aviation		
FSTD	Flight Simulation Training Device		
GI	Ground Instructor		
HEMS	Helicopter Emergency Medical Service		
HIL	Hold Item List		
LIFUS	Line Flying under Supervision		
MEL	Minimum Equipment List		
MID	Middle-East Region		
NAM	North America Region		
NAT	North Atlantic		
OPS SPECS	Operations Specifications		
PAC	Pacific Region		
RVSM	Reduced Vertical Separation Minima		
SFE	Synthetic Flight Examiner		
SFI	Synthetic Flight Instructor		
SOP	Standard Operating Procedures		

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## **CL 0 Introduction**

All Certification Leaflets (CL) are intended to assist the organisation/operator in the implementation of relevant matters into the activities and the document system of the organisation/operator, as well as to ensure compliance with legal requirements. It is to be considered a tool for the organisation/operator in order to ease processes of obtaining required and defined acceptances, approvals and authorisations issued by the Federal Office of Civil Aviation (FOCA). Using the CL will facilitate establishing compliance with defined requirements and will lead through the respective certification or variation process. This is achieved by the presentation of key questions to be used by the organisation/operator to question completeness and compliance of the information contained in the respective document system by performing a self-assessment prior to submitting the documentation to FOCA.

It is important to understand, that FOCA will use the identical CL when evaluating regulatory compliance to a specific requirement. The CL is also used as a checklist when performing the authorities' technical finding during the certification or variation process. The questions used by the organisation/operator during the self-assessment are identical to those used by the responsible inspector during the evaluation process.

### **0.1. Purpose of this CL**

Operators acquiring the operations specification RVSM must be in compliance with the requirements concerning airworthiness, operational procedures and training of all involved personnel. The process of approval includes the adoption of all parts of the operations manual system in the respective chapters as well as the amendment of affected maintenance documentation, procedures and tasks.

This CL was developed in accordance with the legal requirements, intending to provide guidance for operators when applying for an extension of their Operations Specifications within the AOC by adopting their operations manuals and maintenance documents in order to get an operational approval for RVSM operations. This CL covers airworthiness aspects, operational requirements and flight crew training subjects.

### **0.2. Scope**

The presented guidance material covers all aspects of RVSM operations requirements and shall assist the applicant to be compliant with these requirements.

### 0.3. Terms and Conditions

When used throughout the Certification Leaflet the following terms shall have the meaning as defined below:

Term	Meaning	Reference
<i>shall, must, will</i>	These terms express an obligation, a positive command.	EC English Style Guide: Ch. 7.19
<i>may</i>	This term expresses a positive permission.	EC English Style Guide: Ch. 7.21
<i>shall not, will not</i>	These terms express an obligation, a negative command.	EC English Style Guide: Ch. 7.20
<i>may not, must not</i>	These terms express a prohibition.	EC English Style Guide: Ch. 7.20
<i>need not</i>	This term expresses a negative permission.	EC English Style Guide: Ch. 7.22
<i>should</i>	This term expresses an obligation when an acceptable means of compliance should be applied.	EASA Acceptable Means of Compliance publications FOCA policies and requirements
<i>could</i>	This term expresses a possibility.	<a href="http://oxforddictionaries.com/definition/english/could">http://oxforddictionaries.com/definition/english/could</a>
<i>ideally</i>	This term expresses a best possible means of compliance and/or best experienced industry practice.	FOCA recommendation

**Note:** To highlight an information or editorial note, a specific note box is used.

- The use of the male gender should be understood to include male and female persons.

#### 0.4. Legal and Reference

This CL is based on the legal references listed below:

Legal Reference	Issue	Subject
Basic Regulation (EC) No 216/2008	20.02.2008	Common rules in the field of civil aviation and establishing an European Aviation Safety Agency
Commission Regulation (EU) No 965/2012	05.10.2012	Technical requirements and administrative procedures related to air operations Annex I: DEF; Annex II: Part-ARO; Annex III: Part-ORO; Annex IV: Part-CAT; Annex V: Part-SPA
Commission Regulation (EU) No 1178/2011	03.11.2011	Technical requirements and administrative procedures related to civil aviation aircrew Annex I: Part-FCL; Annex II: Conversion of existing national licences and ratings; Annex III: Acceptance of Licences of third countries; Annex IV: Part-MED
Commission Regulation (EU) No 290/2012 (amending regulation 1178/2011)	30.03.2012	Technical requirements and administrative procedures related to civil aviation aircrew Annex V: Part-CC; Annex VI: Part-ARA; Annex VII: Part-ORA
Regulation (EU) No 376/2014 (amending regulation 996/2010)	03.04.2014	Reporting, analysis and follow-up of occurrences in civil aviation
Regulation (EU) No 2015/1018	29.06.2015	Classifies occurrences in civil aviation to be mandatorily reported acc. to Regulation (EU) 376/2014
Regulation (EU) No 996/2010	20.10.2010	Investigation and prevention of accidents and incidents in civil aviation
ICAO Annex 6 PART 1	01.07.2010	Operation of aircraft
ICAO Doc 9574	01.01.2012	RVSM (FL290-FL410)
ICAO Doc 7030	01.01.2008	Regional Supplementary Procedures

#### 0.5. Organisation/Operator Responsibilities

The operator has to ensure that all parts of the operations manual system are revised in a manner as to be compliant with the requirements relevant for RVSM operations. All airworthiness requirements must be fulfilled.

The following subjects must be covered:

- **Evidence of the certification status** of the affected aircraft has to be provided to FOCA (AFM / Supplement).
- **Standard Operating Procedures (OM-B)** as well as the **Training Programmes (OM-D)** must be defined and implemented in the OM-System.
- **Regional specific operational procedures** and information must be implemented (OM-C).
- **Occurrence Reporting Procedures** have to be established and described accordingly (OM-A).

## 0.6. Format of the CL

The CL consists of a standardised modular reference box system. The following presentation provides details of the defined format:

<b>1</b>	<b>3.2. Minimum Equipment List (MEL)</b> <small>TOPIC</small>	<b>M/CC</b> <small>EVALUATION METHOD</small>	<b>2</b>
<b>3</b>	<b>RVSM</b> <small>CL TOPIC</small> <b>3-B9-075</b> <small>CL Ch.-OM Ch.-Seq.-No.</small>	<b>ORO.MLR.105 CAT.IDE.A.105</b> <small>LEGAL REFERENCE</small>	<b>4</b>
		<b>OM B, Chapter 9, Minimum Equipment List (MEL)</b> <small>MANUAL REFERENCE</small>	<b>5</b>
<b>6</b>	<b>APP:</b> The MEL and any amendment thereto requires prior approval <small>IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL</small>		
<b>7</b>	<input checked="" type="checkbox"/> Is the MEL amended in order to cover all system components that are relevant for the RVSM capability of the aeroplane? <small>QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT</small>		
<b>8</b>	The MEL shall be amended in order to comply with the requirement for RVSM operations in respect to system capability and redundancy.		

<b>1</b>	Topic: subject description
<b>2</b>	FOCA evaluation method
<b>3</b>	FOCA / Topic Reference Number which may be used as an identification in addition to interlink between this leaflet and the Document Evaluation Report (Finding Report). The Number consists of a combination of: - a subject code related to the specific topic/ theme; and - sequence number in the respective chapter of the CL. The above example 3-B9-075 indicates: RVSM = CL regarding RVSM Specific Approval, 3 = CL section; B9 = OM chapter under evaluation (here OM-B, Chapter 9.), followed by 075 = sequence number.
<b>4</b>	Associated legal reference and/ or reference to other relevant publications including information on formal Acceptance (ACC) or Approval (APP) where applicable.
<b>5</b>	Reference to the Part(s), Chapter(s) and/or Subchapters of the organisation's document systems or manual system as required by the applicable Part.
<b>6</b>	If the legal provision requires a formal approval, a short description of the content of this approval is provided.
<b>7</b>	Questions for self-assessment and compliance verification.
<b>8</b>	Provides instructions, provisions, regulatory requirements, guidelines, acceptable means of compliance and examples of current best practice.

## CL 1 Formal Application

1.1. Operational Documents		M/CC
TOPIC		EVALUATION METHOD
RVSM CL TOPIC	ORO.MLR.100      ORO.MLR.101 LEGAL REFERENCE	
1-G-005 CL Ch.-OM Ch.-Seq.-No.	Operations Manual System MANUAL REFERENCE	

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

Has the application form 44.20 been submitted to FOCA together with all relevant documents?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

- The following relevant documents may form part of the formal application:
  - Revision of the relevant parts of the operations manual system including checklists and Minimum Equipment List (MEL).
  - Description of the relevant operating history of the operator together with the experience-level of flight crew members concerning RVSM operations.
  - Plan for participation in Verification/Monitoring programmes.
- The revised parts of the operations manual system containing instruction and information on RVSM operations, as a complete package, shall be submitted to: FOCA, Section Operations of Complex Airplanes, 3003 Berne.

## CL 2 Operational Approval

2.1. Operations Specification RVSM					M/CC
TOPIC					EVALUATION METHOD
RVSM CL TOPIC 2-A0.1-005 Ch.-OM Ch.-Seq.-No.	ORO.MLR.100	ORO.MLR.101	ORO.MLR.105	SPA.GEN.100	SPA.GEN.105
	SPA.GEN.110	SPA.GEN.115	SPA.GEN.120	SPA.RVSM.100	SPA.RVSM.105
	LEGAL REFERENCE				
MANUAL REFERENCE					
OM – A, Chapter 0, Administration and Control of the Operations Manual, 0.1 Introduction					

**APP:** The Operations Specification RVSM must be listed together with all other operations specifications of the operator concerned.

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

Is the Operations Specification RVSM mentioned in the introduction paragraph of the Operations Manual Part-A?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

2.2. Route Competence RVSM					M/CC
TOPIC					EVALUATION METHOD
RVSM CL TOPIC 2-A5.2-010 Ch.-OM Ch.-Seq.-No.	ORO.MLR.100	ORO.MLR.101	ORO.FC.105	CAT.OP.MPA.135	
	LEGAL REFERENCE				
	MANUAL REFERENCE				
OM – A, Chapter 5, Qualification requirements					
5.2 Description of required qualification/competence for flight crew members					

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

Is the Route Competence for RVSM Airspace declared?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

- For flight crew members, the qualification “Route-Competence to operate in RVSM Airspace” must be declared in OM-A, Chapter 5.

## CL 3 Operating Procedures

<b>3.1.</b>	<b>Flight Preparation Instruction</b>	<b>M/CC</b>
	<small>TOPIC</small>	<small>EVALUATION METHOD</small>
RVSM <small>CL TOPIC</small>  3-A8.1-005 <small>Ch.-OM Ch.-Seq.-No.</small>	CAT.OP.MPA.135    CAT.OP.MPA.175    SPA.RVSM.100    SPA.RSVM.105    SPA.RVSM.110 <small>LEGAL REFERENCE</small>  OM – A, Section 8.1, Flight Preparation Instruction <small>MANUAL REFERENCE</small>	

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

- Does the operator consider operational influence related to RVSM operations during his flight preparation procedure?
- Is a procedure established and appropriately described, indicating which equipment is required for the operation in RVSM airspace and which has to be checked to be operational before entering RVSM airspace?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

The following subjects shall be described, as a minimum:

- **Flight Planning:** For RVSM operations, instructions must be provided to the flight crew to review and verify the aircraft technical status reflected in the Aircraft Technical Log (ATL), to consult the aeroplanes Hold Item List (HIL), to verify the aeroplane dispatch status using the Minimum Equipment List (MEL) concerning RVSM operation and en-route weather forecast for the detection of areas with heavy turbulence on the intended route.
- **Aircraft External Inspection:** It shall be stated that the external inspection procedure of the aeroplane shall focus on the fuselage skin condition in the surrounding of the static sources and the condition of the static sources itself.
- **Flight Deck Preparation:** Instructions shall be provided for a comparison check between the indications of the two primary altimeters to be within a tolerance of 75 ft for RVSM operation.
- **Equipment:** It must be mentioned clearly that the following equipment must be checked to be operational prior to entering RVSM airspace:
  - Two independent altitude measurement systems; and
  - One altitude alerting system; and
  - One automatic altitude control system; and
  - One secondary surveillance radar (SSR) transponder with altitude reporting system that can be connected to the altitude measurement system in use for altitude control.

3.2. In-Flight Procedures		M/CC
TOPIC		EVALUATION METHOD
RVSM CL TOPIC	(EU) No 965/2012 Air Operations LEGAL REFERENCE	
3-A8.3-010 Ch.-OM Ch.-Seq.-No.	OM – A, Chapter 8.3, Flight Procedures MANUAL REFERENCE	

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

Are the procedures applicable during RVSM operation described in detail?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

Detailed provisions and procedures shall be made, covering the following, as a minimum:

- a) Notification that RVSM operation is limited in Altitude and also on Airspeed (Mach-Number).
- b) Altimeter setting procedures must be observed and respective crosschecks shall be performed in hourly intervals.
- c) Altitude comparison checks during level flight shall be stated to be within  $\pm 200$  ft.
- d) Procedures to monitor the aeroplane`s level-off manoeuvre and system capability at an assigned flight level while using the automatic altitude control system and the autopilot function.
- e) Monitoring procedures shall be described, ensuring that the altitude alerting system is operative.
- f) The limit for over- or undershooting of 150 ft of an assigned flight level shall be stated.
- g) It must be stated that the altimeter system being used for altitude control shall be the source information for the altitude reporting transponder.
- h) Applicable Standard ATC phraseology with regard to RVSM operation shall be implemented and the use of the respective wording shall be explained.



3.3. Contingency Procedures		M/CC
TOPIC		EVALUATION METHOD
RVSM CL TOPIC	(EU) No 965/2012 Air Operations LEGAL REFERENCE	
3-A8.3-015 Ch.-OM Ch.-Seq.-No.	OM – A, Section 8.3, Flight Procedures MANUAL REFERENCE	

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

- Are the circumstances affecting the capability for RVSM operation of the aircraft concerned clearly mentioned?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

The list of circumstances that affect RVSM capability of an aeroplane shall contain at least the following:

- a) Failure of all automatic altitude control systems
- b) Loss of redundancy of altimeter system
- c) Loss of engine thrust requiring to descend
- d) Any failure of equipment affecting the ability to maintain cleared flight level
- e) Heavy turbulence affecting the altitude keeping capability of the aircraft

Contingency procedures to be applied within RVSM airspace shall be described, containing at least the following:

- Notification to the relevant Air Traffic Control centre about the loss of RVSM capability by applying the respective phraseology.
- Coordination of the action plan appropriate to the situation and airspace environment concerned.

3.4. Post Flight Procedures		M/CC
TOPIC		EVALUATION METHOD
RVSM CL TOPIC	(EU) No 965/2012 Air Operations LEGAL REFERENCE	
3-A8.3-020 Ch.-OM Ch.-Seq.-No.	OM – A, Section 8.3, Flight Procedures MANUAL REFERENCE	

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

Are the Post Flight Procedures adequately described with regard to RVSM operation?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

With respect to RVSM operations, the following shall be stated as a minimum:

- Any malfunction affecting the RVSM capability of the airplane shall be recorded in detail in the Aircraft Technical Logbook (ATL).

Deficiencies, that are critical in regard to RVSM operations, shall be listed and shall contain, as a minimum:

- Any malfunction in the automatic height keeping system;
- Any malfunction in the altimetry system;
- Any deficiency affecting the redundancy within the altitude measurement system.

3.5. Reporting of Occurrences TOPIC	M/CC EVALUATION METHOD
RVSM CL TOPIC 3-A11-025 Ch.-OM Ch.-Seq.-No.	Regulation (EU) No 376/2014, Reporting, Analysis and Follow-Up of Occurrences in Civil Aviation
	(EU) No 996/2012, Investigation and Prevention of Accidents and Incidents in civil Aviation
	ORO.GEN.160      CAT.GEN.MPA.100      CAT.GEN.MPA.100      SPA.RVSM.115 <small>LEGAL REFERENCE</small>
	OM – A, Chapter 11, Handling, Notifying and Reporting Occurrences <small>MANUAL REFERENCE</small>

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

- Are violations in regard to RVSM operating rules addressed which need to be reported by the flight crew?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

### Altitude Deviations

For altitude deviations during RVSM operations or height keeping errors, at least the following shall be stated and need to be reported:

- A total vertical error (TVE) of  $\pm 300$  ft; and
- An altimeter system error (ASE) of  $\pm 245$  ft; and
- An assigned altitude deviation (AAD) of  $\pm 300$  ft; and
- During transition phase, overshooting or undershooting of a cleared flight level of more than 150 ft; and
- The loss of RVSM capability; and
- The application of any contingency procedure.

### Reporting Procedures

The reporting procedure, that is applicable after any violation regarding RVSM operating rules, shall be described in detail, containing at least the following:

- who has to file the report (Commander); and
- who is receiving the report (Head of Flight Operations, Flight Safety Officer, etc.); and
- that the report has to be filed within 72 hours after the occurrence, containing an initial analysis of causal factors and measurement taken to prevent the reoccurrence; and
- that the altitude deviation report (ADR) form, relevant for the FIR, has to be used for the report; and
- where the corresponding form can be found within the organisation.

## CL 4 Aeroplane Type Specific Procedures

4.1. Limitations TOPIC	M/CC EVALUATION METHOD		
RVSM CL TOPIC  4-B1-005 Ch.-OM Ch.-Seq.-No.	ORO.GEN LEGAL REFERENCE	ORO.AOC	SPA.RVSM
	OM – B, Section 1, Limitations MANUAL REFERENCE		

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

Is the Operation Specification RVSM listed as a type of operation?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

The following shall be stated, as a minimum:

- The Operation Specification RVSM must be listed together with all other operations specifications applicable for the aeroplane (-group) concerned.
- The speed limit for RVSM operations must be provided in the chapter limitations. Ideally, this shall be stipulated as a figure in KIAS or Mach, not as a reference only.

4.2. Normal Procedures		M/CC
TOPIC		EVALUATION METHOD
RVSM CL TOPIC	ORO.GEN.110 LEGAL REFERENCE	
4-B2-010 Ch.-OM Ch.-Seq.-No.	OM – B, Section 2, Normal Operations MANUAL REFERENCE	

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

- Is the aircraft pre-flight procedure adopted for operational equipment required for RVSM operations?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

### Pre-Flight Inspection

The procedure shall be described, covering the following as a minimum:

- The external inspection procedure shall contain all relevant equipment such as all static ports, especially the condition of the fuselage skin around the static-ports.
- The cockpit preparation shall include a primary altimeter crosscheck to be within a tolerance of  $\pm 75$  ft.
- The equipment relevant for RVSM operations must be checked operational.
- The Tech-Log-System shall be reviewed concerning the operational status and RVSM capability of the aeroplane.

### Altimeter Setting Procedures

The different procedures shall be defined in detail, covering the following as a minimum:

- The procedure for altimeter setting and checking shall be described in detail, covering all relevant aspects regarding crew coordination and crew communication (call-outs).
- The procedure for the transition out of a climb or descent into a straight level flight shall be described, covering the relevant aspects in regard to the monitoring of correct operation of the altitude alerting system and the automatic altitude control system.
- The procedure to perform primary altimeter crosschecks and respective recording.
- The use of the autopilot system in relation to the respective altitude transmitting transponder.

4.3. Abnormal / Emergency Procedures		M/CC
TOPIC		EVALUATION METHOD
RVSM CL TOPIC	ORO.GEN.110 LEGAL REFERENCE	
4-B3-015 Ch.-OM Ch.-Seq.-No.	OM – B, Section 3, Abnormal- and Emergency procedures MANUAL REFERENCE	

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

- Are contingency procedures established and described covering the case of any system malfunction affecting the RVSM capability?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

When the flight is exposed to any situation that implies a degradation of RVSM capability of the aeroplane, i.e. when encountering greater than moderate turbulence, the aeroplane type specific procedure to be applied by the flight crew shall be described, covering the following as a minimum:

- the use of the automation system in general; and
- the use of the altitude keeping system; and
- the applicable flight modes of the automatic flight control system during flight level changes (climb or descend); and
- the use of speed brakes and spoilers; and
- the applicable mode for the use of the auto throttle system.

4.4. Minimum Equipment List (MEL)		M/CC
TOPIC		EVALUATION METHOD
RVSM CL TOPIC	ORO.MLR.105      CAT.IDE.A.105 LEGAL REFERENCE	
4-B9-020 Ch.-OM Ch.-Seq.-No.	OM – B, Section 9, Minimum Equipment List (MEL) MANUAL REFERENCE	

**APP: Minimum Equipment List**

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

- Is the MEL amended in order to cover all system components that are relevant for the RVSM capability of the aeroplane?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

The minimum equipment list shall be amended in order to comply with the requirement for RVSM operations in respect to system capability and redundancy.

## CL 5 Regional Procedures

5.1. Specific Regional Operational Procedures		M/CC
TOPIC		EVALUATION METHOD
RVSM CL TOPIC	ORO.MLR.100 LEGAL REFERENCE	ORO.MLR.101
5-C-005 Ch.-OM Ch.-Seq.-No.	Operations Manual Part C MANUAL REFERENCE	

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

- Are the Regional Operational Procedures applicable for the Operator`s area of operation provided to the users?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

The regional operational procedures including normal and contingency procedures must be integrated in the Operations Manual Part-C, covering the operator`s whole area of operation as specified on the AOC.

- European Region (EUR)
- North Atlantic (NAT)
- Western Atlantic Route System (WATRS)
- North America Region (NAM)
- Domestic United States (D-RVSM)
- Pacific Region (PAC)
- Middle East Region (MID)

## CL 6 Training and Checking

<b>6.1. RVSM Training and Checking Concept</b>	M/CC EVALUATION METHOD				
TOPIC	ORO.FC.105	ORO.FC.115	ORO.FC.120	ORO.FC.145	ORO.FC.205
RVSM CL TOPIC 6-D2-005 Ch.-OM Ch.-Seq.-No.	ORO.FC.215	ORO.FC.220	ORO.FC.230	LEGAL REFERENCE	
	OM-D, Chapter 2 , Training Syllabi and Checking Programme				
	MANUAL REFERENCE				

**APP:** Operator Conversion Training Syllabus, Line Check and Proficiency Training and Checking

**ACC:** Command Course

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

- Is the RVSM training correctly integrated into both the conversion and recurrent training and the checking programme as well?
- Is a sector included in the line flying under supervision module where RVSM operation can be applied within RVSM airspace?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

The RVSM-Training and Checking Module shall be implemented within “Key Courses” as listed below:

“Key Courses”			Training required	Checking required	
<b>Phase</b>	Ground and FSTD / Airplane Training	<b>Conversion Training and Checking covering:</b> <ul style="list-style-type: none"> <li>Conversion Course changing operator</li> <li>Conversion Course changing ACFT type</li> <li>Conversion Course changing operator and ACFT type</li> </ul>	Yes	Yes	
	FSTD / Airplane Training	<b>Command Course</b>		No	Yes
		<b>Recurrent Training and Checking</b>	• LPC	N/A	No
			• OPC		Yes
			• Line Check		Yes
			• Recurrent training		Yes
	<b>Difference and Familiarisation Training</b>		No	N/A	
<b>In Flight Relief of Flight Crew Members Training</b>		N/A			
<b>Recent Experience</b>					



6.2. RVSM Training Module TOPIC	M/CC EVALUATION METHOD				
RVSM CL TOPIC  6-D2-010 Ch.-OM Ch.-Seq.-No.	ORO.FC.105	ORO.FC.115	ORO.FC.120	ORO.FC.145	ORO.FC.200
	ORO.FC.205	ORO.FC.215	ORO.FC.220	ORO.FC.230	
	LEGAL REFERENCE				
	OM-D, Chapter 2, Training Syllabi and Checking Programme MANUAL REFERENCE				

IF APPLICABLE, BRIEF DESCRIPTION OF ELEMENT REQUIRING PRIOR APPROVAL

- Is a RVSM training and checking module integrated within the OM-D?
- Are the topics listed below implemented within the RVSM training and checking module?

QUESTION FOR COMPLIANCE VERIFICATION AND SELF ASSESSMENT

<b>RVSM Training and Checking Module</b>
<b>Definition of Topic</b>
<i>The RVSM training module must contain comprehensive instruction of basic knowledge and operational procedures in order to get familiar with all aspects of operations within RVSM airspace.</i>
<b>Reference to qualification requirements (if required)</b>
NIL
<b>Standard of performance to be obtained</b>
<p><i>The following standards of performance shall be defined as minimum requirement to be obtained after having completed the RVSM training module:</i></p> <ul style="list-style-type: none"> <li>• <i>The trainee has obtained a thorough knowledge of the RVSM operational procedures and contingency procedures including standard ATC phraseology used in the relevant area of operations;</i></li> <li>• <i>The trainee has an understanding of the interaction between the aeroplane's altimeter system, its automatic altitude control capability (with emphasis to the aeroplane altitude capture system) and the transponder system in normal and abnormal conditions;</i></li> <li>• <i>The trainee has an understanding of visual perception of other aircrafts during darkness, when encountering local phenomena, for opposite and same direction traffic, and during turns;</i></li> <li>• <i>The trainee has completed at least one sector during the line flying under supervision phase, where RVSM operation was applied.</i></li> </ul>
<b>Prerequisites</b>
<p><i>The trainee shall fulfil the following prerequisites before starting RVSM training:</i></p> <ul style="list-style-type: none"> <li>• <i>Vital parts of the operator's manual system should have been taught to the trainee beforehand to allow an adequate overview.</i></li> </ul>
<b>Interrelation with other training modules</b>
<i>As the operation within RVSM airspace is considered part of Standard Operating Procedures (SOP), RVSM Training shall be part of the "Ground Refresher Training".</i>
<b>Training items (steps, lessons, sequence and detailed content)</b>
<p><i>RVSM Training is to be performed according to the information given in the "Key Course" list.</i></p> <p><i>Theoretical instruction for initial training means: classroom instruction and/or CBT;</i></p> <p><i>The following Training Items shall be covered:</i></p>

- The minimum equipment requirements for RVSM operations; Specific Minimum Equipment List (MEL) content;
- Aeroplane Automation Systems;
- Airframe operation restrictions, characteristics of aeroplane altitude capture systems;
- Use and limitations in terms of accuracy of standby altimeters contingencies; application of static source error correction-/ position error correction-tables;
- Visual perception of other traffic;
- Basic concept for normal procedures in RVSM airspace;
- Flight-Planning;
- Pre-Flight Procedures;
- In-Flight Procedures: - Prior to entry into RVSM airspace, - within RVSM airspace, - TCAS / ACAS operating characteristics within RVSM airspace;
- Basic concepts for RVSM contingencies;
- ATC phraseology applicable for RVSM operations. Emphasis shall be laid on re-enforcement of understanding, compliance and query in case of uncertainties;
- Specific Regional Operational Procedures and Contingency Procedures in accordance with the Area of Operation, e.g. European Region (EUR), North Atlantic (NAT) Western Atlantic Route System (WATRS), North America Region (NAM), Domestic United States (D-RVSM), Pacific Region (PAC), Middle East Region (MID);
- Post-Flight Procedures;
- Entries in Technical Log Systems;

Ground Training and Checking shall cover theoretical and practical parts of the subject (Classroom),  
Practical Training and Checking shall be performed in the FSTD or aircraft.

#### **Checking / Examination including pass mark for written tests**

Means of Training and Checking:

- Theoretical knowledge will be checked by means of a written test or by any other suitable method where the quality of the transferred knowledge can be traced and recorded. The questionnaire shall comprise questions distributed appropriately across the main subjects of the syllabus.
- The candidate has to pass the knowledge assessment before being entitled to undergo further practical training and checking in the FSTD or aircraft.
- During the OPC, the candidate has to demonstrate practical knowledge of RVSM operation.
- Flight Crew have to demonstrate their competence in carrying out normal operations within RVSM airspace. Therefore, as RVSM operation is an integral part of SOP, proficiency and knowledge shall be assessed during the line check.

#### **Training and Checking personnel required / involved**

All necessary Training and Checking personnel involved in Training and Checking as listed below have to be incorporated in the operators OM-D, chapter 1.3 Training and Checking Personnel before being entitled to execute the privileges:

- Classroom practical and theoretical Training and Checking is to be given by a Ground Instructor (GI), Training Captain (TC) or a Type Rating Instructor (TRI)
- FSTD / Aircraft Training is to be given by a SFI/TRI on the Flight Simulator/Aircraft during Conversion training when changing aircraft type or when changing operator.
- Checking of practical knowledge on FSTD shall be performed by a SFE/TRE.
- Checking of practical knowledge on the aircraft shall be performed by a TC or TRE.
- Practical Training during Line Flying under supervision (LIFUS) as well as initial and regular Line Checks shall be given/taken by formally accepted Training Captains (TC).

Subcontracted Training Organisations:

Reference to subcontracted training organisations, listed in OM D, Chapter 1.2; shall be made, if applicable.

#### **Reference to syllabi and lesson plans**

The operator shall state all references where a specific RVSM training syllabus and associated lesson plans can be found within the operators OM Part-D.