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SUP 8/03
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1.0 INTRODUCTION

1.1 The International Civil Aviation Organization (ICAO) Sixth Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG) meeting in order to contribute to the reduction of congestion in the Middle East (MID) region, agreed that Reduced Vertical Separation Minimum (RVSM) should be introduced in MID region after successful implementation in the North Atlantic, European and Asia/Pacific regions. ICAO Document 9574, *Manual on Implementation of a 300 m (1 000ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive*, contains an explanation of RVSM.

1.2 Benefits to be gained from RVSM include:

a) Adoption of an ICAO endorsed navigation requirement;
b) Improved utilization of airspace for ATC conflict resolution;
c) Fuel savings of~ 1% for flight closer to optimum cruise altitude; and
d) Reduction in ground delays.

1.3 CONTENT. The ICAO MID RVSM Task Force has harmonized the basic content of this document. The following policies are addressed in the paragraphs of this document:

2.0 Identification RVSM airspace in the Amman FIR.
3.0 Airworthiness and Operational Approval and Monitoring
4.0 ACAS II and Transponder Equipage
5.0 In-flight Procedures Within Amman FIR RVSM Airspace
6.0 Special procedures for in-flight contingencies involving a loss of Vertical Navigation Performance required for flight within the Amman FIR RVSM airspace
7.0 Special procedures for In-flight Contingencies in the Amman FIR.
8.0 In-flight Contingency Procedures for Subsonic Aircraft Requiring Rapid Descent. Turn-back or Diversion in Amman FIR.
9.0 Weather Deviation Procedures
10.0 Special Procedures to Mitigate Wake Turbulence Encounters and Distracting Aircraft System Alerts
11.0 Vertical Separation Minima
12.0 Flight Planning Requirements
13.0 Procedures for Operation of non-RVSM Compliant Aircraft in RVSM Airspace
14.0 Delivery Flights for Aircraft that are RVSM Compliant on Delivery
15.0 Procedures for Suspension of RVSM
16.0 Guidance for Pilot and Controller for Actions in Event of Aircraft System Malfunction of Turbulence Greater than Moderate

2.0 IDENTIFICATION OF RVSM AIRSPACE IN THE AMMAN FIR

2.1 RVSM shall be applicable in that volume of airspace between FL 290 and FL 410 inclusive in the Amman FIR.

3.0 AIRWORTHINESS AND OPERATIONAL APPROVAL AND MONITORING

3.1 APPROVAL PROCESS. (Source Document: FAA Interim Guidance (IG) 91 **-RVSM/JAA** TGL #6) Operators must obtain airworthiness and operational approval from the State of Registry Or State of the Operator, as appropriate, to conduct RVSM operations. On behalf of the MID Region ATS providers, the MID Region is maintaining a website containing documents and policy for RVSM approval. The Internet address is: http://www.mecma.com

3.2 AIRCRAFT MONITORING. (Source Document: IG 91-RVSM/TGL #6. Asia/Pacific Minimum Monitoring Requirements) Operators are required to participate in the RVSM aircraft monitoring program. This is an essential element of the RVSM implementation program in that it confirms that the aircraft altitude-keeping performance standard is being met The Middle East Central monitoring agency (MECMA) will process the results of monitoring. For further information on RVSM monitoring, the MECMA web site can be accessed by:http://www.mecma.com

3.2.1 Monitoring accomplished for other regions can be used to fulfill the monitoring requirements for the Middle East Region. MECMA will coordinate with other monitoring agencies to access this information. For monitoring services in the Middle East Region, operators should contact MECMA as follows:

Phone: 971-2-405-4339
Fax: *971-2 -449-1599*
Email: traffic@mecma.com

4.0 ACAS II AND TRANSPONDER EQUIPAGE

4.1 All civil aircraft intending to operate within the Middle East RVSM airspace shall be equipped with ACAS II. (TCAS II systems with Version 7.0 incorporated meet ICAO ACAS II standards).

4.1.1 Operators must take action to familiar themselves of ACAS II equipage requirements and plan for compliance. ICAO and individual States have established policies requiring ACAS II equipage and schedules for compliance, hi addition, the MIDANPIRG has endorsed early ACAS II equipage in the region.

4.2 INTERNATIONAL GENERAL AVIATION (IGA) TRANSPONDER EQUIPAGE. ICAO Annex 6, Part II, states that, starting 1 January 2000. IGA airplanes shall be equipped with a pressure altitude reporting transponder certified by the appropriate State authority as meeting the provisions of Annex 10.

5.0 IN-FLIGHT PROCEDURES WITHIN AMMAN FIR RVSM AIRSPACE

5.1 Before entering Amman FIR RVSM airspace, the pilot should review the status of required equipment. (See **Appendix 4** of FAA IG 91-RVSM for pilot RVSM procedures). The following equipment should be operating normally:

a) Two primary altimetry systems;

b) One automatic altitude-keeping device; and

c) One altitude-alerting device.

5.2 PILOT ACTIONS IN CONTINGENCIES: The pilot must notify ATC whenever the aircraft:

a) Is no longer RVSM Compliant due to equipment failure; or

b) Experiences loss of redundancy of altimetry systems; or

c) Encounters turbulence that affects the capability to maintain flight level.

5.3 RVSM /TGL #6): During cleared transition between levels, the aircraft should not overshoot or undershoot the assigned FL by more than 150 **ft (45 m).**

5.4 PILOT LEVEL CALL**:** Except in an ADS or radar environment, pilots shall report reaching any altitude assigned within RVSM airspace.

6.0 SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES INVOLVING A LOSS OF VERTICAL NAVIGATION PERFORMANCE REQUIRED FOR FLIGHT WITHIN THE AMN FIR RVSM AIRSPACE

6.1 GENERAL PROCEDURES

6.1.1 An in-flight contingency affecting flight in the Amman FIR RVSM airspace pertains to unforeseen circumstances that directly impact on the ability of one or more aircraft to operate in accordance with the vertical navigation performance requirements of the Amman FIR RVSM airspace. Such in-flight contingencies can result from degradation of aircraft equipment associated with height-keeping and from turbulent atmospheric conditions.

6.1.2 The pilot shall inform ATC as soon as possible of any circumstances where the vertical navigation performance requirements for the Amman FIR RVSM airspace cannot be maintained. In such cases, the pilot shall obtain a revised ATC clearance prior to initiating any deviation from the cleared route and/or flight level, whenever possible. When a revised ATC clearance could not be obtained prior to such a deviation, the pilot shall obtain a revised clearance as soon as possible.

6.1.3 ATC shall render all possible assistance to a pilot experiencing an in-flight contingency. Subsequent ATC actions will be based on the intentions of the pilot, the overall air traffic Situation and the real-time dynamics of the contingency.

6.2 DEGRADATION OF AIRCRAFT EQUIPMENT, PILOT REPORTED

6.2.1 When informed by the pilot of an RVSM Compliant aircraft operating in the Amman FIR RVSM airspace that the aircraft is now Non-RVSM Compliant. ATC shall take action immediately to provide a minimum vertical separation of 600M (2000ft) or an appropriate horizontal separation from all other aircraft concerned that are operating in the Amman FIR RVSM airspace. An RVSM Compliant aircraft rendered Non-RVSM Compliant shall normally be cleared out of the Amman FIR RVSM airspace by ATC when it is possible to do so.

6.2.2 Pilots shall inform ATC, as soon as practicable, of any restoration of the proper functioning of equipment required to meet the RVSM MASPS.

6.2.3 Amman TACC controllers will coordinate with adjacent ACCs, as appropriate.

6.3 SEVERE TURBULENCE NOT FORECAST

6.3.1 When an aircraft operating in the Amman FIR RVSM airspace encounters severe turbulence due to cleared flight level, the pilot shall inform ATC and ATC shall establish either an appropriate horizontal separation or an increased minimum vertical separation.

6.3.2 ATC shall, to the extent possible, accommodate pilot requests for flight level and/or route changes and shall pass on traffic information as required.

1.1.1 ATC shall solicit reports from other aircraft to determine whether RVSM in the Amman FIR should be suspended entirely or within a specific flight level band and/or area.

6.3.4 The Amman TACC, when suspending RVSM in the Amman FIR, shall coordinate such suspension(s)
with adjacent ACCs. as appropriate, to ensure an orderly progression to the transfer of traffic.

6.4 SEVERE TURBULENCE - FORECAST

6.4.1 When a meteorological forecast is predicting severe turbulence within the Amman FIR RVSM airspace, ATC shall determine when RVSM should be suspended and, if so, the period of time and specific flight level(s) and/or area.

6.4.2 In cases where RVSM will be suspended in the Amman FIR, Amman TACC shall coordinate with adjacent ACCs with regard to the flight levels appropriate for the transfer of traffic, unless a contingency flight level allocation scheme has been determined by a Letter of Agreement. Amman TACC shall also coordinate applicable sector capacities with adjacent ACCs, as appropriate.

1.0 SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN AMMAN FIR

GENERAL PROCEDURES

7.1 The following general procedures apply to both subsonic and supersonic aircraft and are intended as guidance only. Although all possible contingencies cannot be covered, they provide for cases of inability to maintain assigned level due to:

a) Weather;

b) Aircraft performance;

c) Pressurization failure; and

d) Problems associated with high-level supersonic flight.

7.2 The procedures are applicable primarily when rapid descent and/or turn-back or diversion to an alternate airport, taking into account specific circumstances.

7.3 If an aircraft is unable to continue flight in accordance with its air traffic control clearance, a revised clearance shall, whenever possible, be obtained prior to initiating any action, using a distress or urgency signal as appropriate.

7.4 If prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time and, until a revised clearance is received, the pilot shall:

a) If possible, deviate away from an organized track or route system;

b) Establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: flight identification, flight level, aircraft position, (including the ATS route designator or the track code) and intentions on the frequency in use, as well as on frequency 121.5 MHz (or, as a back-up, the VHF inter-pilot air-to-air frequency 123.45);

c) Watch for conflicting traffic both visually and by reference to ACAS and

d) Turn on all aircraft exterior lights (commensurate with appropriate operating limitations).

8.0 IN-FLIGHT CONTINGENCY PROCEDURES FOR SUBSONIC AIRCRAFT REQUIRING RAPID DESCENT, TURN-BACK OR DIVERSION IN AMMAN FIR.

INITIAL ACTION:

1.1 If unable to comply with the provisions of paragraph 7.3 to obtain a revised ATC clearance, the aircraft should leave its assigned route or track by turning 90 degrees right or left whenever this is possible. The direction of the turn should be determined by the position of the aircraft relative to any organized route or track system (for example, whether the aircraft is outside, at the edge of, or within the system). Other factors to consider are terrain clearance and the levels allocated to adjacent routes or tracks.

SUBSEQUENT ACTION:

8. 2 AIRCRAFT ABLE TO MAINTAIN LEVEL. An aircraft able to maintain its assigned level should acquire and maintain in either direction a track laterally separated by 10 NM from its assigned route or track and once established on the offset track, climb or descend *500* ft (150 m).

8.3 AIRCRAFT UNABLE TO MAINTAIN LEVEL. An aircraft NOT able to maintain its assigned level should, whenever possible, minimize its rate of descent while turning to acquire and maintain in either direction a track laterally separated by 10 NM from its assigned route or track. For subsequent level flight, a level should be selected which differs by 500ft (150 m) from those normally used.

8.4 DIVERSION ACROSS THE FLOW OF ADJACENT TRAFFIC. Before commencing a diversion across the flow of adjacent traffic, the aircraft should, while maintaining the 10 NM offset, expedite climb above or descent below levels where the majority of aircraft operate *(e.g., to a level above FL 410 or below FL 290)* and then maintain a level which differs by 500 ft (150 m) from those normally used. However, if the pilot is unable or unwilling to carry out a major climb or descent, the aircraft should be flown at a level 500 ft above or below levels normally used until a new ATC clearance is obtained.

8.5 ETOPS AIRCRAFT. If these contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or a failure of an ETOP S critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved and requesting expeditious handling.

1.0 WEATHER DEVIATION PROCEDURES IN THE AMMAN FIR

GENERAL PROCEDURES:

9.1 The following procedures are intended to provide guidance for pilots and ATC shall render all possible assistance.

9.2 If the aircraft is required to deviate from track to avoid weather and prior clearance cannot be obtained, an air traffic control clearance shall be obtained at the earliest possible time. In the meantime, the aircraft shall follow the procedures detailed m paragraph 9.9 below.

9 3 The pilot shall advise ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to the centerline of its cleared route.

9.4 When the pilot initiates communications with ATC, rapid response may be obtained by stating **"WEATHER DEVIATION REQUIRED"** to indicate that priority is desired on the frequency and for ATC response.

9.5 The pilot still retains the option of initiating the communications using the urgency call "PAN, PAN, PAN" to alert all listening parties to a special handling condition, which may receive ATC priority for issuance of a clearance or assistance.

9.6 When controller-pilot communications are established, the pilot shall notify ATC and request clearance to deviate from track, advising, when possible, the extent of the deviation expected. ATC will take one of the following actions:

a) If there is no conflicting traffic in the horizontal dimension, ATC will issue clearance to deviate from track: or

b) If there is conflicting traffic in the horizontal dimension, ATC will separate aircraft by establishing vertical separation or, if unable to establish vertical separation, ATC shall:

* advise the pilot unable to issue clearance for requested deviation

* advise pilot of conflicting traffic

SAMPLE PHRASEOLOGY:

9.7 The pilot will take the following actions:

(a) Advise ATC of intentions by the most expeditious means available.

(b) Execute the procedures detailed in 9.8 below. (ATC will issue essential traffic information to all affected aircraft).

(c) If necessary, establish voice communications with ATC to expedite dialogue on the situation

ACTIONS TO BE TAKEN IF A REVISED ATC CLEARANCE CANNOT BE OBTAINED

9.8 The pilot shall take the actions listed in 9.9 below under the provision that the pilot may deviate from rules of the air (e.g., the requirement to operate on route or track center line unless otherwise directed by ATC), when it is absolutely necessary in the interests of safety to do so.

9.9 If a revised Air Traffic Control clearance cannot be obtained and deviation from track is required to avoid weather, the pilot shall take the following actions:

a) If possible, deviate away from an organized track or route system;

b) Establish communication with and alert nearby aircraft by broadcasting, at suitable intervals: flight identification, flight level, aircraft position (including the ATS route designator or the track code) and intentions (including the magnitude of the deviation expected) on the frequency in use, as well as on frequency 121.5 MHz (or, as a backup, the VHF inter-pilot air-to-air frequency 123.45).

c) Watch for conflicting traffic both visually and by reference to ACAS;

d) Turn on *all* aircraft exterior lights (commensurate with appropriate operating limitations);

e) For deviations of less than 19 km (10NM), aircraft should remain at the level assigned by ATC;

f) For deviations of greater than 19 km (10NM), when the aircraft is approximately 19 km (10NM) from track. initiate a level change based
on the following criteria:

g) If contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

h) When returning to track, be at its assigned flight level, when the aircraft is within approximately 19 km (10NM) of center line.

ROUTE CENTER LINE TRACK	**DEVIATIONS 19 km (IO NM)**	**LEVEL CHANGE**
EAST 000 – 179 Magnetic	LEFT RIGHT	DESCEND 300 FT CLIMB 300 FT
WEST 180 – 359 Magnetic	LEFT RIGHT	CLIMB 300 FT DESCEND 300 FT

10.0 PROCEDURES TO MITIGATE WAKE TURBULENCE ENCOUNTERS AND DISTRACTING AIRCRAFT SYSTEM ALERTS IN THE AMMAN FIR

10.1 The following special procedures are applicable to mitigate wake turbulence or distracting aircraft system alerts (e.g., ACAS, Ground Proximity Warning System):

NOTE: In the contingency circumstances below, ATC will not issue clearances for lateral offsets and will not normally respond to actions taken by the pilots.

10.2 An aircraft that encounters wake vortex turbulence or experiences distracting aircraft system alerts shall notify ATC and request a flight level, track or speed change to avoid the condition. However, in situations where such a change is not possible or practicable, the pilot may initiate the following temporary lateral offset procedure with the intention of returning to center line as soon as practicable:

a) The pilot should establish contact with other aircraft, if possible, on the appropriate VHF inter-pilot air to air frequency; 123.45 MHz, and

b) One (or both) aircraft may initiate lateral offset(s) not to exceed 2 NM from the assigned track, provided that:

* as soon as practicable to do so, the offsetting aircraft notify ATC that ***temporary*** lateral offset action has been taken and specify the reason for doing so ***(ATC will not normally respond);*** and

* the offsetting aircraft notify ATC when re-established on assigned route(s) or track(s). ***(ATC will not normally respond).***

11.0 VERTICAL SEPARATION MINIMA

11..1 The applicable vertical separation minimum between RVSM Compliant aircraft operating within the Amman RVSM airspace shall be (1000 ft).

11.2 Within the Amman RVSM airspace, a vertical separation minimum of (1000 ft) is applicable only when both aircraft are RVSM Compliant

11.3 The applicable vertical separation minimum between Non-RVSM Compliant aircraft and any other aircraft operating within the Amman RVSM airspace shall be (2000ft)..

11.4 The applicable vertical separation minimum between all formation flights operating within the Amman RVSM airspace shall be (2000 ft).

11.5 Formation flights of State aircraft shall be considered as Non-RVSM Compliant, regardless of the RVSM Compliant status of the individual aircraft concerned. Formation flights of State aircraft will be accommodated within the Amman RVSM airspace on the basis of an applicable vertical separation minimum of(2 000 ft).

11.6 Since ATC is unable to determine the extent of any equipment failure for an aircraft experiencing a communication failure in flight, the applicable vertical separation minimum between an aircraft experiencing a communication failure in flight and any other aircraft, where both aircraft are operating within the Amman RVSM airspace, shall be (2000 ft**),** unless an appropriate horizontal separation minimum exists

12.0 FLIGHT PLANNING REQUIREMENTS

The operator must determine whether or not the appropriate State authority has certified that the crew and aircraft is RVSM Compliant before filing a Flight Plan for any flight that will enter the Amman FIR RVSM airspace. If the crew and aircraft is determined to be Non-Compliant, Para. 13.0 below will apply.

13.0 PROCEDURES FOR OPERATION OF NON-RVSM COMPLIANT AIRCRAFT IN RVSM AIRSPACE

13.1 **FLIGHT PRIORITY**: It should be noted that RVSM Compliant aircraft will be given priority for level allocation over Non-RVSM Compliant aircraft.

13.2 **VERTICAL SEPARATION APPLIED**: The vertical separation minimum between Non-RVSM Compliant aircraft operating in the RVSM stratum and all other aircraft is 2,000 ft.

13.3 **CONTINUOUS CLIMB/DESCENT OF NON-RVSM COMPLIANT AIRCRAFT THROUGH RVSM AIRSPACE** : Non-RVSM Compliant aircraft may be cleared to climb to and operate at or above FL 430 or descend to and operate at or below FL 280, provided that they:

a) Do not climb or descend at less than the normal rate for the aircraft and

b) Do not level off at an intermediate level while passing through the RVSM stratum.

13.4 **SPECIAL COORDINATION PROCEDURES FOR CRUISE OPERATION OF NON-RVSM COMPLIANT AIRCRAFT IN RVSM AIRSPACE.**

13.5.1 Non-RVSM Compliant aircraft may not flight plan between FL 290 and FL 410 inclusive within RVSM airspace. However, if at least 24 hours prior to departure, specific coordination is carried out with the Amman TACC and approval for the flight is received, the following Non RVSM Compliant aircraft may flight plan at RVSM flight levels in the RVSM airspace.

a) Aircraft is being initially delivered to the State of Registry or Operator (see Paragraph 14.0 for additional details and information); or

b) Aircraft was formally RVSM Compliant but has experienced an equipment failure and is being flown to a maintenance facility for repair in order to renew its RVSM Compliant status or

c) Is transporting a spare engine mounted under the wing; or

d) Aircraft is being utilized for mercy or humanitarian purposes; or

e) It is a State aircraft (those aircraft used in military, custom and police services shall be deemed state aircraft)

13.5.2 Contact details for coordination with Amman TACC:

AFTN	OJAIZQZX
TEL	0096 2 6 4451672
FAX	0096 2 6 4452811

13.5.3 These procedures are intended exclusively for the purposes indicated above and not as a means to circumvent the normal RVSM approval process.

14.0 DELIVERY FLIGHTS FOR AIRCRAFT THAT ARE RVSM COMPLIANT

14.1 An aircraft that is RVSM compliant on delivery may operate in RVSM airspace provided that the crew is trained on RVSM policies and procedures applicable in the airspace and the responsible State issues the operator a letter of authorization approving the operation. State notification to the MECMA should be in the form of a letter, e-mail or *fax* documenting the one-time flight. The planned date of the flight, flight identification, registration number and aircraft type/series should be included. Email address is **traffic@mecma.com** . Fax number is 971-2-449-1599.

15.0 PROCEDURES FOR SUSPENSION OF RVSM

15.1 **AMMAN TACC** will consider suspending RVSM procedures within affected areas of the Amman FIR when there are pilot reports of greater than moderate turbulence. Within areas where RVSM procedures are suspended, the vertical separation minimum between all aircraft will be at least 2,000 ft.

16.0GUIDANCE FOR PILOTS AND CONTROLLERS FOR ACTIONS IN THE EVENT OF AIRCRAFT SYSTEM MALFUNCTION OR TURBULENCE GREATER THAN MODERATE

16.1 **SCENARIO#1:** The pilot is:

a) Unsure of the vertical position of the aircraft due to the loss or degradation of all primary altimetry systems, or

1) Unsure of the capability to maintain cleared flight level (CFL) due to turbulence or loss of all automatic altitude control systems.

THE PILOT SHOULD		ATC CAN BE EXPECTED TO
Maintain CFL while evaluating the situation;		Obtain the pilot's intentions and pass essential traffic information.
Watch for conflicting traffic both visually and by reference to ACAS, if equipped		1) If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal or conventional vertical separation and if so, apply the appropriate minimum
If considered necessary, alert nearby aircraft by 1) Making maximum use of exterior lights; 2) Broadcasting position, FL, and intentions on 121.5 MHz (as a back-up, the VHF inter-pilot air-to-air frequency, 123,45MHz, may be used).		2) If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible. 3) If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation. 4) Notify adjoining ATC Facilities / Sectors of the situation.
Notify ATC of the situation and intended course of action. Possible courses of action include: 1) Maintain the CFL and route provided that ATC can provide lateral, longitudinal or conventional vertical separation. 2) Request ATC clearance to climb above or descend below RVSM airspace if the aircraft cannot maintain CFL and ATC cannot establish adequate separation from other aircraft. 3) Executing the contingency maneuver shown in paragraphs 7.0 and 8.0 of this AlP Supplement to offset from the assigned track and FL, if ATC clearance cannot be obtained and the aircraft cannot maintain CFL.		

16.2 SCENARIO # 2: There is a failure or loss of accuracy of one primary altimetry system. (e.g., greater than 200 foot difference between primary altimeters)

THE PILOT SHOULD
1) Cross check standby altimeter, confirm the accuracy of a primary altimeter system.
2) Notify ATC of the loss of redundancy.
3) If unable to confirm primary altimeter system accuracy, follow pilot actions listed in the preceding scenario.

17.0 EXPANDED EQUIPMENT FAILURE AND TURBULENCE ENCOUNTER SCENARIOS

Operators may consider this material for use in training programs.

1.1 SCENARIO #1: All automatic altitude control systems fail (e.g., Automatic Altitude Hold)

THE PILOT SHOULD	ATC CAN BE EXPECTED TO
Initially Maintain CFL	1) If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum,
Evaluate the aircraft's capability to maintain altitude through manual control.	2) If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible.
Subsequently watch for conflicting traffic both visually and by reference to ACAS, if equipped.	3) If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation.
If considered necessary, alert nearby aircraft by 1) Making maximum use of exterior lights; 2) Broadcasting position, FL, and intentions on 121.5MHz (as a back-up, the VHF inter-pilot air-to-air frequency, 123.45MHz, may be used.)	4) Notify adjoining ATC facilities/ sectors of the situation.
Notify ATC of the failure and intended course of action. Possible courses of action include; 1) Maintaining the CFL and route, provided that the aircraft can maintain level. 2) Requesting ATC clearance to climb above or descend below RVSM airspace if the aircraft cannot maintain CFL and ATC cannot establish lateral, longitudinal or conventional vertical separation. 3) If a revised ATC clearance cannot be obtained, execute the contingency maneuver, shown in paragraphs 7.0 and 8,0, above, to offset from the assigned Track and FL.	

1.1 SCENARIO #2: Loss of redundancy in Primary Altimeter Systems.

THE PILOT SHOULD	ATC CAN BE EXPECTED TO
If the remaining Altimetry System is functioning normally. Couple that system to the Automatic Altitude Control System, notify ATC of the loss of redundancy and maintain vigilance of altitude keeping.	Acknowledge the situation and continue to monitor progress.

1.1.1 SCANARIO # 3: All primary Altimetry System are considered unreliable or fail

3 THE PILOT SHOULD	ATC CAN BE EXPECTED TO
Maintain CFL by reference to the standby altimeter (if the aircraft is so equipped)	Obtain pilots intentions, and pass essential traffic information .
Alert nearby aircraft by 1- Making maximum use of exterior lights; 2- Broadcasting position, FL, and intentions on 121.5MHz (as a back-up, the VHF inter-pilot air-to –air frequency, 123.45MHz, may be used)	1- If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation. And if so, apply the appropriate minimum. 2- If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible. 3- If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation. 4- Notify adjoining ATC facilities/sectors of the situation.
Consider declaring an emergency. Notify ATC of the failure and intended course of action. Possible courses of action include: 1- Maintaining CFL and route provided that ATC can provide lateral, longitudinal or conventional vertical separation. 2- Requesting ATC clearance to climb above or descend below RVSM airspace if ATC cannot establish adequate separation from other aircraft.. 3- Executing the contingency maneuver shown in paragraphs 7.0 and 8.0 of this AIP Supplement to offset from the assigned track and FL, if ATC clearance cannot be obtained.	

17.4 SCENARIO #4 The Primary Altimeters diverge by more than 200 FT (60m).

THE PILOT SHOULD
Attempt to determine the defective system through established trouble-shooting procedures and/or comparing the primary altimeter displace to the standby altimeter (as corrected by the correction cards, if required).
If the defective system can be determined, couple the functioning altimeter system to the altitude keeping device
If the defective system cannot be determined, follow the guidance in Scenario 3 for failure or unreliable altimeter indications of all primary altimeters.

1.1.1 **SCENARIO #5**: Turbulence (greater than Moderate) which the pilot believes will impact the aircraft's capability to maintain level flight.

THE PILOT SHOULD	ATC CAN BE EXPECTED TO
Watch for conflicting traffic both visually and by reference to ACAS, if equipped. If considered necessary, alert nearby aircraft by: 1) Making maximum use of exterior lights; 2 Broadcasting position, FL. and intentions on 121.5 MHz (as a back-up, the VHF inter-pilot air-to-air frequency, 123.45MHz, may be used). Notify ATC of intended course of action as soon as Possible. Possible courses of action include: 1) Maintaining CFL and route provided ATC can provide lateral. Longitudinal or conventional vertical separation. 2) Requesting flight level change, if necessary. 3) Executing the contingency maneuver shown in paragraphs 7.0 and 8.0 of this AlP Supplement to offset from the assigned track and FL, if ATC clearance cannot be obtained and the aircraft cannot maintain CFL.	1) Assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum. 2) If unable to provide adequate separation, advise the pilot of essential traffic information and request pilot's intentions 3) Notify other aircraft in the vicinity and monitor the situation 4) Notify adjoining ATC facilities/sectors of the situation.