

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N7210.601

5/5/05

Cancellation
Date: 5/11/06

SUBJ: DOMESTIC REDUCED VERTICAL SEPARATION MINIMUM (DRVSM)

- 1. PURPOSE.** This Notice provides additional clarification on procedures to be used when operating in Domestic Reduced Vertical Separation Minimum (DRVSM) airspace.
- 2. DISTRIBUTION.** This notice is distributed to select offices in Washington headquarters, the service area offices, Mike Monroney Aeronautical Center, and all air traffic field facilities.
- 3. EFFECTIVE DATE.** This notice is effective May 12, 2005, and will remain in effect for 1 year or until the changes are published in FAA Order 7210.3, whichever occurs first.
- 4. CANCELLATION.** Notice N7110.591, Domestic Reduced Vertical Separation Minimum (DRVSM), dated January 7, 2005.
- 5. BACKGROUND.** The vertical separation minimum at flight levels 290 thru 410 has been reduced from 2000 feet to 1000 feet within many areas of the world. This reduced vertical separation minimum became effective within the domestic United States and specified adjoining airspace on January 20, 2005.

Recently the DRVSM Post-Implementation Analysis and Review Team (PART) conducted a follow-up analysis of DRVSM since its implementation. As a result they have made several recommendations for improvements and changes to current procedures. These include elimination of the pre-coordination process for handling exception aircraft.

- 6. EXPLANATION OF CHANGES.** This Notice is identical to Notice N7110.591 except for the following changes and additions.

Subparagraph 2-2-4 b1(a)(14) - Changed to non-RVSM aircraft operations.

Subparagraph 6-9-1c – Adds options available to operators of non-RVSM exception aircraft.

Subparagraph 6-9-1d – Adds requirements for managing non-RVSM aircraft.

Subparagraph 6-9-1e - Adds reference to STORM flight.

Subparagraph 6-9-2e – Removes a requirement to document denials of exception aircraft into RVSM airspace.

Subparagraph 6-9-3e - Adds a requirement for operational supervisor workstations to have access to the Department of Defense (DoD) Priority Mission website and that appropriate training is given.

Subparagraph 6-9-4b – Adds reference to STORM flight status.

Subparagraph 6-9-4e - Deletes a requirement to coordinate pre-coordinated exceptions. Adds requirements for operational supervisors/controllers-in-charge (CIC) when coordinating non-RVSM exception aircraft outbound from the United States (U.S.).

Subparagraph 6-9-4f - Adds requirements for operational supervisors/CICs when coordinating non-RVSM exception aircraft entering Canadian controlled airspace.

Subparagraph 6-9-4g - Adds a requirement for STORM flights and DoD exception aircraft.

Subparagraph 6-9-4h – Adds a requirement DoD STORM flights.

Subparagraph 6-9-4i - Adds a requirement concerning coordination of STORM flights.

Subparagraph 6-9-4j - Renumbered due to other changes.

Paragraph 6-9-5 - Name of paragraph changed.

Subparagraph 6-9-5b - Changes reference to Foreign State aircraft and how they will be handled.

Subparagraph 6-9-5c - Adds TMU requirements regarding handling of non-RVSM exception aircraft inbound to the U.S.

7. PROCEDURES.

a. Amend FAA Order 7210.3T, Paragraph 2-2-4, Duty Familiarization and the Transfer of Position Responsibility, to read as follows:

a. thru b.1.(a)(13) *NOTE-* No Change

Add:

(14) Non-RVSM aircraft operations.

(15) TRAFFIC.

No further changes to paragraph.

Add Section 9 to Chapter 6, En Route Operations and Services, to read as follows:

Section 9. Reduced Vertical Separation Minimum (RVSM)

6-9-1. GENERAL

a. RVSM reduces the standard separation between FL290 and FL410 from 2,000 feet to 1,000 feet for those aircraft approved for operation within these altitude strata. The six additional altitudes provide the users fuel savings and operational efficiencies while providing ATC flexibility, mitigation of conflict points, enhanced sector throughput and reduced controller workload for air traffic control operations.

b. RVSM is applied in that airspace from FL290 through FL410 over the domestic United States, Alaska, the Gulf of Mexico where the FAA provides air traffic services, the San Juan FIR, across international borders with Canada and Mexico, and the Pacific and Atlantic Oceanic airspace controlled by the FAA. There are two forms of RVSM airspace:

1. RVSM Airspace. Use of the term RVSM airspace refers to the RVSM exclusive environment. Aircraft operating in this airspace must be RVSM approved.

NOTE-

1. *The following non-RVSM aircraft are exceptions to the exclusive RVSM airspace however, access will be on a workload-permitting basis:*

- a. DoD aircraft.*
- b. Lifeguard aircraft.*
- c. Aircraft being flown by manufacturers for development and certification.*
- d. Foreign State aircraft.*

2. *Aircraft not approved for RVSM operations may transition through RVSM airspace to operate above or below.*

2. Transition Airspace. Airspace where both RVSM aircraft and non-RVSM aircraft may be accommodated at all altitudes and RVSM approval is not required. Transition airspace connects airspace wherein conventional separation is applied to RVSM airspace. One thousand feet vertical separation can only be applied between RVSM aircraft. Two thousand feet separation must be applied between non-RVSM aircraft or whenever one of the aircraft is non-RVSM.

c. Non-RVSM exception aircraft may access RVSM airspace in one of the following ways:

1. LOA/MOU: Complies with a Letter of Agreement (LOA)/Memorandum of Understanding (MOU) for operations within a single or adjacent ARTCCs.

2. File-and-Fly: Files a flight plan and makes the initial request to access RVSM airspace by requesting an ATC clearance.

d. Facilities with RVSM airspace must:

1. Provide guidance in the facility Standard Operating Procedures (SOP) for managing non-RVSM flights.

2. Where available, display the Center Monitor on the Traffic Situation Display in each area and the TMU. This will aid in the coordination and decision making process for approving non-RVSM flights.

e. A non-RVSM exception designated by the DoD for special consideration via the DoD Priority Mission website shall be referred to as a STORM flight.

6-9-2. FACILITY MANAGER RESPONSIBILITIES

- a. Ensure all facility directives are current to support RVSM.
- b. Ensure all LOAs, SOPs, MOUs and Sector Position Binders are current to support RVSM.
- c. Ensure airspace is continually reviewed for impact of RVSM.
- d. Ensure all height deviations of 300 feet or more are recorded and forwarded to the FAA Technical Center in Atlantic City, New Jersey at NAARMO@faa.gov.

REFERENCE-

FAAO 7210.56, para 4-1-9, Invalid Mode C Reporting

6-9-3. OPERATIONS MANAGER-IN-CHARGE RESPONSIBILITIES

Responsibilities shall include but not be limited to the following:

- a. Maintain an operational awareness of RVSM impact specifically any non-RVSM aircraft being worked within RVSM airspace.
- b. Ensure proper coordination is accomplished between the STMC/TMU and the operations supervisors/controllers-in-charge regarding the accommodation and handling of any non-RVSM aircraft.
- c. Ensure, in conjunction with the Traffic Management Officer, that monitor alert parameters are reviewed and adjusted with RVSM impacts considered.
- d. Ensure the proper RVSM software is turned on.
- e. **Ensure that all operational supervisor workstations have access to the DoD Priority Mission website and that supervisors/controllers-in-charge have received appropriate training on the website.**

6-9-4. OPERATIONS SUPERVISOR-IN-CHARGE/CONTROLLER-IN-CHARGE RESPONSIBILITIES

Responsibilities shall include but not be limited to the following:

- a. Maintain an awareness of all operational impacts associated with RVSM, specifically any non-RVSM aircraft currently within area sectors or projected to be in sectors under his/her area of responsibility.
- b. Ensure sector personnel have been properly briefed regarding any known non-RVSM aircraft in or projected to be in sectors under his/her area of responsibility, **including DoD STORM flight status.**
- c. Ensure sector workload remains manageable when non-RVSM aircraft are in or projected to be in sectors under his/her area of responsibility.
- d. Coordinate all non-RVSM aircraft with operational supervisors/CIC as appropriate, both internally and externally, to ensure the aircraft is coordinated and accepted along its route of flight.
- e. **Non-RVSM Exception Flights Outbound from the U.S. The operational supervisor/CIC from the last area to have communications and operational control of the aircraft in the facility where an aircraft departs RVSM airspace designated for United States air traffic control, or exit facility, shall coordinate with the international point-of-contact in a timely manner.**

f. For non-RVSM exception aircraft that will enter Canadian Controlled Airspace, the operational supervisor/CIC from the last area to have communications and operational control of the aircraft in the exit facility shall coordinate with the National Operations Center (NOC) in a timely manner.

g. Verify DoD STORM flight status via the DoD Priority Mission website whenever a DoD exception aircraft requests accommodation, and whenever notified by a controller that a DoD exception's request for accommodation was denied.

h. Give special consideration to DoD STORM flights when determining whether an exception aircraft can be accommodated in your area.

i. Ensure coordination is accomplished to inform sectors when an inbound flight is a DoD STORM flight. This procedure applies to coordination in U.S. airspace only.

j. Ensure controllers at applicable sectors have their DSR MDM properly aligned to display the RVSM indicator depicting those aircraft that are non-RVSM.

6-9-5. NON-RVSM REQUIREMENTS

a. RVSM approval is required for aircraft to operate within RVSM airspace. The operator must determine that the appropriate State authority has approved the aircraft.

b. DoD, Lifeguard, aircraft operated by manufacturers for certification and development, and Foreign State exception aircraft will be accommodated in RVSM airspace on a workload permitting basis.

c. Non-RVSM Exception Flights Inbound to United States. The TMU at the facility where an aircraft penetrates RVSM airspace designated for United States air traffic control, or entry facility, receives the coordination from an international point-of-contact advising of an inbound non-RVSM exception. The TMU shall coordinate with the operational supervisor/CIC in a timely manner.

6-9-6. EQUIPMENT SUFFIX AND DISPLAY MANAGEMENT

RVSM aircraft will file the equipment suffix "W" or "Q". NAS automation has been modified to reflect non-RVSM aircraft with a coral box around the fourth character in the altitude segment of the data block. Conflict alert parameters will distinguish between RVSM and non-RVSM aircraft based upon the "W" or "Q" suffix for the appropriate separation standard to be applied.

6-9-7. MOUNTAIN WAVE ACTIVITY (MWA)

In areas of known MWA, aircraft operators have been encouraged to report encountering this weather event and the severity of its impact. Operators may request assistance in the form of reroutes, change of altitude, vectors, or merging target procedures.

6-9-8. WAKE TURBULENCE AND WEATHER RELATED TURBULENCE

a. *Oceanic:* Aircraft experiencing turbulence can be anticipated to advise ATC and request a revised clearance. In instances where a revised clearance is not possible or practicable the aircraft may

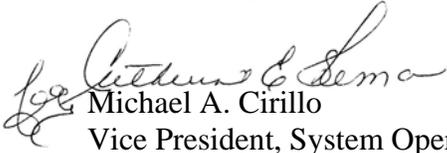
fly a lateral offset not to exceed 2NM from the assigned route or track, advise ATC as soon as practical and return to the assigned route when the offset is no longer required.

b. *Domestic:* Aircraft experiencing turbulence can be anticipated to advise ATC and request a clearance for mitigation in the form of vectors, altitude change or to fly an offset.

6-9-9. SUSPENSION OF RVSM

a. *Domestic:* RVSM will not be suspended in domestic airspace. Should turbulence or other weather phenomena require, separation can be increased in a defined area and thoroughly coordinated operationally.

b. *Oceanic:* Air Traffic Service providers will consider suspending RVSM procedures within affected areas when pilot reports of greater than moderate turbulence are received. Within airspace where RVSM procedures are suspended, the vertical separation minimum between all aircraft will be 2,000 feet above FL290.



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