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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ
ГРАЖДАНСКОЙ АВИАЦИИ
Европейское/Североатлантическое бюро

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Reference : T 13/3 – 05-0099.ATM

10 February 2005

Subject : **Correct application of the strategic lateral offset procedures**

Action
required : As indicated in paragraph 3

Sir/Madam,

1. I have the honour to refer to the Secretary General's letter AN 13/11.6-04/85 of 27 August 2004 and to the proposal for amendment to the NAT Regional Supplementary Procedures Serial Number S 01/36 – NAT RAC/14, which was approved by the President on behalf of the Council on 20 November 2003. A copy of the approved proposal for amendment and of the Aeronautical Information Circular (AIC) are enclosed for ease of reference. All NAT Region provider States implemented the procedure on 10 June 2004.

2. The North Atlantic Systems Planning Group (NAT SPG), in its effort to reduce the risk in the NAT Region, had agreed that the implementation of the strategic lateral offset procedure was required. However, an initial analysis of the use of strategic lateral offsets has shown that few flight crews have been applying the procedure and the expected risk reduction has not been achieved. It was determined that this was probably because many flight crews had not been made aware of the procedure or the benefit of applying the procedure.

3. A pre-requisite for future reductions in separation minima and therefore increased efficiencies, is that all risk reduction procedures be correctly implemented. I would therefore urge you to remind all NAT airspace users of the importance of applying the offset procedure as detailed in the attached proposal for amendment.

Please accept the assurances of my highest consideration.

Karsten Theil
ICAO Regional Director
Europe and North Atlantic

Enclosure

Distribution: NAT Provider and User States and international organizations concerned



PROPOSAL FOR AMENDMENT OF THE REGIONAL SUPPLEMENTARY PROCEDURES, NAT REGION (Doc 7030/4)

(Serial No.: EUR/NAT-S 01/36 – NAT RAC/14)

a) Regional Supplementary Procedures:

Doc 7030/4 - NAT, Part 1 Rules of the Air, Air Traffic Services and Search and Rescue, incorporating Amendment No. 207

b) Proposed by:

The United States of America.

c) Proposed amendment:

1. **Amend** Section 7.3 *Special contingency procedures for subsonic aircraft* as follows:

"7.3.2.1 If unable to obtain prior air traffic control clearance, the aircraft should leave its assigned route or track by initially turning 90 degrees to the right or left to acquire an offset track of 56 km (30 NM). The direction of the turn should, where possible, be determined by the position of the aircraft relative to any organized route or track system (e.g. whether the aircraft is outside, at the edge of, or within the organized track system (OTS)). Other factors, which may affect the direction of the turn, are the location of an alternate airport, terrain clearance, any lateral offset being flown and levels allocated on adjacent routes or tracks.

...

7.3.3.2 An aircraft that is unable to maintain its assigned flight level should:

- a) initially minimize its descent rate to the extent possible;
- b) take account of other aircraft possibly being laterally offset from its track;
- bc) select a flight level which differs from those normally used by 300 m (1 000 ft) if above FL 410 or by 150 m (500 ft) if below FL 410;
- ed) if it is a random track aircraft operating in MNPS airspace and its distance is less than 110 km (60 NM) from any organized track, establish and maintain a 56 km (30 NM) offset track from any OTS track prior to initiating descent if the aircraft is able to do so; and
- de) contact ATC as soon as practicable and request a revised ATC clearance."

2. **Replace** in entirety the wording contained in paragraph 7.5 *Special procedures to mitigate wake turbulence encounters in the NAT Region* as follows:

Insert new text as follows:

7.5 Special procedures for lateral offsets within NAT airspace

Note.— The following incorporates lateral offset procedures for both the mitigation of the increasing lateral overlap probability and wake turbulence encounters.

7.5.1 It has been determined that allowing aircraft conducting oceanic flight to fly lateral offsets, not to exceed 2 NM right of centreline, will provide an additional safety margin and mitigate the risk of conflict when non-normal events such as aircraft navigation errors, altitude deviation errors and turbulence induced altitude-keeping errors occur.

7.5.2 This procedure provides for offsets within the following guidelines. Along a route or track there will be three positions that an aircraft may fly: centreline or one or two miles right. Offsets will not exceed 2 NM right of centreline. The intent of this procedure is to reduce risk (add safety margin) by distributing aircraft laterally across the three available positions.

- a) Aircraft without automatic offset programming capability must fly the centreline.
- b) Operators capable of programming automatic offsets may fly the centreline or offset one or two nautical miles right of centreline to obtain lateral spacing from nearby aircraft. (Offsets will not exceed 2 NM right of centreline). An aircraft overtaking another aircraft should offset within the confines of this procedure, if capable, so as to create the least amount of wake turbulence for the aircraft being overtaken.
- c) Pilots should use whatever means is available to determine the best flight path to fly.
- d) Pilots should also fly one of the three positions shown above to avoid wake turbulence. Aircraft should not offset to the left of centreline nor offset more than 2 NM right of centreline. Pilots may contact other aircraft on frequency 123.45, as necessary, to coordinate the best wake turbulence offset option.

Note.— It is recognized that the pilot will use his/her judgement to determine the action most appropriate to any given situation and has the final authority and responsibility for the safe operations of the aeroplane.

- e) Pilots may apply an offset outbound at the oceanic entry point and must return to centreline at the oceanic exit point.
- f) Aircraft transiting oceanic radar areas may remain on their established offset positions.
- g) There is no ATC clearance required for this procedure and it is not necessary that ATC be advised.

End of new text

AERONAUTICAL INFORMATION CIRCULAR

Application of strategic lateral offsets in North Atlantic Region airspace

1. Introduction

1.1 During recent years, the introduction of very accurate aircraft navigation systems, along with sophisticated flight management systems, has drastically reduced the number of risk bearing lateral navigation errors reported in North Atlantic (NAT) airspace. Paradoxically, the propensity of aircraft to navigate to such a high level of accuracy has led to a situation where aircraft on the same track but at different levels, are increasingly likely to be in horizontal overlap. The effect of this is to increase the risk of collision in the event that, for whatever reason, an aircraft departs from its cleared level.

1.2 It must be stressed that the current estimated risk of a mid-air collision in NAT airspace is at an all time low, and is exhibiting a downward trend. However, NAT Service Providers' have a responsibility to their customers to continually assess the level of risk in the NAT and make modifications to system operation to ensure the highest possible level of safety. Accordingly, following a successful trial in the West Atlantic Route System (WATRS), it has been determined that by allowing aircraft conducting oceanic flights to fly lateral offsets not exceeding 2 NM right of centreline, an additional safety margin will be provided and will mitigate the risk of collision when non-normal events such as operational altitude deviation errors and turbulence induced altitude deviations occur.

2. The strategic lateral offset procedure

2.1 The procedure provides for the application of lateral offsets within the following guidelines:

- a) strategic lateral offsets and those executed to avoid wake turbulence are to be made to the **right** of a route or track;
- b) in relation to a route or track, there are three positions that an aircraft may fly: centreline, one or 2 NM **right**; and,
- c) offsets are not to exceed 2 NM **right** of centreline.

2.2 The intent of this procedure is to reduce risk (increase the safety margin) by distributing aircraft laterally and equally across the three available positions. In this connection, pilots must take account of the following:

- a. aircraft without automatic offset programming capability **must** fly the centreline;
- b. aircraft capable of being programmed with automatic offsets may fly the centreline or offset one or 2 NM right of centreline to obtain lateral spacing from nearby aircraft;
- c. pilots should use whatever means are available (e.g. TCAS, communications, visual acquisition, GPWS) to determine the best flight path to fly;
- d. any aircraft overtaking another aircraft is to offset within the confines of this procedure, if capable, so as to create the least amount of wake turbulence for the aircraft being overtaken;
- e. for wake turbulence purposes, pilots are also to fly one of the three positions at 2.2b above and never offset to the left of centreline nor offset more than 2 NM right of centreline;

Note.— It is recognized that the pilot will use his/her judgement to determine the action most appropriate to any given situation and has the final authority and responsibility for the safe operation of the aeroplane. The use of air-to-air channel, 123.45, may be used to co-ordinate the best wake turbulence offset option.

- f. pilots may apply an offset outbound at the oceanic entry point but must return to centreline at the oceanic exit point;
- g. aircraft transiting radar-controlled airspace e.g. Bermuda, are to remain on their established offset positions;
- h. there is no ATC clearance required for this procedure and it is not necessary that ATC be advised; and,
- j. position reports are to be based on the current ATC clearance and not the exact co-ordinates of the offset position. An example of a report when passing 54N 020W while being offset from track is “*Shanwick, Austrian 73, position 54N 020W, 1222, estimate ...etc*”.

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