



Safety Warning Message

- *Safety Subject:* EMERGENCY DESCENT IN HIGH TRAFFIC DENSITY SITUATIONS
 - *Origin:* EUROCONTORL ATM Procedures Development Sub-Group
 - *Date:* 22/07/2010
 - *Distribution:* Procedure Designers and Aviation Safety Professionals
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PURPOSE

This Safety Warning Message is raised to highlight the concerns of European aviation stakeholders related to 'emergency descent', in particular in high traffic density scenarios.

SYNOPSIS

Existing ICAO provisions describe what is expected from air traffic controllers and pilots in the event of an emergency descent, including the option for ATC to broadcast an emergency message regarding the emergency descent. However, the provisions may, in some circumstances specific to high density operations, lead to potential risks for operations and several European States have therefore promulgated different national procedures to be followed.

ICAO PROVISIONS

According to ICAO PANS ATM, § 15.1.4: "*Upon receipt of advice that an aircraft is making an emergency descent through other traffic, all possible action shall be taken immediately to safeguard all aircraft concerned. When deemed necessary, air traffic control units shall immediately broadcast an emergency message.*"

PANS ATM, § 12.3.2.5 specifies the emergency message phraseology: "*ATTENTION ALL AIRCRAFT IN THE VICINITY OF [or AT] (significant point or location) EMERGENCY DESCENT IN PROGRESS FROM (level) (followed as necessary by specific instructions, clearances, traffic information, etc.)*"

With regard to the actions by the pilots-in-command (PIC), PANS ATM § 15.1.4.2 states: "*It is expected that aircraft receiving such a broadcast will clear the specified areas and stand by on the appropriate radio frequency for further clearances from the air traffic control unit.*"

In addition, the provision 9.1.1.1 of the European Regional Supplementary Procedures, ICAO Doc. 7030, recommends pilots of the aircraft executing an emergency descent to "*...initiate a turn away from the assigned route or track before commencing the emergency descent*"

ANALYSIS

A broadcast of a message associated with emergency descent is optional and depends on the best judgement of ATC in a given set of circumstances. However, the pilot community expressed a need to be informed of such events especially with regard to ACAS TAs/RAs that may be experienced when they are in close proximity to aircraft conducting an emergency descent.

An emergency message broadcast would also be received by aircraft not necessarily affected by the emergency descent. Therefore, unless the emergency broadcast is appropriately targeted and contains unambiguous instructions, there is the possibility of aircraft unexpectedly deviating from their track to '*clear the specified area*' which, in **areas of high traffic density**, has the **potential to create additional hazardous situations**.

In mitigation, several ATS authorities and ANSPs in the EUR Region have published in their national AIPs, procedures indicating clearly that an aircraft receiving an emergency broadcast is

not expected to leave the specified area, but is to continue according to their latest clearance unless threatened by immediate danger, and to stand by on the appropriate channels for specific clearances and instructions.

EMERGING CONSIDERATIONS

The EUROCONTROL Airspace and Navigation Team has approached the ATM Section of ICAO Montreal with proposals for a global, or alternatively a regional, solution, as appropriate.

In the meantime, it is suggested that air traffic controllers:

- Note the potential pilot actions stemming out of the requirements of PANS-ATM § 15.1.4. 2.
- Where practicable, try to provide specific instructions to those aircraft that would be in direct conflict with the emergency descent aircraft, when it is judged necessary to broadcast an emergency message.
- Follow national procedures where these are published.

YOUR ATTENTION IS REQUIRED

- Please note the subject and consider the relevance to your operational environment.
- Share your experiences concerning the issue described.

FURTHER READING

- ICAO Doc. 4444 - PANS ATM.
- ICAO Doc. 7030 – Regional Supplementary Procedures.
- SKYbrary - www.skybrary.aero .

DISCLAIMER

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