



Safety Reminder Message

- **Safety Subject:** OWN SEPARATION BETWEEN IFR FLIGHTS IN VMC AND INTERACTION WITH ACAS II OPS
 - **Origin:** European Air Navigation Service Provider
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 - **Distribution:** Aviation Safety Professionals
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SYNOPSIS

This Safety Reminder Message is prompted by an incident in **Class C en route airspace** between two IFR passenger-carrying aircraft whose pilots were **requested by ATC** to apply 'own separation' (based on visual acquisition) for a short period of time. In the State where the incident originated, ATC uses this practice as permitted by that State's Rules of the Air. The intention of the request was to continue the climb of one aircraft through the level of the other one. Essential traffic information was passed to both aircraft, but the outcome of the subsequent VMC manoeuvring was a close encounter between the aircraft.

Events such as these raise a number of safety issues relevant to air traffic controllers, aircraft operators and aviation regulators:

- The use of 'own separation' between IFR flights in VMC in circumstances other than those specified in existing ICAO provisions.
- The potential incompatibility between VMC 'own separation' manoeuvring and ACAS II operations.

OWN SEPARATION BETWEEN IFR FLIGHTS IN VMC

ICAO Provisions

ICAO PANS ATM § 5.9 states that, "**when so requested by an aircraft and provided it is agreed by the pilot of the other aircraft and so authorised by the appropriate ATS authority, an ATC unit may clear a controlled flight, including **departing and arriving** flights, operating in **airspace Classes D and E** in visual meteorological conditions during the hours of daylight to fly subject to maintaining own separation to one other aircraft and remaining in visual meteorological conditions. When a controlled flight is so cleared, the following shall apply (inter alia):**

*a) the clearance shall be for a specified portion of the **flight at or below 3,050 m (10,000 ft)**, during climb or descent and subject to further restrictions as and when prescribed on the basis of regional air navigation agreements".*

Moreover, PANS ATM § 5.10.1.2 states, "*Essential traffic information shall be given to controlled flights concerned whenever they constitute essential traffic to each other.*

Note. *This information will inevitably relate to controlled flights cleared subject to maintaining own separation and remaining in visual meteorological conditions and also whenever the intended separation minimum has been infringed".*

Note: By definition, the use of 'own separation' should also be limited to aircraft flying at 250kts or less (speed limit imposed inside airspace Classes D and E when flying below FL100).

State Rules of the Air

In the State where the incident above occurred, the Rules of the Air for "Visual self separation on VMC" specify that such separation can be applied as follows:

*"a) Aircraft so authorised should guarantee that they **will not fly as close to the other aircraft as to endanger safety.***

*b) When requested by the aircraft or upon **proposal by an ATC unit**, clearance can be granted to an (IFR) flight upon condition of self separation, on VMC during day hours, provided:*

- *Clearance is only to facilitate climb or descent.*
- *Alternate clearance must be given when there is a possibility that VMC cannot be maintained.*
- *Essential traffic information is issued as necessary."*

Furthermore, the State Rules of the Air make **no** provision for any **particular airspace class, or level** on which such clearances can be granted, **or for acceptance of the pilot to have another aircraft crossing his level visually.**

VMC OWN SEPARATION and ACAS II OPERATIONS

VMC 'own separation' may result in close proximity between aircraft that could cause an ACAS resolution advisory (RA) to be generated. The use of visual 'own separation' manoeuvring may not always be compatible with the main objectives of ICAO PANS OPS § 3.3.2 related to ACAS II RAs, namely that, "*pilots shall respond immediately by following the RA as indicated, unless doing so would jeopardise the safety of the aeroplane*" and "*...visually acquired traffic may not be the same traffic causing a RA. Visual perception of an encounter may be misleading, particularly at night*".

YOUR ATTENTION IS REQUIRED

- Aircraft operators, air traffic service providers and aviation regulators are invited to consider the advisability of permitting the use of visual 'own separation' between IFR flights in VMC in circumstances other than those specified in the current ICAO PANS ATM § 5.9 provisions.
- Pilots must understand the full implications of requesting or accepting a clearance to maintain 'own separation' in VMC, namely:
 - There is a possible incompatibility with ACAS ops - a pilot has no means to know whether the visual separation he is applying is likely to trigger RA or not.
 - Moreover, it cannot be excluded that an RA will be generated only on one of the aircraft in the "VMC 'own separation' constellation" - not necessarily the one that is manoeuvring and keeping the other in sight.
 - **If an RA is generated during 'own separation' manoeuvring, then pilots must follow the RA.**

Note: Notwithstanding the above, ICAO PAN OPS states that, "*Nothing in the procedures... shall prevent pilots in command from exercising their best judgement and full authority in the choice of their best course of action to resolve a traffic conflict or avert a potential collision*".

- Aviation professionals are invited to share their operational experience concerning the issues described.

FURTHER READING

- ICAO Doc - 4444 - PANS ATM.
- ICAO Doc - 8186 - PANS OPS.

■ SKYbrary - www.skybrary.aero

For more information contact, EUROCONTROL Safety Alerts Coordinator, Richard Lawrence at: richard.lawrence@eurocontrol.int

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