

Safety Bulletin

13 FEBRUARY 2012

Deviations around weather

During every wet season there is a noticeable increase in the number of safety reports submitted for aircraft;

- deviating off route without a clearance;
- deviating off route by more than the cleared amount; or
- reporting back on route when they are not.

While the majority of these deviations are due to weather, and considered necessary by the pilot for safety reasons, they have on occasion contributed to significant occurrences, including breakdowns of separation.

In the Australian FIRs, all airspace above FL245 is Class A, with separation predicated on aircraft operating along the defined centre line of their cleared route. Improvements in aircraft navigation accuracy, increasing traffic levels and the requirement to improve operating efficiency has, over time, led to a reduction in the separation standards required between aircraft in non radar airspace.

ICAO Doc 4444 – Air Traffic Management requires lateral separation to be applied so that the distance between those portions of the intended routes for which the aircraft are to be laterally separated is never less than a distance that accounts for navigational inaccuracies plus a specified buffer (in Australia this buffer is 1NM). This means that if an aircraft deviates by more than 1NM from its cleared route, allowing for navigation equipment and other inaccuracies, the probability of infringing separation standards between aircraft is increased.

ICAO Doc 4444 and AIP Australia provide guidance to pilots in relation to weather deviations in Controlled Airspace, including:

- The requirement to obtain a clearance from ATC,
- How to obtain priority from ATC, and
- What to do if you cannot obtain a clearance from ATC.

It is acknowledged that all scenarios cannot be covered in ICAO publications or AIP and that under the rules of the air, and in the interests of safety, the pilot may deviate from route as necessary. However, by requesting clearance from ATC prior to commencing or increasing the diversion, the likelihood of infringing the separation standard with another aircraft is significantly reduced. AIP states that if unable to obtain a clearance and the pilot in command considers the deviation necessary, a PAN call specifying details of the deviation must be broadcast on the appropriate frequencies.

It should also be noted that, even though your aircraft may be outside of radar surveillance airspace, if ADS-B or ADS-C equipped, ATC will be aware of your position and your deviation off route will be observed.

Summary

Deviating off route due to weather is a frequent requirement, particularly during the wet season, and is often complicated by a range of factors. Procedures have been implemented regarding the majority of scenarios that may eventuate when deviating, including the pilot's overall responsibility for the safety of their aircraft and the right to deviate without ATC clearance if safety is jeopardised. However, pilots should be aware that due to the reduced tolerances of today's separation standards, coupled with the sheer volume of aircraft operating within Australian airspace, to preserve the safety of the airways system ATC should be contacted for a clearance prior to the deviation being commenced.

For further information:

- ICAO Annex 2 Para 3.6.2 - Adherence to Flight Plan
- ICAO Doc 4444 Para 15.2.3 – Weather Deviation Procedures
- AIP ENR 1.1 Para 19.7 – Deviation from Track
- AIP ENR 2.2 – Operations in Oceanic Controlled Airspace

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