►This RA has been substantially re-written; for clarity, no change marks are presented - please read RA in entirety◄

# RA 2310 – Flight Procedures: Role Specific Fixed Wing

**Rationale**

*UK military fixed wing aviation offers capabilities and challenges that are distinct from other Air Systems. Failure to appropriately address the nuances of fixed wing Air System role specific hazards could lead to an increased Risk to Life (RtL). This regulation requires Aviation Duty Holders (ADH) and Accountable Managers (Military Flying) (AM(MF)) to detail in orders the conduct of these role specific activities to ensure that RtL is As Low As Reasonably Practicable and Tolerable.*

**Contents**



**Regulation 2310(1)**

## Supersonic Flight

2310(1) ADH and AM(MF) **shall** publish orders detailing the conduct of supersonic flight for operations, training, tests and trials within their Area of Responsibility.

**Acceptable Means of Compliance 2310(1)**

## Supersonic Flight

1. **Conduct and Positioning of Supersonic Flights in the UK Flight Information Region (FIR)**. In the UK FIR, all supersonic flights **should** be conducted over the sea, unless supersonic flight over land is operationally required. Aircraft Commanders **should** ensure their Aircraft is at least 10 nautical miles (nm) out to sea and along a line of flight at least 20º divergent from the mean line of the coast. When the purpose of a dive manoeuvre is to achieve supersonic flight, the angle of dive **should not** exceed the minimum necessary. Supersonic flights with the Aircraft pointing towards the land, turning or flying parallel to the coast **should** take place at least 35 nm from the nearest coastline. Low-level supersonic flight **should** only take place if a radar / visual search is maintained to avoid the following by the margins stated: 3 nm from shipping and fixed or mobile oil and gas installations; 6 nm from civilian or military transport Aircraft, helicopters, helicopter main routes and corridors. If more than one radar unit is controlling within the same airspace, close co-ordination **should** be effected before any supersonic runs take place. Aircraft Commanders that know or suspect that they have infringed any of these criteria **should** follow the reporting procedure for Inadvertent Supersonic Flight, below.

2. **Supersonic Flights outside the UK FIR**. Supersonic flight **should** only be carried out in accordance with (iaw) host nation regulations.

3. **Recording of Supersonic Flights**. With the exception of operational missions that require supersonic flight, Commanders **should** notify the appropriate radar station of all planned supersonic flights in advance. Where supersonic flights do not conform to the pre-flight briefing, Aircraft Commanders **should** retrospectively make a record of the details of the supersonic flight in the flight authorization record. Similarly, radar stations **should** maintain a permanent record of supersonic flights carried out under their control. The permanent record **should** contain the following details:

   a. Aircraft.

   b. Time period during which supersonic flight conducted.

   c. Heading and speed of Aircraft (where known).

   d. Position (area in the case of sustained supersonic flight).

   e. Altitude and attitude (where known).

**Acceptable Means of Compliance 2310(1)**

4. **Inadvertent Supersonic Flight**. If any Aircraft Commander knows or suspects that their Aircraft has inadvertently made a supersonic flight that breaches this regulation, they **should** make a permanent record, as listed above, of the breach in the flight Authorization record. In addition, it is the responsibility of their parent unit concerned to notify the appropriate Control and Reporting Centre or Control and Reporting Point, Military Supervisor at 78 Sqn, Swanwick Mil or Naval Radar Unit of the flight within 30 minutes of the Air System's landing. The radar station **should** maintain a record of all such occurrences.

**Guidance Material 2310(1)**

## Supersonic Flight

5. **Supersonic Flights outside the UK FIR**. Where there are no host nation regulations, these UK regulations must be used.

**Regulation 2310(2)**

## Spinning

2310(2) Intentional spinning **shall** be specifically approved and Authorized.

**Acceptable Means of Compliance 2310(2)**

## Spinning

6. Intentional spinning **should** be permitted only where clearance is given in the Release To Service (RTS) for the Aircraft iaw procedures laid down in the Air System Document Set (ADS) or, for non-RTS flying operations the Military Permit to Fly (MPTF).

7. If still spinning by the minimum height given in the ADS or, for non-RTS flying operations, the MPTF, or higher if stipulated in ADH and AM(MF) orders, the Aircraft **should** be abandoned.

**Guidance Material 2310(2)**

## Spinning

8. Nil.

**Regulation 2310(3)**

## Asymmetric Flight

2310(3) Airborne Practice and Simulated Asymmetric Flight **shall** be specifically approved and Authorized.

**Acceptable Means of Compliance 2310(3)**

## Asymmetric Flight

9. ADH and AM(MF) **should** promulgate orders that apply to Practice and Simulated Asymmetric Flight and stipulate; the minimum height for each Aircraft; the frequency of training; weather limitations; and, operating conditions.

10. Asymmetric Flight approaches and landings **should** only be practised in weather conditions within the handling competence of the individual pilot under training. Other operating criteria for Asymmetric Flight training **should** be iaw specific Air System operating procedures. Practice Asymmetric Flight **should** only be permitted if approved in the ADS or, for non-RTS flying operations, the MPTF.

11. Simulated engine failure on take-off below 500 ft above ground or sea level **should** only be carried out under the direction of a suitably authorized Qualified Flying Instructor or when authorized under a trials instruction.

**Guidance Material 2310(3)**

## Asymmetric Flight

12. Due to the increased risks associated with Asymmetric Flight, Practice and Simulated Asymmetric Flight training will be closely supervised; training will be regular and limited to the amount necessary to achieve the aim. The aim of Practice and Simulated Asymmetric Flying is to ensure that pilots are capable of making safe, competent and confident approaches and landings if a Real Asymmetric Flight situation arises.

**Guidance Material 2310(3)**

13. Practice Asymmetric Flight is flight in which a serviceable engine (or engines) is shut down, (eg: for training purposes), with the propeller(s) feathered (if applicable).

14. Simulated Asymmetric Flight is flight with all engines running, but with one or more engines set at “Zero Thrust” or “Flight Idle” to give a condition of asymmetry.

15. Practice and Simulated Asymmetric Flight will be conducted in such a manner that safe flight can be continued in the event of a real engine failure.

16. Full-stop landings and touch-and-go landings following Simulated Asymmetric Flight approaches and touchdowns may be carried out providing that approval for the Air System has been granted by the appropriate ADH or AM(MF).

**Regulation 2310(4)**

## Single-Engine Air System Engine Shutdowns

2310(4) Engine shutdowns and re-lights in single-engine Air Systems **shall not** be carried out in the air, except where Authorized for Maintenance Test Flights or Test and Evaluation.

**Acceptable Means of Compliance 2310(4)**

## Single-Engine Air System Engine Shutdowns

17. Engine shutdowns and re-lights **should** only be carried out in single-engine Air Systems when part of an approved Flight Test Schedule or MPTF (Development) programme.

**Guidance Material 2310(4)**

## Single-Engine Air System Engine Shutdowns

18. This Regulation does not apply to self-launching motor gliders or Remotely Piloted Air Systems that can only recover by means of a parachute.

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