

## RA 2345 - Aircrew Fatigue Management

### Rationale

► *Fatigue is a significant factor in degrading the performance of Aircrew. Aircrew suffering from fatigue may not be fit to perform their duty and present a Risk to Flight Safety. This Regulation requires Aviation Duty Holders (ADH) and Accountable Managers (Military Flying) (AM(MF)) to manage Aircrew fatigue.* ◀

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### Regulation 2345(1)

#### Management of Aircrew Fatigue

2345(1) ADH and AM(MF) **shall** define the maximum allowable flying hours and measures to provide for compulsory rest periods for Aircrew.

### Acceptable Means of Compliance 2345(1)

#### Management of Aircrew Fatigue

1. ADH and AM(MF) **should** define in orders the 'crew duty day' that is allowable for Aircrew in any 24-hour period. ► **These orders** ◀ **should** ► ◀ take into account the aspects required to perform special operations and missions, and as a minimum ► **address:** ◀

- a. Maximum flying times;
- b. Cockpit alert time;
- c. Standby duties ► **and;** ◀
- d. Compulsory rest periods.

2. Periods of activity **should** alternate with compulsory rest periods. The maximum accumulated flying hours ► **for pilots** ◀ **should not** exceed the hours ► **given in Table 1** ◀<sup>1</sup>:

Table 1. Maximum ► **Pilot** ◀ Accumulated Flying Hours.

	Type of ► <b>Aircraft or Remote Pilot Station</b> ◀		
	Single Pilot	Multi Pilot (unpressurized)	Multi Pilot (pressurized)
Per Month	90	125	150
Per Quarter	240	330	400
Per Annum	850	1200	1400

3. ► **Authorizers** ◀ **should** ► ◀ enforce the fatigue management limits and measures stated in orders.

4. ► **Where Aircraft or Remote Pilot Stations are also crewed by non-pilot Aircrew, ADH and AM(MF) should** define in orders their maximum accumulated flying hours for non-pilot Aircrew per month, quarter and annum having considered the Flight Safety implications and stressors of their role. ◀

5. ► ◀ Aircrew **should** make full use of opportunities to rest and avoid activity detrimental to the next crew duty period. Non-military flying and other fatiguing activities **should** be considered ► **by both Aircrew and Authorizers** ◀ when reviewing activity prior to the next planned duty cycle.

6. ADH and AM(MF) **should** define in orders the procedures for granting extensions or exceptions to fatigue management limitations.

<sup>1</sup> Table as per STANAG 3527 – ► ◀ Fatigue Management ► **in Air Operations.** ◀

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7. ► **Factors that may be considered when setting** ◀ maximum flying times and compulsory rest periods ► **include, but are not limited to:** ◀
- a. The need for climatic or environmental acclimatization;
  - b. The type and distance of accommodation used by Aircrew from the operating base;
  - c. Disturbance and actual rest taken during the stand-down period;
  - d. The time that Aircrew arrived on duty;
  - e. Flying related ground activities (instructions, briefings, mission planning, simulator training etc);
  - f. Type of ► **Aircraft** ◀ (in relation to ► **Aircraft** ◀ performance, noise and vibration, workload and effort of the individual Aircrew);
  - g. Cumulative and / or split duty periods;
  - h. Extremes of temperature during ground operations;
  - i. The time taken to complete the task, delays incurred and expected (latest) landing time;
  - j. ► **Flight across multiple time zones;**
  - k. **The** ◀ personal and social situation of individual Aircrew;
  - l. The fatiguing effect of non-military flying.
8. ► **All in the supervisory chain** ◀ may impose more stringent Aircrew fatigue management limits in the interests of Flight Safety.
9. ► **Aircrew have an individual responsibility in the avoidance of fatigue. Therefore, prior to their next planned duty cycle, individuals need to ensure that they achieve adequate rest and avoid activity detrimental to the next duty period.**
10. **Fatigue management training is beneficial to equip personnel at all levels with the skills to identify the signs and symptoms of fatigue, and to manage associated Hazards. Fatigue management is an essential objective of the Aviation Medicine course as described in RA 2135(5)<sup>2</sup>. A specific focus on fatigue related issues may also be included in pre-deployment training.**
11. **A Fatigue Risk Management System (FRMS) is a recognized civilian methodology, based on scientific principles, that allows operators to manage the fatigue related Hazards particular to their types of operations and context. An FRMS may assist ADH / AM(MF)s to manage fatigue Risk within the stipulations of Table 1.**
12. **Whilst not mandatory for Aircrew within the Defence Air Environment, ADH and AM(MF) may wish to refer to CAP 371<sup>3</sup> guidance to understand the commercial aviation view on avoiding Aircrew fatigue.** ◀

<sup>2</sup> ► Refer to RA 2135(5): Aviation Medicine Training.

<sup>3</sup> Refer to CAP 371 – The Avoidance of Fatigue In Aircrews. ◀

### Regulation 2345(2)

#### Use of Temazepam in the Management of Work and Rest in Aircrew

2345(2) ADH **shall** issue orders ►for◄ the use of Temazepam in ►their Area of Responsibility (AoR) to manage work and rest schedules.◄

### Acceptable Means of Compliance 2345(2)

#### Use of Temazepam in the Management of Work and Rest in Aircrew

13. Temazepam **should** be prescribed and used in accordance with (iaw) AP1269A<sup>4</sup>.
14. ADH **should** issue orders ►for◄ the ►◄ use of Temazepam within their AoR in consultation with Aviation Medical Subject Matter Experts and iaw AP1269A<sup>4</sup>.
15. ADH orders **should** ►emphasize◄ that the use of Temazepam ►is◄ only ►to◄ be considered as an adjunct and ►is◄ not considered a substitute for effective scheduling and rest patterns.
16. Aircrew **should** undergo a successful ground trial<sup>4</sup> of Temazepam ►before any intended use to ensure they suffer no adverse side effects. The date of the trial and any limitations **should** be recorded in the medical section of their Flying Logbook.◄
17. Temazepam **should not** be taken for any longer than 5 days consecutively, and **should not** be taken for more than a total of 20 days in a 60-day period.
18. ►◄ Temazepam **should** only be used by Aircrew in the management of work and rest on operations, operational training and route flying. ►◄ The use of Temazepam **should not** be considered by Defence Contractor Flying Organizations.

### Guidance Material 2345(2)

#### Use of Temazepam in the Management of Work and Rest in Aircrew

19. Military Aviation Medical Examiners may prescribe Temazepam for use by Aircrew in the management of work and rest in operational scenarios, operational training and route flying. The drug is effective in inducing sleep and leaves no residual conditions or complications when used judiciously. Its short duration of activity prevents significant accumulation in the body, and extensive testing has failed to detect any harmful effects on individuals' performance 6 hours after ingestion. However, the use of Temazepam is an adjunct to an effective management plan for work and rest schedules, it is not a substitute.
20. Further guidance on the management and employment of Temazepam can be found in AP1269A<sup>4</sup>.

<sup>4</sup> Refer to AP1269A – ►RAF Manual◄ - Assessment of Medical Fitness, Leaflet 5-19 Annex C - Temazepam in the Management of Work and Rest in Aircrew.

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