



Defence
Safety Authority

DSA 03.OME Part 5: Defence Code of Practice (DCOP) 503

Military Laser System Safety Assessment for Service
and Training Use



Version Record

Version 1.2

Version Date: August 2024.

Version changes: see amendment table.

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Preface

Requests for Change

1. Proposed changes, recommendations, or amendments to DOSR Regulations and Guidance can be submitted to the DOSR Regulations and Publications Team:

Email Address: dsa-dosr-prg@mod.gov.uk

Postal Address: Juniper #5004, Level 1, Wing 4, Abbey Wood North, Bristol, BS34 8QW

2. Any post and grammar change proposals can be approved or rejected by the DOSR without involvement of the associated Working Group.

3. Technical change proposals should be submitted to the associated Working Group for review and approval or rejection.

4. When incorporating changes, care is to be taken to maintain coherence across regulations.

5. Changes effecting Risk to Life will be published immediately. Other changes will be incorporated as part of routine reviews.

Review Process

6. The DOSR team will ensure OME Regulations remain fit for purpose by conducting regular reviews through the DOSR Governance Committees, consulting with MOD Stakeholders and other Defence Regulators as necessary on interfaces and where there may be overlaps of responsibility.

Further Advice and Feedback

7. For further information about any aspect of this document, or questions not answered within the subsequent sections, or to provide feedback on the content, contact the DOSR Regulations and Publications Team.

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Amendment Record

No	Section	Para	Amendment Summary	Agreed	Date
1.0	all	all	Document created	Regs ATL	Jul 2021
1.1	various	various	Inclusion of improved wording to address competence requirements (addition of para 3, para 12, para 20).	MLST/DOSR	Dec 2021
1.2	all	all	Reformatted in line with DSA accessibility requirements	Regs ATL	Aug 2024

DSA 02.OME Regulation 503

Military Laser System Through Life Safety Management

1. All military lasers shall be procured following normal DE&S methods or local procedures. Military lasers shall be certified as per Regulation 501.
2. All military laser systems shall be stored safely.
3. Those undertaking duties and roles involving Lasers shall be competent and Suitably Qualified and Experienced Personnel (SQEP).
4. All Military Laser System Safety Assessment Certificates (MLSSAC) shall include details of requirements for PPE. PPE shall be used if the hazard cannot be mitigated to reduce the risk from exposure to harmful laser radiation.
5. All Military Laser Systems shall be disposed of in a manner which assures that safety and environmental risks are broadly acceptable or ALARP.
6. All military laser systems shall be evaluated & maintained throughout their lifecycle in accordance with agreed procedures.

DSA 03.OME DCOP 503

Objectives/Scope

7. This DCOP has been created to give guidance on the through life management of Military Laser systems. This will cover procurement, storage, SQEP, PPE, Disposal, and test & maintenance.

Legislation

8. There are several UK and European Union (EU) laws and regulations dealing with health, safety and environmental issues which have an impact on the management of laser safety.
 - a. Control of Artificial Optical Radiation at Work (CAOR) 2010
 - b. Directive 2006/25/EC – Artificial Optical Radiation
 - c. Laser Misuse (Vehicle) Act (2018)
 - d. The Control of Substances Hazardous to Health (COSHH)

Responsibilities

Procurement

9. When procuring a laser/laser system through DE&S, the usual method as outlined in Knowledge in Defence (Kid)) Web Tool shall be used, ensuring that

hazards are captured in a hazard/risk register. A Laser Safety Paper (LSP) should be produced as part of this process. This can be part of the systems overall safety case if part of a larger platform.

10. For local purchases, every attempt should be made to purchase a Class 1 or Class 2 laser. It should be CE marked and from a reputable source. If the laser is Class 1M, 2M, 3R, 3B, or 4, the MLST should be contacted to capture the hazards.

Storage

11. The Laser Safety Officer (LSO) is responsible for creating the procedures for storing laser systems safely. The local armoury is responsible for following the procedures.

Competence & SQEP

12. The Head of Establishment (HoE) is responsible for ensuring that people are competent and SQEP for the role.

PPE

13. If the activity is a general range activity, it is the responsibility of the RCO to ensure that, if required, appropriate PPE is issued to 1st and 2nd party personnel on the range.

14. If the activity is a trial, it is the responsibility of the TCO to ensure that, if required, appropriate PPE is issued to 1st and 2nd party personnel taking part in the activity.

Disposal

15. If the laser was purchased through DE&S, it is the responsibility of the DT to ensure that the system(s) are disposed of correctly, safely, and considering environmental risks as per POSMS and POEMS.

16. If the laser was a local purchase, it is the responsibility of the equipment owner to ensure that the laser system is disposed of correctly, safely, and considering environmental risks.

Test & Maintenance

17. The equipment owner is responsible for ensuring that the Military Laser is evaluated and maintained according to agreed plans.

Procurement

18. These regulations have been put in place to ensure that military lasers are procured the same way as other military systems/platforms. This means that risks are captured in a risk register and well understood. This is done as often laser are procured without a full understanding of the hazards and risks.

Storage

19. Military Lasers must be stored in accordance with local procedures and rules. Class 3B and Class 4 must be treated as weapons and stored in compliance with JSP 440.

Competence & SQEP

20. These regulations have been put in place to ensure that laser Operators and LSOs receive the appropriate laser safety training. If required, more advanced training can be sought from specialist courses. LSOs are required to attend a 1.5 day course at Defence Academy (DA) Shrivenham.

PPE

21. These regulations have been put in place to ensure that service personnel and civilians are protected from harmful laser radiation. Note: PPE should always be considered the last line of defence in risk mitigation. Laser protective goggles can be specified to two standards: BS EN 207 and BS EN 208. PPE should be CE marked in compliance with Personal Protective Equipment Regulations 2002, except where exempt under HSE L25 – Personal Protective Equipment at work. The MLST is available for consultation on the purchase of PPE.

Disposal

22. These regulations have been put in place to ensure that all Military Laser systems are disposed of ensuring that safety and environmental risks are ALARP. As laser systems can be complex systems, it is important to ensure that the laser is disposed of as per guidance in POEMS and POSMS. In the event a laser is disposed of/removed from service, the MLST must be informed to withdraw the relevant certificates from circulation and archive the files.

Test & Maintenance

23. During testing and maintenance there is increased risk due to the close vicinity to the laser system. The increased risk during this activity should be captured. Test & maintenance should be conducted in accordance with agreed plans, equipment manuals and guidance documents.