



Ministry of Defence Defence Standard 05-61 Part 9

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Quality Assurance Procedural Requirements

Part 9 – Independent Inspection Requirements for Safety Critical Items



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Foreword

AMENDMENT RECORD

Amd No.	Date	Text Affected	Signature and Date

REVISION NOTE

This standard is raised to Issue 4 to update its content and clarify its application.

HISTORICAL RECORD

This standard supersedes the following:

Def Stan 05-61(Part 9) Issue 3, dated 25 October 2002 - Quality Assurance Procedural Requirements Part 9: Independent Inspection Requirements for Safety Critical Items;

Def Stan 05-61(Part 9) Issue 2, dated 29 May 1987 - Quality Assurance Procedural Requirements Part 9: Special Inspection Requirements for Aircraft Systems;

Def Stan 05-61(Part 9) Issue 1, dated 30 June 1983 - Quality Assurance Procedural Requirements Part 9: Special Inspection Requirements for Aircraft Systems.

- a) This standard defines the requirements for Independent Inspection(s) of Safety Critical Items, Control Systems and personnel escape and survival systems.
- b) This standard has been produced on behalf of the Defence Material Standardisation Committee (DMSC) by a Joint MOD / Industry working group and the MOD Quality Assurance Authority (MOD QAA). This standard is sponsored by the MOD QAA.
- c) This standard has been agreed by the authorities concerned with its use and is intended to be used whenever relevant in all future designs, contracts, orders etc. and whenever practicable by amendment to those already in existence. If any difficulty arises which prevents application of the Defence Standard, DStan shall be informed so that a remedy may be sought.
- d) Please address any enquiries regarding this standard, whether in relation to an invitation to tender or to a contract in which it is incorporated, to the responsible technical or supervising authority named in the invitation to tender or contract.
- e) Compliance with this Defence Standard shall not in itself relieve any person from any legal obligations imposed upon them.
- f) This standard has been devised solely for the use of the MOD and its contractors in the execution of contracts for the MOD. To the extent permitted by law, the MOD hereby excludes all liability whatsoever and howsoever arising (including, but without limitation, liability resulting from negligence) for any loss or damage however caused when the standard is used for any other purpose.

0 Introduction

This Standard defines the requirements for the Independent Inspection(s) of; Safety Critical Items, Control Systems, first level items and personnel escape / survival systems.

Quality Assurance Procedural Requirements

Part 9: Independent Inspection Requirements for Safety Critical Items

1 Scope

1.1 This standard specifies the requirements for the Independent Inspection(s) of Safety Critical Items, Control Systems, first level items and personnel escape / survival systems, which shall be undertaken by a contractor and/or their subcontractors.

1.2 Independent Inspection(s) of first level items or equipment affecting safety systems relates to; nuclear steam raising plant controls, nuclear containment or the requirements for submarine / ship water tight integrity.

2 Warning

The Ministry of Defence (MOD), like its contractors, is subject to both United Kingdom and European laws regarding Health and Safety at Work. Many Defence Standards set out processes and procedures that could be injurious to health if adequate precautions are not taken. Adherence to those processes and procedures in no way absolves users from complying with legal requirements relating to Health and Safety at Work.

3 Normative References

3.1 The publications shown below are referred to in the text of this standard. Publications are grouped and listed in alpha-numeric order.

JAP 100A-01	Military Aviation Engineering Policy and Regulation
SSP 25	Quality Assurance for Safety in Submarines

3.2 Reference in this Standard to any normative references means in any Invitation to Tender or contract the edition and all amendments current at the date of such tender or contract unless a specific edition is indicated. For some standards the most recent editions shall always apply due to safety and regulatory requirements. Examples of these are Flight Order AvP 67 and Statutory Instruments (SI's).

3.3 In consideration of clause 3.2 above, users shall be fully aware of the issue, amendment status and application of all normative references, particularly when forming part of an Invitation to Tender or contract. Responsibility for the correct application of standards rests with users.

3.4 DStan can advise regarding where to obtain normative referenced documents. Requests for such information can be made to the DStan Helpdesk. Details of how to contact the helpdesk are shown on the outside rear cover of Defence Standards.

4 Definitions

For the purposes of this document, the following terms and definitions apply.

4.1 Authority

Secretary of State for Defence.

4.2 Authority's Representative

The MOD PTL or a Crown Servant who is authorized by the PTL.

4.3 Authorized Personnel

A competent person appointed by the contractor to undertake Independent Inspection of those components and systems that affect the safe operation of the platform/equipment.

4.4 Control System

Any system whether electrical, mechanical or optical, operated by user input or automation, by which a platform's speed, direction, attitude or propulsive force are changed. Includes power operated and assisted controls and may be extended to systems that provide power to such controls.

4.5 Design Authority

An organisation appointed by contract to be responsible for a design and for signing the certificate of design. The authority for acceptance of a design and any change to that design remains with the MoD Project Team Leader.

4.6 Independent Inspection

Two, or more, separate and independent inspections and/or test operations, carried out by different Authorized Personnel at different times; on safety critical components, installations, assembly features, and/or functional tests of a system.

4.7 Safety Critical Item

An assembly or installation stage or test of a system, or its components of which; the consequences of an error or failure could introduce a hazard to the system, personnel or environment.

5 Abbreviations

Def Stan	Defence Standard
DStan	UK Defence Standardization
MOD	Ministry of Defence
PTL	Project Team Leader
QAA	Quality Assurance Authority
UK	United Kingdom

6 Requirements for Independent Inspection of Safety Critical Items

6.1 Planning

6.1.1 The contractor shall develop and maintain a plan for the Independent Inspection(s) of Safety Critical Items. The plan shall detail the arrangements for the identification, conduct, reporting and review of items subject to Independent Inspection. The plan shall be agreed by the Authority's Representative.

6.2 Identification

6.2.1 The contractor shall identify, document and review with the Authority's Representative, the Independent Inspection requirements for those components and systems that affect the safe operation of the platform / equipment including:

- a) Safety Critical Items of Control Systems;
- b) Systems, sub-systems and components required by, the Design Authority and/or the Representative of the Authority, and agreed with the contractor;
- c) Escape and survival systems which operate on the "one shot" principle, the integrity of which cannot be verified by functional tests after final installation;
- d) First level items / systems and equipment affecting safety; refer to SSP 25;
- e) Special inspection processes of first level items.
- f) Additional considerations when specifying Independent Inspection in the Military Air Environment are detailed within JAP 100A-01.

6.3 Conduct

6.3.1 An Independent Inspection consists of two elements; an inspection for correct assembly, followed by functional test(s), dependent upon the level of build or disturbance to a system.

6.3.2 Independent Inspection shall be conducted by Authorized Personnel at different times.

6.4 Schedule

6.4.1 The contractor shall perform Independent Inspection of the systems, as follows:

- a) During the build stages, integration or test;
- b) Before the first use of an installed system/platform (whether new or repaired);
- c) Following any disruption/breakdown or change to the systems/platform e.g. maintenance, modification, adjustments, experimental changes.

6.5 Records

6.5.1 The contractor shall maintain records of all Independent Inspection requirements and all Independent Inspections carried out. These records shall be made available to the Authority's Representative, upon request.

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Contract Requirements

When Defence Standards are incorporated into contracts users are responsible for their correct application and for complying with contractual and statutory requirements. Compliance with a Defence Standard does not in itself confer immunity from legal obligations.

Revision of Defence Standards

Defence Standards are revised as necessary by an up issue or amendment. It is important that users of Defence Standards should ascertain that they are in possession of the latest issue or amendment. Information on all Defence Standards can be found on the DStan Website www.dstan.mod.uk, updated weekly and supplemented regularly by Standards in Defence News (SID News). Any person who, when making use of a Defence Standard encounters an inaccuracy or ambiguity is requested to notify UK Defence Standardization (DStan) without delay in order that the matter may be investigated and appropriate action taken. Sponsors and authors shall refer to Def Stan 00-00 part 2 before proceeding with any standards work.