

STANDARDS RELATED DOCUMENT

AQAP-2110-SRD.2

GUIDANCE ON THE APPLICATION OF AQAP-2110 EDITION D WITHIN AN AS9100 QUALITY MANAGEMENT SYSTEM

**Edition A Version 1
NOVEMBER 2018**



NORTH ATLANTIC TREATY ORGANIZATION

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

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NATO LETTER OF PROMULGATION

8 November 2018

1. The enclosed Standards-Related Document, AQAP-2110-SRD.2, Edition A, Version 1, GUIDANCE ON THE APPLICATION OF AQAP 2110 EDITION D WITHIN AN AS9100 QUALITY MANAGEMENT SYSTEM, which has been approved in conjunction with AQAP-2110 by the nations in the Life Cycle Management Group, is promulgated herewith.
2. AQAP-2110-SRD.2, Edition A, Version 1, is effective upon receipt and replaces the content of Annex F to AQAP-2009, Edition 3, which has been cancelled.
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4. This publication shall be handled in accordance with C-M(2002)60.



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TABLE OF CONTENTS

CHAPTER 1	INTRODUCTION
CHAPTER 2	REFERENCES
CHAPTER 3	GENERAL GUIDANCE
CHAPTER 4	DETAILED GUIDANCE

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CHAPTER 1 - INTRODUCTION

1.1 This document has been prepared and issued to provide information and guidance on the application of AQAP-2110 when the Supplier adheres to the provisions of AS9100. This publication is published as an AQAP-2110-SRD.2 and AS9137. It was jointly developed by NATO and industry representatives for use by NATO and industry to facilitate the use and understanding of the relationship between the AQAP-2110 and AS9100. AQAPs may be required when an Acquiring nation use Foreign Military Sales (FMS) as procuring method.

1.2 This publication aims to contribute to commonality of interpretation of the AQAP-2110 requirements by the Acquirer and their AS9100 Supplier.

1.3 This publication's content has no legal or contractual status nor does it supersede, add to, or cancel any of the AQAP-2110 or AS9100 requirements.

1.4 Because of the multiplicity of conditions that can exist (dependent on such factors as the type of work or process, the devices used, and the skill of personnel involved), this guidance should not be considered as all-encompassing nor should it be considered as imposing specific means or methods for meeting contract requirements. Stakeholders should be aware that other means or methods could be used to meet these requirements.

1.5 Users of this guidance should keep in mind that the requirements of AQAP-2110 as cited in the contract are mandatory on Suppliers and External Providers.

CHAPTER 2 - REFERENCES

The following documents are important references for the application guidance provided in this publication. Only the edition cited applies for dated references. The latest edition of the referenced document (including any amendments) applies for undated references.

AS/EN/JISQ 9100:2016 Quality Management Systems – Requirements for Aviation, Space and Defense (AS9100)

AQAP-2110 NATO Quality Assurance Requirements for Design, Development and Production

AQAP-2310 – NATO Quality Assurance Requirements for Aviation, Space and Defence Suppliers". Note: NATO have published AQAP-2310 to contractually invoke the requirements of AS/EN 9100, with additional NATO requirements. Consideration for the use of AQAP 2310 should be made in accordance with the 'AQAP Selection SRD'.

ISO 9001:2015 Quality management systems – Requirements

ISO 10012:2003 Measurement management systems – Requirements for measurement processes and measuring equipment

CHAPTER 3 - GENERAL GUIDANCE

3.1 In an AS9100 certificated organization, the entire content of both standards is within the purview of Government Quality Assurance (GQA).

3.2 When reviewing the two documents (i.e. AQAP-2110, AS9100) it is helpful to note the differences in wording used to describe the stakeholders. The following equivalence (see Table 1) is offered as a workable translation. The contract will normally define the points of contact, outlining their role and authority.

TABLE 1 – AQAP 2110 AND AS9100 STAKEHOLDER TERMS

AQAP-2110	AS9100
Acquirer	Customer, only if it is the Acquiring government.
Government Quality Assurance Representative (GQAR)	A Customer’s Quality Representative.
Supplier	Organization with a direct contract with the government.
External Provider	Supplier or Organization without a direct contract with the government.

3.3 AS9100 is complementary (not alternative) to contractual and applicable law and regulatory requirements. It includes ISO 9001:2015 Quality Management System (QMS) requirements and specifies additional requirements for a quality management system for the aviation, space and defence industries.

3.4 The common ISO 9001:2015 baseline inherently makes AS9100 and AQAP-2110 appear almost identical in requirements. However, four features differentiate the two documents:

- a) AQAP-2110 defines contractual requirements; while AS9100 defines organizational provisions to be addressed within the scope of certification;
- b) AQAP-2110 reflects the agreement between NATO members to contract using the mandatory QMS clauses that enables reciprocal GQA; while industry conformance to AS9100 may be voluntary, but is normally contractual;
- c) The additions to ISO 9001:2015 of both documents add higher level quality management functions. AQAP-2110 also includes additional requirements related to communication and GQAR access to contract pertinent facilities, information and processes;
- d) AQAP-2110 format has been changed from previous editions. The format no longer implements the requirements of ISO 9001:2015 paragraph by paragraph. Instead the requirements of ISO 9001:2015 in total have been required, "as necessary to satisfy the contractual requirements", by a single paragraph within AQAP 2110 Edition D Version 1 section 4 with General QMS Requirements. NATO specific requirements are then included in section 5.

CHAPTER 4 - DETAILED GUIDANCE

Detailed guidance is provided only where there is either the need for clarification or the potential for conflict or misunderstanding exists. Each paragraph and subparagraph of the standards (i.e., AS9100, AQAP-2110) are listed below in Table 2 – AS9100 AND AQAP-2110 DETAILED HARMONIZATION GUIDANCE. Where either standard contains additional requirements or notes to the base standard (i.e. ISO 9001:2015), the clause heading text is bolded.

TABLE 2 – AS9100 AND AQAP 2110 DETAILED HARMONIZATION GUIDANCE

AS9100 CLAUSE	AQAP-2110 CLAUSE	DETAILED HARMONIZATION GUIDANCE
	4.1 Applicability of ISO 9001:2015 requirements	<p>AQAP-2110 implements all of ISO 9001:2015 with a single requirement.</p> <p>This is a document structure difference with AS9100.</p>
	4.2 Quality Management System and its Processes	<p>If a Supplier QMS is based on AS9100:</p> <p>With respect to the NATO specific requirements: AS9100 highlights the need to include customer and applicable statutory and regulatory requirements in the scope of the QMS in addition to the ISO 9001:2015 provisions relating to the product (see clause 7.2.1).</p> <p>The Acquirer and/or GQAR have the right to review and verify that the QMS meets the AQAP-2110 requirements and contractual requirements. Where objective evidence of non-compliance is presented, the Supplier is obliged to take corrective action. If corrective action is not taken or is shown to be persistently ineffective then ultimately the QMS might be rejected, but this is neither a desired or common outcome. Regardless of an existing EN9100 certification, the Acquirer/GQAR has the right to reject the QMS and/or non-conforming products.</p> <p>Shared AS9100 certification results from the Online Aerospace Supplier Information System (OASIS) and audit reports provides ongoing evidence of how the system is meeting the certification requirements and may reduce the need for the Acquirer/GQAR to conduct additional audits.</p>

AS9100 CLAUSE	AQAP-2110 CLAUSE	DETAILED HARMONIZATION GUIDANCE
	4.3 Access to Supplier and External Providers and Support for GQA Activities	Unrestricted access is within the limitations of the national laws within the acquisition process. Any limitations must be fully justified and documented (in the tender, contract documentation and/or QP) and brought to the attention of the GQAR.
4. CONTEXT OF THE ORGANIZATION		
4.1 Understanding the Organization and its Context		Paragraph is self-explanatory.
4.2 Understanding the Needs and Expectations of Interested Parties		Paragraph is self-explanatory.
4.3 Determining the Scope of the Quality Management System		
4.4 Quality Management System and Its Processes	4.2 Quality Management System and its Processes	With reference to AQAP-2110 clause 5.4.1.1. it is permissible to detail any international clarifications or specific application of AQAP requirements in the QP.
5. LEADERSHIP		
5.1 Leadership and Commitment		Paragraph is self-explanatory.
5.1.1 General		
5.1.2 Customer Focus		Paragraph is self-explanatory.
5.2 Policy		
5.2.1 Establishing the Quality Policy		Paragraph is self-explanatory.
5.2.2 Communicating the Quality Policy		Paragraph is self-explanatory.

AS9100 CLAUSE	AQAP-2110 CLAUSE	DETAILED HARMONIZATION GUIDANCE
5.3 Organizational Roles, Responsibilities, and Authorities	5.1.1 Organizational roles, responsibilities and authorities	AQAP-2110 requires that the management representative reports directly to top management. AS9100 requires that the management representative has unrestricted access to top management. The key aspect is that AQAP-2110 requires the management representative to have the necessary organizational authority and freedom to resolve matters pertaining to the QMS and product quality. In that respect, the standards are considered to be in harmony.
6. Planning		
6.1 Actions to Address Risks and Opportunities	5.2.1 Risk Management	Paragraph is self-explanatory.
6.2 Quality Objectives and Planning to Achieve Them		Paragraph is self-explanatory.
6.3 Planning of Changes		Paragraph is self-explanatory.
7. Support		
7.1 Resources		Paragraph is self-explanatory.
7.1.1 General		
7.1.2 People		Paragraph is self-explanatory.
7.1.3 Infrastructure	5.3.1 Infrastructure	Paragraph is self-explanatory.
7.1.4 Environment for the Operation of Processes		Paragraph is self-explanatory.
7.1.5 Monitoring and Measuring Resources	5.3.2 Monitoring and measuring resources	With respect to the NATO specific requirement to implement ISO 10012, the QP should identify uncertainties in regards to measuring processes, and what requirements of ISO 10012 are appropriate to the contract.
7.1.5.1 General		
7.1.5.2 Measurement Traceability		Paragraph is self-explanatory.
7.1.6 Organizational Knowledge		Paragraph is self-explanatory.
7.2 Competence	5.3.3 Competence	Paragraph is self-explanatory.
7.3 Awareness	5.3.4 Awareness	Paragraph is self-explanatory.

AS9100 CLAUSE	AQAP-2110 CLAUSE	DETAILED HARMONIZATION GUIDANCE
7.4 Communication		The NATO specific requirement for communication found in paragraphs 5.4.2, and 5.4.6.3 of AQAP-2110 should be considered as part of AS9100 clause 7.4 Communication.
7.5 Documented Information	5.3.5 Documented information	Paragraph is self-explanatory.
7.5.1 General		Paragraph is self-explanatory.
7.5.2 Creating and Updating		Paragraph is self-explanatory.
7.5.3 Control of Documented Information		Paragraph is self-explanatory.
8. OPERATION		
8.1 Operational Planning and Control	5.4.1 Operational planning and control 5.4.1.1 Quality Plan	Both AS9100 and AQAP-2110 require planning for quality to be undertaken and recorded, describing how the product will be realized. AQAP-2110 requires a contract specific QP to be documented and provided to the Acquirer so that it may be reviewed against the contractual requirements. The QP describes the application of the QMS to fulfil the contract requirements; describing what the Supplier will actually do (e.g. what requirements apply or how they are interpreted). To be compliant, QPs should address clause 5.4.1.1 of AQAP-+2110 and section 8 of ISO 9001 and AS9100. QPs should be developed in conjunction with other project related planning.
8.1.1 Operational Risk Management		Paragraph is self-explanatory.
8.1.2 Configuration Management	5.4.1.2 Configuration Management	For specific Configuration Management (CM) requirements refer to the contractual conditions. Either NATO, International or National standards may be acceptable.
8.1.3 Product Safety		Paragraph is self-explanatory.
8.1.4 Prevention of Counterfeit Parts	5.4.6.2 Type and extent of control	Paragraph is self-explanatory.
8.2 Requirements for Products and Services		Paragraph is self-explanatory.

AS9100 CLAUSE	AQAP-2110 CLAUSE	DETAILED HARMONIZATION GUIDANCE
8.2.1 Customer Communication	5.4.2 Customer communications	The NATO specific requirement for communication should be considered as part of AS9100 clause 8.2.1 Customer Communication.
8.2.2 Determining the Requirements for Products and Services	5.4.3 Determining the requirements related to products	Paragraph is self-explanatory.
8.2.3 Review of the Requirements for Products and Services		Paragraph is self-explanatory.
8.2.4 Changes to Requirements of Products and Services		Paragraph is self-explanatory.
8.3 Design and Development of Products and Services		Paragraph is self-explanatory.
8.3.1 General		
8.3.2 Design and Development Planning		Paragraph is self-explanatory.
8.3.3 Design and Development Inputs		Paragraph is self-explanatory.
8.3.4 Design and Development Controls	5.4.4 Design and development controls	Paragraph is self-explanatory.
8.3.5 Design and Development Outputs		Paragraph is self-explanatory.
8.3.6 Design and Development Changes		Paragraph is self-explanatory.
	5.4.5 Dependability	

AS9100 CLAUSE	AQAP-2110 CLAUSE	DETAILED HARMONIZATION GUIDANCE
8.4 Control of Externally Provided Processes, Products, and Services	5.4.6 Control of externally provided processes, products and services	<p>With respect to the NATO specific requirement to provide copies of subcontracts or orders for products, those documents may obscure or exclude pricing information.</p> <p>With respect to the NATO Specific requirement for notification of risks in subcontracts or orders; the Acquirer and/or GQAR, need to be aware of risks in the supply chain so that appropriate GQA activities can be planned. The Supplier (AQAP definition) will be informed of any GQA activities to be planned and performed in the Supplier chain.</p>
8.4.1 General	5.4.6.1 General	<p>Flowing down the relevant contractual requirements, not necessarily the full AQAP-2110 or AS9100 is the key aspect of the NATO specific requirement.</p> <p>This means that flowing down standard Supplier requirements for the supply chain, which cover the relevant contractual requirements, is compliant with this clause of AQAP-2110 but should be detailed in the QP.</p> <p>The NATO specific requirement states the text to be included on purchasing information to ensure that rights of access to perform GQA are provided.</p> <p>The text may be amended, if agreed through the QP provided that rights to conduct GQA, through the supply chain are preserved.</p>
8.4.2 Type and Extent of Control	5.4.6.2 Type and extent of control	Paragraph is self-explanatory.
8.4.3 Information for External Providers		Paragraph is self-explanatory.
	5.4.6.3 Communication	The NATO specific requirement for communication related to external providers should be considered as part of AS9100 clause 8.4 Control of Externally Provided Processes, Products, and Services.
8.5 Production and Service Provision		
8.5.1 Control of Production and Service Provision	5.4.7 Control of production and service provision	Paragraph is self-explanatory.

AS9100 CLAUSE	AQAP-2110 CLAUSE	DETAILED HARMONIZATION GUIDANCE
8.5.1.1 Control of Equipment, Tools, and Software Programs		Paragraph is self-explanatory.
8.5.1.2 Validation and Control of Special Processes		Paragraph is self-explanatory.
8.5.1.3 Production Process Verification		Paragraph is self-explanatory.
8.5.2 Identification and Traceability	5.4.8 Identification and traceability	Paragraph is self-explanatory.
8.5.3 Property Belonging to Customers or External Providers	5.4.9 Property belonging to customers or External Providers	Paragraph is self-explanatory.
8.5.4 Preservation	5.4.10 Preservation	Paragraph is self-explanatory.
8.5.5 Post-Delivery Activities		Paragraph is self-explanatory.
8.5.6 Control of Changes		Paragraph is self-explanatory.
8.6 Release of Products and Services	5.4.11 Release of products	Paragraph is self-explanatory.
8.7 Control of Nonconforming Outputs	5.4.12 Control of nonconforming products	AQAP-2110 does not allow the delivery of nonconforming product, unless by Concessions/waiver or Deviation Permit (C/DP). There is no AQAP-2110 clause defining how to apply for C/DP, therefore, the process to be applied to C/DP should be covered by separate contractual arrangements and/or addressed in the QP.
9. PERFORMANCE EVALUATION		
9.1 Monitoring, Measurement, Analysis, and Evaluation		Paragraph is self-explanatory.
9.1.1 General		Paragraph is self-explanatory.
9.1.2 Customer Satisfaction	5.5.1 Customer satisfaction	Paragraph is self-explanatory.

AS9100 CLAUSE	AQAP-2110 CLAUSE	DETAILED HARMONIZATION GUIDANCE
9.1.3 Analysis and Evaluation		Paragraph is self-explanatory.
9.2 Internal Audit	5.5.2 Internal audit	Traceability is the key aspect of the NATO specific requirement and is related to 'planned arrangements' defined in the AS9100 note. Internal audits themselves do not need to reference the AQAP. They need only demonstrate traceability to AQAP-2110 requirements.
9.3 Management Review	5.5.3 Management review	
9.3.1 General		Paragraph is self-explanatory.
9.3.2 Management Review Inputs	5.5.3.1 Management review input	Paragraph is self-explanatory.
9.3.3 Management Review Outputs	5.5.3.2 Management review output	Paragraph is self-explanatory.
10 IMPROVEMENT		
10.1 General		Paragraph is self-explanatory.
10.2 Nonconformity and Corrective Action	5.6.1 Nonconformity and corrective action	Paragraph is self-explanatory.
10.3 Continual Improvement		Paragraph is self-explanatory.

Notes

Note 1: For the purposes of this guidance, the terms within AQAP 2110 have been used. (see Chapter 3, General Guidance 3.2 Table 1)

AQAP-2110-SRD.2(A)(1)