



AEROSPACE STANDARD	AS7107™	REV. A
	Issued	1994-07
	Cancelled	2017-06
Superseding AS7107		
National Aerospace and Defense Contractors Accreditation Program Inspection System Requirements		

RATIONALE

AS7107A is being cancelled as it is no longer supported by Nadcap.

CANCELLATION NOTICE

This document has been declared "CANCELLED" as of June 2017. By this action, this document will remain listed in the Numerical Section of the Aerospace Standards Index. Cancelled specifications are available from SAE.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2017 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
<http://www.sae.org>

SAE WEB ADDRESS:

Full document details: [SAE AS7107A](#)

SAE values your input. To provide feedback on this Technical Report, please visit <http://standards.sae.org/AS7107A>

Documents
Document Sharing Hub

1. **SCOPE:**

This Aerospace Standard establishes the minimum requirements necessary for NADCAP accreditation of an Inspection System that meets, at a minimum, MIL-I-45208. These requirements may be supplemented by additional requirements at the discretion of the NADCAP General Quality Systems Task Group.

It is the intent of this standard to provide a harmonized quality standard that meets MIL-I-45208, MIL-STD- 45662, and the relevant portions of MIL-STD-1520. In addition to meeting these requirements as a minimum, an attempt has been made to harmonize the requirements of MIL-Q and the ISO9000 series of standards. Where similar requirements existed between these two standards, the more stringent requirement was imposed.

2. **REFERENCES:**

2.1 **Applicable Documents:**

The following publications form a part of this specification to the extent specified herein.

2.1.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15086-0001.

AS7001	National Aerospace and Defense Contractors Accreditation Program (NADCAP) - Program Description
AS7002	National Aerospace and Defense Contractors Accreditation Program (NADCAP) - Rules for Implementation
AS7003	National Aerospace and Defense Contractors Accreditation Program (NADCAP) - Program Operation
AS7106/1	NADCAP - Deliverable Software Quality Assurance
AS7106/2	NADCAP - 1520
AS7106/3	NADCAP - Supplier Quality Assurance Program Requirements
AS7106/4	NADCAP - Supplemental Requirements for ISO9000 Equivalence
AS7106/5	NADCAP - Total Quality Management Requirements

2.1.2 PRI Publications:

Available from the Performance Review Institute, 402 Commonwealth Drive, Warrendale, PA 15086-7511.

AC7106	NADCAP - Quality Program Requirements
AC7106/1	NADCAP - Deliverable Software Quality Assurance
AC7106/2	NADCAP - Corrective Action and Disposition System for Nonconforming Material
AC7106/3	NADCAP - Supplier Quality Assurance Program Requirements
AC7106/4	NADCAP - Supplemental Requirements for ISO9000 Equivalence
AC7106/5	NADCAP - Total Quality Management Requirements

2.1.3 U.S. Government Publications:

Available from DODSSP Subscription Services Desk, Building 4D, 700 Robins Avenue, Philadelphia, PA 19111-5094.

MIL-I-45208	Inspection System Requirements
MIL-STD-1520	Corrective Action and Disposition System for Nonconforming Material
MIL-STD-45662	Calibration Systems Requirements

2.1.4 ISO Publications:

Available from the American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

ISO 9001	“Quality systems - Model for Quality Assurance in Design, Development, Production, Installation and Servicing
----------	---

3. **QUALITY PROGRAM MANAGEMENT:**

3.1 **Organization:**

- 3.1.1 Executive management shall define their policy and objectives for and their commitment to quality through the issuance of a formalized and documented quality policy or quality statement.
- 3.1.2 There shall be an appointed management representative who, irrespective of other responsibilities, has defined authority and responsibility for ensuring that quality system requirements are implemented, maintained, and in compliance with appropriate quality standards.
- 3.1.3 There shall be provisions for periodic review and revision of the quality policy.
- 3.1.4 Implementation of the quality policy shall be documented as part of a formal quality plan or Quality Manual that is signed and authorized by a senior management representative.
- 3.1.5 The supplier plan/manual shall provide for a description of all subsystems, including exhibits of various forms, tags, and other control documents.
- 3.1.6 The Quality Manual shall contain all of the requirements applicable to the organization including:
 - a. The supplier's name, address, quality policy, and objectives for quality
 - b. Responsibility, authority, and interrelationship of all personnel affecting quality
 - c. Organization chart(s)
 - d. Quality Management Review System
 - e. Detail of organization, facility, and products covered by the Manual

- 3.1.7 The Quality Manual shall cover all of the following System Procedures applicable to the organization including:
- a. Contract review
 - b. Document control
 - c. Purchasing
 - d. Purchaser supplied material
 - e. Product identification and traceability
 - f. Process control
 - g. Inspection and testing
 - h. Inspection, measuring and testing equipment
 - i. Inspection and test status
 - j. Control of nonconforming products
 - k. Corrective action
 - l. Handling, storage, packaging and delivery
 - m. Quality records
 - n. Internal quality audits
 - o. Training
- 3.1.8 A documented quality system shall be established as a means of ensuring that the product, process, or service conforms to the specified requirements.
- 3.1.9 A formal organizational chart shall exist that defines the responsibility, authority, and interrelation of all personnel and it shall have key positions identified.
- 3.1.10 The organization responsible for quality shall be well defined, established, and functioning.

- 3.1.11 Personnel performing verification activities shall have the organizational freedom and authority to:
- a. Initiate action to prevent the occurrence of product nonconformity
 - b. Identify and record any product quality problems
 - c. Initiate, recommend or provide solutions through designated channels
 - d. Verify the implementation of solutions
 - e. Control further processing, delivery or installation of nonconforming product until the deficiency or unsatisfactory condition has been corrected

There shall be a formal procedure documenting this authority.

- 3.1.12 The quality organization shall have the necessary procedures to implement the inspection system responsibilities assigned by the company managerial policies.
- 3.1.13 These procedures shall be reviewed periodically by management for adequacy.
- 3.1.14 Personnel assigned key positions affecting quality shall be qualified on the basis of appropriate education, training, and/or experience as required.
- 3.1.15 Position descriptions for all positions impacting quality shall be available listing individual duties and responsibilities.
- 3.1.16 There shall be a documented comprehensive system of planned and documented internal quality audits performed on a regular basis.
- 3.2 **Contract Review:**
- 3.2.1 Procedures shall exist for contract review and for the coordination of these activities.
- 3.2.2 Procedures shall exist to assure contractual requirements flow down.

- 3.2.3 The quality system shall provide for the following:
- a. Identification and acquisition of all controls, processes, inspection equipment, fixtures, total production resources, and skills necessary to achieve the required quality.
 - b. Periodic review and updating of quality control, inspection and testing techniques.
 - c. Identification of measurement requirements that exceed capabilities in sufficient time for needed capability to be developed.
 - d. Clarification of standards of acceptability for all features and requirements, including those which contain subjective elements.
 - e. Compatibility of the design, production process, installation, inspection, and test procedures, as well as all applicable documentation.
- 3.2.4 The measurements to be made and the accuracy required shall be identified and the appropriate inspection, measuring and test equipment selected.
- 3.3 **Work Instructions:**
- 3.3.1 All departments that have an effect on product quality shall have written work instructions.
- 3.3.2 The work instructions shall be approved, distributed, and accessible throughout the operation with appropriate parts located in areas where the work is performed.
- 3.3.3 Supplier documentation shall require verification that work instructions are maintained to reflect the appropriate contractual requirements such as: drawings, specifications, etc.
- 3.3.4 Work instructions shall be reviewed and updated on a systematic basis for accuracy, completeness, and worker compliance.
- 3.3.5 The work instructions shall provide documented sequencing of manufacturing and process operations and they shall identify specific methods, tooling, and equipment to be used.

3.4 **Records:**

- 3.4.1 Procedures shall be established and maintained for identification, collection, indexing, filing, storage, maintenance and disposition of quality records to include subcontractor quality records as appropriate.
- 3.4.2 Quality records shall be legible and identifiable and traceable to the product involved.
- 3.4.3 There shall be effective means of assuring the currency, completeness, and accuracy of records.
- 3.4.4 Quality records shall be stored and maintained in facilities that provide a suitable environment to minimize deterioration or damage and to prevent loss.
- 3.4.5 Retention times of quality records shall be established and recorded.
- 3.4.6 The supplier's record system and procedures shall provide for record retention identification and retrieval for articles including the following:
 - a. Quality System implementation records
 - 1. Quality Manual and Systems Procedures
 - 2. Management Review records
 - 3. Internal Audit records
 - 4. Sub-tier selection, audit, evaluation and verification records
 - 5. Qualified/certified/approved processes, equipment, and personnel employed for Special Processes
 - 6. Inspection, measuring, and test equipment calibration records
 - 7. Corrective Action records

3.4.7 Continued

b. Verification of Product quality records

1. Document numbers, revision levels or part numbers
2. Quality Plans, identification and traceability, inspection and test and positive recall records
3. Nonconformance records for internal, sub-tier, and customer reported deficiencies

3.4.7 Record retention and retrieval shall be consistent with contract requirements.

3.4.8 Documentation shall provide for records and data maintained in an electronic form.

3.4.9 Records that give evidence that the product has passed inspection and/or test with defined acceptance criteria shall be established and maintained.

3.4.10 Inspection Records shall show lot size, sample size, lot identification, and results of inspection.

3.4.11 Records shall be documented in a manner or medium (i.e, permanent ink, electronic) that will obviously reflect alterations or changes if made to the original documentation.

3.4.12 Inspection and test data documents shall indicate the type and number of observations made, conformance or nonconformance, the number and description of nonconformances found, and corrective actions taken when needed.

3.4.13 Traceability shall be maintained to the detailed parts and their product acceptance records for serialized or lot numbered sub-assemblies containing serialized or lot numbered parts.

3.5 **Corrective Action:**

3.5.1 Procedures shall be established, documented and maintained for investigating the root cause of nonconforming product and the corrective action needed to prevent recurrence.

- 3.5.2 The corrective action system shall define the circumstances or conditions which prompt the issuance of a corrective action request.
- 3.5.3 The cause of nonconforming product shall be investigated and the root cause corrective action needed to prevent recurrence shall be identified and implemented.
- 3.5.4 There shall be provisions for recording the description of the cause(s), action taken (or planned) to correct the cause(s), and the date when corrective action will be completed or is estimated to be completed.
- 3.5.5 The supplier shall maintain a follow-up system of control on corrective action taken, ensuring that the supplier corrective action system provides for timely and effective root cause action.
- 3.5.6 Inspection data shall be collected and analyzed to establish quality levels for repetitive discrepancies.
- 3.5.7 Corrective action requests shall be issued to a sub-tier supplier or internal departments when necessary to correct a quality problem that exists.
- 3.5.8 Nonconforming materials, conditions, and systems, exposed during audits, shall be used to initiate the corrective action process.
- 4. **FACILITIES AND STANDARDS:**
 - 4.1 **Drawings, Documentation, and Changes:**
 - 4.1.1 Procedures shall be established and maintained to control all documents and data related to product quality.
 - 4.1.2 The supplier shall have a procedure for a formal approval and release system on the following documents whether maintained manually or electronically:
 - a. Quality Manual and the Systems Procedures
 - b. Purchasing documents
 - c. Process Control Documents