

AEROSPACE INFORMATION REPORT

SAE AIR5359

REV.
C

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Cancelled 2008-01

Superseded by AS9014

Requirements for Certification/Registration of Aerospace Quality Management Systems

RATIONALE

This standard has been superseded by AS9014 and should be withdrawn.

CANCELLATION NOTICE

This document has been declared "CANCELLED" as of January 2008 and has been superseded by AS9014. By this action, this document will remain listed in the Numerical Section of the Aerospace Standards Index noting that it is superseded by AS9014.

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INTRODUCTION

The aerospace industry requires that all elements of the production and supply chain operate to levels of quality and performance that assure safe and reliable products. Quality management systems must be designed to assure that all aspects of the design, manufacture and support of aerospace products meet their intended functions. In parallel with the aerospace industry's development of quality management systems, as a means of ensuring that products comply with exacting requirements, equal importance has been attached to the role of quality systems assessment.

The Americas Aerospace Quality Group (AAQG) in cooperation with many aerospace companies developed specific requirements for quality systems that are to be implemented and maintained by the complete production and supply chain in the manufacture of products used in aviation and space applications. This Aerospace Information Report (AIR) was developed by the aerospace industry to standardize requirements and aid the potential pooling of resources, recognizing the highly professional and effective assessment of quality systems by the aerospace industry with oversight by the regulatory agencies of the Government. These requirements provide for continued integrity and credibility in the registration of those quality systems while recognizing the wealth of experience accrued by aerospace companies over many decades.

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The processes and requirements herein are intended for use by members of the AAQG, aerospace industry companies, their suppliers, industry recognized Accreditation Bodies (ABs), and AB approved Certification/Registration Bodies (CRBs). This AIR addresses the following:

- a. assessment of quality systems by accredited CRBs,
- b. principles for determining the content and duration of assessments,
- c. reporting and control of nonconformance,
- d. form of registration recommendations,
- e. minimum standards of qualification and experience for aerospace auditors employed by CRBs,
- f. qualifications of auditors by CRBs, ABs and the AAQG Registrar Management Committee (RMC),
- g. sharing of audits between Original Equipment Manufacturers (OEMs) using a 2nd party shared method,
- h. oversight process of CRBs by the ABs, AAQG RMC and AAQG Member Companies,
- i. oversight process of AB's by the AAQG RMC and AAQG Member Companies,
- j. operation of the AAQG RMC.

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1. SCOPE:

The requirements defined in this AIR are applicable to Accreditation Bodies (ABs), Certification/Registration Bodies (CRBs), and Original Equipment Manufacturers (OEMs), during assessment and/or certification/registration to the applicable quality management system standard to meet industry accepted practices.

1.1 Purpose:

The purpose of this document is to outline the process for providing aerospace companies and their suppliers with assessment and registration of their quality management systems, by aerospace industry recognized and AB qualified CRBs. It also details requirements for assessing organizations to the applicable quality management system standard. This document is created to be in conformance with AIR9104.

2. REFERENCES:

(as amended from time to time)

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001 or www.sae.org

AIR5493	Requirements for Development, Implementation and Control of Aerospace Auditor Training
AS9000	Aerospace Basic Quality System Standard
AS9003	Inspection and Test Quality System
AS9006	Deliverable Aerospace Software Supplement for AS9100
AS9100	Quality Management Systems - Aerospace - Model for Quality Assurance in Design, Development, Production, Installation and Servicing
AS9101	Quality System Assessment
AS9102	Aerospace First Article Inspection Requirement
AS9103	Variation Management of Key Characteristics
AS9104	Requirements for Aerospace Supplier Quality System Certification/Registration Schemes for Use by the IAQG Sectors (DRAFT)
AS9110	Quality Management Systems - Aerospace - Requirements for Maintenance Organizations
AS9111	Quality System Assessment for Maintenance Organizations (DRAFT)
AS9120	Quality Management Systems - Aerospace - Requirements for Stockist/Distributors
AS9121	Quality System Assessment Applicable to Stockist Distributors (DRAFT)

2.2 ISO Publications:

Available from ANSI, 25 West 43rd Street, New York, NY 10036-8002 or www.ansi.org

ISO 9000	Quality management systems - Fundamentals and vocabulary
ISO 9001	Quality management systems requirements
ISO 9004	Quality management systems - Guidelines for performance improvement
ISO 19011	Guidelines on quality and/or environmental management systems auditing (superseding ISO 10011-1, -2 & -3)
ISO/IEC Guide 61	General Requirements for Assessment and Accreditation of Certification/Registration Bodies
ISO/IEC Guide 62	General Requirements for Bodies Operating Assessments and Certification/Registration of Quality Management Systems

2.3 IAF Publications:

Available from www.iaf.nu

IAF Guidance on the Application of ISO/IEC Guide 61

IAF Guidance on the Application of ISO/IEC Guide 62

2.4 Other Documents:

Society of British Aerospace Companies (SBAC)

Technical Specification (TS) 157 - Aerospace Sector Certification Scheme Objective, Scope and Application

3. DEFINITIONS:

3.1 AMERICAS AEROSPACE QUALITY GROUP (AAQG):

An SAE Aerospace Council committee (G-14) comprised of individuals from aerospace Original Equipment Manufacturers (OEMs). This group is chartered to develop common requirements for use by the aerospace industry for quality improvement.

3.2 ACCREDITATION BODY (AB):

A body recognized by an IAQG sector that has the responsibility for the sector qualification of CRBs to issue certifications/registrations to aerospace quality management system standards.

3.3 ACCREDITED AUDIT/CERTIFICATE:

An audit conducted in complete accordance with the requirements of this document. An audit performed by an approved or certified Aerospace auditor, working through a CRB, qualified for this sector by an AB, that has been recognized by the RMC of the AAQG or IAQG. A certificate is issued attesting to conformance to the applicable standard(s).

3.4 AEROSPACE:

For the purpose of this document "Aerospace" is defined as the business of design, manufacture, overhaul, distribution and support of aerospace vehicles and engines, accessories and component parts, all ancillary and allied businesses including aerospace vehicle and support operations.

3.5 AEROSPACE EXPERIENCE AUDITOR (AEA):

An "Aerospace Experience Auditor" shall refer to an auditor that has met the requirements set forth in paragraph 7.2 of this document. Auditors conducting audits for OEMs in support of recognized shared audits at suppliers may be referred to as "Aerospace Experience Auditors" provided they meet the OEM's requirements that are to be equivalent to paragraph 7.2.

3.6 AEROSPACE PRODUCT:

"Aerospace Product" shall mean an aircraft, rotorcraft, guided weapon, spacecraft, other product designed to travel through the air, inside or outside the ground effect, or to travel outside the influence of the earth's atmosphere or major components of these products.

3.7 AEROSPACE QUALITY MANAGEMENT SYSTEM STANDARDS (AQMS):

Standards developed for and by the aerospace industry to define minimum quality system requirements for the aerospace industry supply chain. These standards are typically ISO 9001 based documents. For example AS9003, AS9100, AS9110, AS9120 and other similar standards.

3.8 AUDITOR:

An "Auditor" shall refer to an auditor that has met the requirements set forth in paragraph 7.1 of this document. Auditors conducting audits for OEMs in support of recognized shared audits at suppliers may be referred to as "Aerospace Auditors" provided they meet the OEM's requirements that are to be equivalent to paragraph 7.1.

3.9 AUTHORITIES/CIVIL AVIATION AUTHORITY (CAA):

The national authority for aviation, defense and space regulations with jurisdiction within its country of origin. [Federal Aviation Administration (FAA), Department of Defense, NASA in the United States, Department of Civil Aviation (DAC) and Brazilian Space Association (AEB) in Brazil, Transport Canada in Canada]

3.10 CERTIFICATION/REGISTRATION BODY (CRB):

An organization that assesses and registers/certifies the quality management system of customer organizations with respect to published quality management system standards and any supplementary documentation required under the system.

3.11 INTERNATIONAL AEROSPACE QUALITY GROUP (IAQG):

An international assembly of major aerospace companies comprised of three sectors representing companies in the Americas, Europe and Asia-Pacific to harmonize quality requirements and processes on a global scale.

3.12 MAJOR NONCONFORMITY:

The absence of or total systemic breakdown of a quality management system element specified in the applicable standard or any nonconformances where the effect is judged to be detrimental to the integrity of the product, processes, or service.

3.13 MINOR NONCONFORMITY:

A single system failure or lapse in conformance with a procedure relating to the applicable standard.

3.14 REGISTRAR MANAGEMENT COMMITTEE (RMC):

An industry group charged with the oversight and management of the registration/certification program and supporting processes, systems and documentation.

3.15 UNACCREDITED AUDIT:

An audit that is conducted that does not fulfill the requirements set forth herein. This includes, but is not limited to:

- a. use of an unapproved audit checklist
- b. failure to audit the requirements of the applicable standard
- c. audit for conformance to standard with no additional surveillance
- d. an audit performed by an auditor, CRB, or AB that has not conformed to the requirements of this document.

4. GENERAL:

- 4.1 The requirements stated herein shall be based on the latest versions of the documents identified in Section 2.
- 4.2 Aerospace additional requirements and supplementation are typically shown in aerospace quality management system (AQMS) documents as boldface items. These items are in addition to ISO 9001 elements and should be applied to the organization's quality system in accordance with the applicable AQMS.

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- 4.3 Data (in the form of checklists, approvals or other company specific information) generated by this document shall be handled as "sensitive" (or proprietary) between the parties generating, collecting, or using the data. Companies using this data shall keep its usage confidential both internally and externally, unless otherwise agreed in writing by the consenting parties. Data resident at the ABs and CRBs on OEMs shall not be shared with OEM competitors. Data relative to nonconformances in the OASIS database shall not be shared among OEM competitors. However, this data may be subject to audit or review at any time (see paragraph 5.4 and 6.4 below) by other parties.

5. REQUIREMENTS FOR ACCREDITATION BODIES:

- 5.1 The responsibilities of the ABs shall be to qualify CRBs against the requirements of this document. Aerospace sector qualification consists of an application review, witness audit, and recommendation for the recognition of the CRB aerospace sector program to the RMC. ABs shall work with the RMC to give assurance that CRBs continue to perform in a manner consistent with the requirements contained herein. The RMC recognizes ABs that demonstrate the capability to operate in accordance with this document. ABs who are recognized by the AAQG will be listed on the AAQG Web site (www.sae.org/aaqg). All ABs who are recognized by the RMC must be signatories to the IAF (International Accreditation Forum) MLA (multi-lateral arrangement) and shall be in conformance with ISO/IEC Guide 61 and IAF Guidance on ISO/IEC Guide 61.
- 5.2 ABs must prepare a CRB Application form for the applicable aerospace AQMS registration. This Application shall provide the AB with confidence that the CRB has developed the necessary documented process to meet AIR5359 requirements for each applicable AQMS. All information required by the CRB Application must be appropriate and acceptable prior to the AB approval and the recognition of that approval by the RMC.
- 5.3 ABs shall perform witness audits and oversight of CRBs in accordance with their internal procedures and ISO/IEC guidelines, including at a minimum of one office audit per year and one ISO 9001 based AQMS witness audit per year. For witness audits the AB audit team shall meet the requirements in paragraph 8.1, except it may use an OEM auditor or technical expert in-lieu of an AEA.
- 5.4 ABs must afford AAQG and IAQG member OEMs and applicable Authorities the right of review of records and information related to their AQMS sector qualification program, including AB activities associated with this document and recognition by the RMC. ABs shall ensure that this right of review is communicated to its AQMS sector qualified CRBs.

6. REQUIREMENTS FOR CERTIFICATION/REGISTRATION BODIES (CRBS):

- 6.1 A nationally recognized AB must first accredit CRBs seeking sector qualification for an AQMS standard to ISO 9001. This accreditation will be in accordance with ISO/IEC Guide 62 and the IAF Guidance on the application of ISO/IEC Guide 62 for ISO 9001. The CRB shall be accredited for at least one year prior to submitting an application for an AQMS accreditation. A CRB must complete the AB's application for the applicable AQMS standard and submit that application, along with necessary auditor applications, for review and approval by the AB prior to gaining recognition by the RMC.

- 6.2 A CRB may or may not previously be recognized by the AB for the scope category of aerospace represented by IAF Scope Category Sector 21 (NACE DM 35.3) (formerly U.S. SIC Code 372 and 376) in accordance with AB procedures and requirements. CRBs shall have and/or use qualified full-time or contract auditors and/or technical experts engaged in certification/registration activities.
- 6.3 CRBs processes and requirements to obtain an AQMS sector qualification, shall include as a minimum:
- a. evidence that the CRB's technical committee or advisory group have person(s) with aerospace background and knowledge
 - b. documented auditor-training program reviewed and approved by the AB during the AQMS Sector qualification process that conforms to AIR5493 and records thereof. Content of the training program as defined by the AAQG is:
 - * Applicable AS standard(s) for AQMSs
 - * Applicable AS checklist(s) and scoring method
 - * AIR5359
 - * AIR5493 Training Requirements
 - * Civil Aviation Authority requirements (such as FAA Title 14 CFR Part 21 or equivalent per the national CAA) and applicable advisory material
 - * Relevant Department of Defense requirements and National Space Agency or Space procurement requirements.
 - c. auditors meeting the requirements as defined in Section 7 of this document. Each auditor must be recognized by the RMC as meeting these requirements. The CRB audit team must meet the requirements of Section 8 of this document.
 - d. specific procedures, tools and techniques for granting, maintaining, extending, reducing, suspending and withdrawing AQMS certification/registrations. This includes audits at aerospace organizations per AB and AAQG requirements (e.g., standards, checklist(s), briefing notes, reference materials, etc.) and per Section 8 and Appendix A of this document.
 - e. achievement of accreditation from ABs for IAF Scope Category 21 (aerospace).
 - f. a full system witness audit from a recognized AB of a CRB aerospace audit.
 - g. agreement to periodic surveillance audits by the ABs and by AAQG member OEMs. CRBs holding AQMS sector qualification shall be subject to surveillance and reassessment audit activity, in accordance with accreditation requirements. AAQG member companies shall perform oversight of CRBs used by their suppliers and report results to the RMC.
 - h. prior to the issuance of an AQMS standard certificate or approval that nonconformities shall be satisfactorily corrected (including root cause analysis), implemented and the corrective action for all nonconformities verified by the CRB. The verification of corrective actions for nonconformities may or may not be on-site.

6.3 (Continued):

- i. the need to leave copies of all information pertaining to the audit results (including checklists, findings, supporting documents, or other correspondence) with the organization for the purpose of the organization sharing this information with their customers.
- j. prohibition against certifying/registering an organization to an AQMS with whom a related body has provided consulting services related to certification/registration of the said organization within the past two years. Any individual, who has in the past two years provided consulting services to an organization, shall have no involvement with the certification/registration of that organization. Where there might appear to be a conflict of interest, either through consulting or the offering of training to a potential client this shall be disclosed to the AB(s) and RMC prior to performing the registration process to determine if there is a conflict of interest.

NOTE: If a CRB performs training for an organization for which it will provide registration services, the training must be conducted and managed separately from the CRB's registration program. In addition, any training of auditors should be conducted in accordance with AIR5493.

- 6.4 CRBs must allow full access to the ABs, AAQG and IAQG member OEMs, and Authorities for the right of review of all records and information concerning their activities associated with this document and their approval as a CRB under this system. This includes information from audits of clients in accordance with this document.
- 6.5 CRBs must allow AAQG member OEMs to perform surveillance reviews of the CRB's processes and activities associated with this document and their approval as a CRB under this system. This access may include the witnessing of CRB audits at suppliers.

7. REQUIREMENTS FOR AUDITORS:

- 7.1 Auditors of AQMS(s) shall, as a minimum, continually meet the education, training, work experience and audit experience of ISO 19011 and continually have the following:
 - a. Auditing Experience: Participated in at least 4 audits for a minimum of 20 audit days, that cover all the elements of the ISO 9001 or the AS9100 standard within the last 3 years. Auditors shall have the ability to cover all the elements of ISO 9001 as determined by the CRB's Audit Program Manager or equivalent.
 - b. Aerospace Training: The Auditor shall be trained in the appropriate AQMS requirements per AIR5493. This training can be performed by the CRB or may be obtained independently. For the CRB, the training program shall be reviewed and approved by the AB as part of the approval process. The CRB's AQMS training program shall also be in accordance with AIR5493 training requirements.

7.2 Aerospace Experience Auditors (AEA):

Auditors that are to be considered and approved as Aerospace Experience Auditors must have a minimum of 4 years aerospace industry experience in the last 10 years, meet the requirements of 7.1 above and the following requirements:

AEROSPACE & OEM AUDITORS (7.1)	Auditors are to be qualified for ISO 9001 auditing and trained per ISO 19011		
	General knowledge of AQMS standards		
	Auditor training in industry standards and current aerospace industry requirements (6.3.b)		
AEROSPACE EXPERIENCE AUDITORS (INCLUDES 7.1 & 7.2)	4 years of aerospace work experience in the last 10 years (7.2.1) or →	Equivalent or current certification to an existing aerospace auditor requirement such as SBAC TS157 (7.2.2) or →	Industry experience & training on aerospace industry requirements and 2 witness audits (7.2.3)
ALL AEROSPACE & AEROSPACE EXPERIENCE AUDITORS (7.3)	15 hours of continuing education for auditors within every 3 years & 4 audits within 3 years (7.3)		

NOTE: numbers in () refer to paragraph numbers contained herein

FIGURE 1

7.2.1 Work Experience: AEAs must have four years in the aerospace industry directly involved in Engineering, Design, Manufacturing, Quality or Process Control for a major airframe/spacecraft/ space payload manufacturer, prime supplier, auxiliary equipment supplier and/or appropriate NASA, DOD or FAA organization (the 4 years shall have been within the prior ten calendar years). The work experience should have included direct involvement or knowledge of the elements as defined in 7.2.3 below (see Appendix C for further definition):

or

7.2.2 If an auditor holds a current auditor certification under an existing accredited aerospace auditor plan (e.g., certified AS9100 AEA, approval to SBAC TS 157, or other equivalent approval recognized by the AAQG) the requirements for an auditor shall be satisfied with the addition of the required AQMS training:

or

7.2.3 Auditors with some aerospace industry experience but less than 4 years experience in the last 10 (or more than 6 consecutive years since last industry work experience from date of the application) must complete an approved in-depth Aerospace Industry Competency course. This course must be in compliance with AIR5493 and approved by an AB, with the approval being recognized by the RMC. A CRB or third party may teach the course. An AB must approve course providers.

7.2.3.1 The aerospace competency course shall include the following topics as a minimum:

- * Aerospace industry quality perspective
- * Civil Aviation Authority roles/responsibilities/regulations overview
- * Defense Contract Management Agency roles/responsibilities
- * Airworthiness and aviation safety requirements
- * Design, development, verification and validation processes
- * First production article inspection (AS9102)
- * Aerospace material traceability requirements
- * Aerospace material accountability systems
- * Aerospace subcontractor approval and control requirements
- * Key/critical characteristic classification (AS9103)
- * Quality requirements flow downs
- * FOD program requirements
- * Use of customer supplied products
- * Calibration control and positive recall system
- * Stamp control
- * Special processes
- * Nonconforming material, system requirements and operation
- * Sampling inspection requirements and limitations
- * Government space organization - roles/responsibilities/regulations overviews
- * Program/project management
- * Risk management
- * Mission assurance/safety
- * Configuration management/requirements control

and

7.2.3.2 The auditor must have participated in at least two full aerospace industry audit(s) within the past 3 years and have been witnessed by a previously qualified Aerospace Experience Auditor, who themselves have not become qualified via training (7.2.3.). The two full witness audits must cumulatively cover all elements of the standard and shall have been conducted at industry or government locations that are predominately aerospace oriented (see 7.2.1 above). The auditor candidate must receive a positive and documented recommendation for approval on all audits.

NOTE: Only in exceptional circumstances, will applications for Aerospace Experience Auditors who have not worked in the Aerospace Industry be considered providing candidates can demonstrate adequate and relevant Aerospace knowledge and experience as per paragraphs 7.2.3.1 and 7.2.3.2.

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- 7.3 To maintain their aerospace auditor qualification, all auditors must participate in at least 4 aerospace audits within the last 3 calendar years. They must also participate in continuing education in accordance with AIR5493 that requires review of the changes to the industry standards, auditing methods and ISO requirements at a minimum of 15 hours total within every 3 years.

8. REQUIREMENTS FOR ASSESSMENT AND REPORTING:

8.1 Aerospace Assessment Teams:

- a. The assessment team leader must be a qualified lead auditor per ISO 19011 as identified in the CRB's accredited system and approved per this document.
- b. The team shall include an "Aerospace Experience Auditor" (AEA) and be supported by other auditors that are approved per this document.
- c. The assessment team must include an auditor qualified for the organization's commodity(ies) (IAF Scope Category). The commodity requirement may be met by a technical expert in-lieu of an auditor (per AB guidelines) who is additional to the team membership.

- 8.1.1 The CRB shall ensure that all members of the team are aware of the requirements of this document as may affect the scope of their assessment activity. The AEA(s) shall provide guidance to the assessment team throughout the assessment on the interpretation of aerospace requirements and, when requested, the significance of any issues identified.

- 8.1.2 The ABs, AAQG OEM members, Regulatory Agencies or Customer representatives may accompany the assessment team to evaluate the assessment process at any time. When these representatives are participating in the audit, the Team Leader shall have the option of including (or not) in the assessment report any findings brought forward by these representatives.

8.2 Duration of Assessment:

- 8.2.1 IAF Guidance on the Application of ISO/IEC Guide 62 (Annex 2), plus any specific additional AQMS audit days detailed in Appendix A, shall be used as the appropriate starting point to establish auditor time required. In all cases where adjustments are made to the appropriate starting point, sufficient evidence and records shall be maintained to justify variations.

- 8.2.2 A full assessment of all AQMS requirements using the complete checklist is mandated for any organization transitioning from an already existing ISO 9001 conforming system to an AQMS that was not previously assessed using AEAs and the requirements of this document.

- 8.3 The assessment team shall record all nonconformances identified during an audit activity. The team leader shall assign a nonconformance to the aerospace categories of "Major" or "Minor". These terms are defined in paragraph 3.12 and 3.13.
- 8.4 Audit Team Conclusions and Reporting:
- 8.4.1 The Assessment Team leader shall present the audit report to the organization including items listed in Appendix E as a minimum, stating its conclusions on conformity and effectiveness of the quality system overall to the AQMS requirements. The assessments shall be documented on the appropriate checklist or an electronic facsimile. For surveillance, the team leader shall advise whether recorded nonconformance(s) jeopardize an existing certificate. In the event that registration is denied or suspended, an appropriate course of action shall be agreed between the organization and the CRB. Where there is a failure to agree on a course of action, the appropriate appeals procedure of the CRB will be invoked.
- 8.4.2 Effective 1 January 2004, scoring shall be used on all AQMS assessments that use required checklists. Scores may be updated in the OASIS database at the conclusion of each assessment or surveillance.
- 8.4.3 The CRB shall submit to SAE via the OASIS database the results of the assessments performed. SAE shall make this information available to members of AAQG in accordance with database requirements including restrictions of access to competitor information. The information shall include as a minimum the items indicated in Appendix E.
- 8.5 AQMS certified/registered organizations shall be subject to CRBs surveillance audits and re-assessments conducted by the CRB in accordance with ISO/IEC Guide 62 requirements and the requirements of IAF Guidance to ISO/IEC Guide 62. These organizations may also be subject to witness audits as described in paragraph 8.1.2.
- a. Initial assessments shall cover the entire AQMS standard.
 - b. Surveillance shall be conducted, as a minimum, once per year.
 - c. During a 3-year period the entire AQMS standard must be completely assessed with important/critical areas covered during surveillance in accordance with IAF Guidance.
- 8.6 Certification/Registration:
- 8.6.1 An AQMS approved CRB is responsible for ensuring the continued integrity and validity of the certificates it issues and for drawing up and implementing a procedure to enable it to carry out this responsibility.
- 8.6.2 For the AQMS Sector qualification program, accredited registration documents shall be in the form of a certificate. Letters of conformance and unaccredited assessment statements shall be clearly distinguishable from accredited certificates. Unaccredited certificates shall not be issued.

8.6.3 The certificate(s) shall include the following information at a minimum:

- a. the appropriate version of the AQMS and ISO 9001 standard,
- b. the assessment was performed in accordance with the requirements of this document (AIR 5359 latest version) and the CRB is accredited under the aerospace Registrar Management Program,
- c. expiration dates, with a maximum period of 3 years.

8.6.4 If desired separate certificates for the applicable AQMS and ISO 9001 may be issued.

8.6.5 All certificates shall be specific in terms of the scope of product and the standard(s) being covered.

8.6.6 The certificate(s) shall have marks in accordance with the AB requirements. The AAQG or IAQG conveys no marks or logos. In case of misuse of the marks or logos by the certification/registration body, the accreditation may be suspended or withdrawn.

9. AUTHENTICATION AND OVERSIGHT OF ACCREDITATION BODIES, CERTIFICATION/REGISTRATION BODIES, AND AUDITORS:

- 9.1 The RMC shall have the primary responsibility to oversee the activities of all recognized organizations (ABs, AB approved CRBs) under this system. The RMC shall identify and document the specific methods that will be used to perform this oversight. (See Appendix B for more detail)
- 9.2 The RMC shall evaluate and recognize which ABs may participate in the AQMS Sector qualification program. The list of recognized ABs shall be documented by the RMC.
- 9.3 AQMS sector qualification of CRBs shall be approved by the ABs and be conducted in accordance with procedures and the requirements of this document. This includes an annual RMC review to evaluate the effectiveness of the process for recognition of CRBs. The review shall be in accordance with the AB's procedures and RMC recognition.
- 9.4 The CRB's Audit Management Program shall be approved to meet requirements of this document via AB oversight. Only individual CRB locations are approved by the RMC. CRB activity can be conducted at any location contingent on local regulations/requirements. All assessments shall be in accordance with the approved office/program management and requirements.
- 9.5 Oversight performed by AAQG member companies on ABs or CRBs, including witness audit results, shall be used by the RMC in AB and CRB assessment. Any issues resulting from OEM oversight should be relayed to the applicable CRB for action and follow-up.

- 9.6 The CRB's internal appeals/complaint process is to be used before other actions are taken. If any supplier/OEM cannot resolve issues with the CRB then the matter shall be referred to the AB. If the problem is related to CRB performance and cannot be resolved to the satisfaction of the organization or the OEM(s) involved, and when all levels of appeal have been exhausted, the matter shall be referred to the RMC. The RMC could recommend loss of the CRB's AQMS recognition, removal of an individual auditor's recognition, or removal of the AB recognition for failure to properly govern their accredited CRB(s).
- 9.7 The AB may suspend or withdraw the AQMS sector qualification of CRBs. The AB shall notify the RMC immediately when the accreditation status or AQMS qualification status of a qualified CRB has changed. The RMC shall notify the AAQG voting members of the change.
- 9.8 The AB shall individually approve auditor's credentials and that approval shall be recognized by the RMC in accordance with Appendix C. Results from the approvals shall be submitted by the AB to the RMC for recognition and will be maintained by the AB in the auditor database (reference address in Appendix E).
- 9.9 Auditor credentials are valid for 3 years and may be renewed based on the proof of continuing education and performance of required assessments per paragraph 7.3 above. The appropriate AB will handle renewals.
- 9.10 OEMs shall require suppliers to notify them when they lose registration or their CRB is no longer qualified for the applicable AQMS. CRBs shall also update the OASIS database in a timely manner when there is a change in the registration status of an organization registered to an AQMS.

10. REQUIREMENTS FOR SHARED AUDITS BY OEMS:

- 10.1 OEMs may use the requirements set forth in this document as a means to share audits within the industry provided the requirements and guidelines set forth in Sections 7 and 8 of this document are incorporated into the OEM's operating procedures. Also, the appropriate standards checklists are used and results reported in accordance with this document. Reporting of results to SAE is not mandatory (Appendix E), but all documentation shall be left with the organization and the organization can determine if it should be made available to its other customers (Appendix D).
- 10.2 Reporting shall be in accordance with Appendix D of this document and be made available with the assessment checklist. Auditor credentials shall be made available to companies upon request.

11. RECORDS:

Supporting evidence of the CRB's qualification to an AQMS shall be maintained at the offices of the AB(s). The RMC OEM members shall have access to records regarding recognition of CRBs qualified in the applicable AQMS. The AB and CRB shall also retain records of auditor qualifications. Records shall be retained for a period of at least 6 years.

12. FEE:

Details of the application process for AQMS accreditation(s) and current fees are available on request from the ABs.

Fee requirements for use of the OASIS database are available from SAE.

13. PROCEDURE RESPONSIBILITY:

13.1 The RMC shall be the governing body by which the requirements for and recognition of ABs, CRBs, and auditors for AQMSs are determined.

13.1.1 The RMC as used in this document is defined as an industry organization that is appointed by members of the AAQG and consists of a minimum of three (3) members of the AAQG and one (1) member of each recognized Accreditation Body (AB) in the Americas. It also includes at least one member of a Certification/Registration Body (CRB) for guidance. Further definition is in Section 9 and Appendix B of this document.

13.2 Any issues related to the implementation or use of this document shall be referred to the appropriate AB. Any issues regarding this document that are not resolved by the AB shall be referred to the RMC.

14. NOTES:

14.1 The change bar (|) located in the left margin is for the convenience of the user in locating areas where technical revisions, not editorial changes, have been made to the previous issue of this document. An (R) symbol to the left of the document title indicates a complete revision of the document.

PREPARED UNDER THE JURISDICTION OF
SAE COMMITTEE G-14, AMERICAS AEROSPACE QUALITY GROUP (AAQG)

APPENDIX A
SPECIFIC AEROSPACE QUALITY MANAGEMENT SYSTEMS REQUIREMENTS

- A.1 The following are specific requirements related to AS9000 assessments and registrations/certifications:
- Registrations/Certifications to AS9000 must expire no later than December 14th, 2003.
 - The following table is to be used as guidance for additional assessment days required for AS9000 assessments per 8.2.1.

TABLE A1

Certified Entity	Initial Assessment AS9000
<i>Number of Employees</i>	<i>Total Additional (Auditor Days)</i>
5 – 100	+ 0.5
101 – 1000	+ 1.0
Over 1000	+1.5

- All assessments to AS9000 shall use AS9000 Appendix 1 as the required checklist per paragraph 8.4 above
- Assessment teams for AS9000 must be in accordance with paragraph 8.1 above.

A.2 The following are specific requirements related to AS9100 assessments and registrations/certifications:

- a. Registrations/Certifications to AS9100 (no change) or AS9100 revision A "Section 2" must expire no later than December 14th, 2003.
- b. The following table is to be used as guidance for additional assessment days required for AS9100 assessments per 8.2.1.

TABLE A2

Certified Entity	Initial or Re-Assessment AS9100	Surveillance AS9100
<i>Number of Employees</i>	<i>Total Additional (Auditor Days)</i>	<i>Annual (Auditor days)</i>
5 - 100	+1.5	+ 1.0
101 - 1000	+ 2.0	+ 1.5
Over 1000	+ 3.0	+2.0

- c. For all AS9100 assessments CRBs shall use AS9101 as the required checklist per paragraph 8.4 above.
- d. Assessment teams for AS9100 must be in accordance with paragraph 8.1 above.

A.3 The following are specific requirements related to AS9110 assessments and registrations/certifications:

- a. The following table is to be used as guidance for additional assessment days required for AS9110 assessments per 8.2.1.

TABLE A3

Certified Entity	Initial or Re-Assessment AS9110	Surveillance AS9110
Number of Employees	Total Additional (Auditor Days)	Annual (Auditor days)
5 - 100	+1.0	+ 0.5
101 - 1000	+ 2.0	+ 1.0
Over 1000	+ 3.0	+1.5

- b. All assessments to AS9110 shall use AS9111 as the required checklist per paragraph 8.4 above.
- c. AS9110 assessments shall be performed by AEAs and aerospace auditors provided they have successfully completed AS9110 training and have aerospace maintenance, repair and overhaul experience of 2 years in the last 4 years or have specific training in repair/overhaul in addition to that defined in 7.2.3.1 above consisting of:
- FAR 43/145/185 or CAA equivalent requirements
 - Tool control
 - "Return to service" process
 - Flight test
 - Functional check flight
 - Weight and balance
 - Wing walking or aircraft marshalling techniques

A.3 (Continued):

- d. A test shall be given to record successful completion of the training. The training course shall be designed per the requirements of AIR5493. The CRB providing the training shall send a letter to the AB attesting to the auditor's successful completion of training.
- e. Assessment teams for AS9110 must be in accordance with the paragraph 8.1 above except it must include 9110 qualified auditors.

A.4 The following are specific requirements related to AS9120 assessments and registrations/certifications:

- a. The following table is to be used as guidance for additional assessment days required for AS9120 assessments after consideration for reduced clauses in ISO 9001 per 8.2.1.

TABLE A4

Certified Entity	Initial or Re-Assessment AS9120
Number of Employees	Total Additional (Auditor Days)
5 – 100	+ 0.5
101 – 1000	+ 1.0
Over 1000	+ 1.5

- b. All assessments to AS9120 shall use AS9121 as the required checklist per paragraph 8.4 above.
- c. AS9120 assessments shall be performed by AEAs and aerospace auditors provided they have successfully completed AS9120 training. This training may be performed off-site and/or by self-study. A test shall be given to record successful completion of the training. The training course shall be designed per the requirements of AIR5493. The CRB providing the training shall send a letter to the AB attesting to the auditor's successful completion of training.
- d. Assessment teams for AS9120 must be in accordance with the paragraph 8.1 above.

A.5 The following are specific requirements related to AS9003 assessments and registrations/certifications:

- a. No additional assessment days are required for AS9003 assessments.
- b. Assessment days as referenced in the IAF Guidance on the application of ISO/IEC Guide 62, Annex 2, are applicable.
- c. CRBs shall incorporate an appropriate checklist into the CRB's operating procedures for AS9003 assessments as per paragraph 8.4 above.
- d. Certificates issued for AS9003 shall be in accordance with paragraph 8.6 above and should not include reference to any ISO document in whole or in part.
- e. Assessment teams for AS9003 must be in accordance with paragraph 8.1 above. AEAs are able to perform assessments to AS9003 provided they have successfully completed AS9003 training. This training may be performed off-site and/or by self-study. A test shall be given to record successful completion of the training. The training course shall be designed per the requirements of AIR5493. The CRB providing the training shall send a letter to the AB attesting to the auditor's successful completion of training.

A.6 The following are specific requirements related to "scope" endorsement of AS9100 assessments using AS9006 requirements for Deliverable Software.

- a. Additional assessment days are not required for AS9006 unless the software assessment is in addition to AS9100 requirements. If the assessment is only for software or for software in lieu of manufacturing, the AS9100 requirements apply. If the assessment is for AS9100 and AS9006 in combination, an appropriate number of auditor-days shall be added to AS9100 requirements based on size of the software activity.
- b. CRBs shall incorporate the required AS9006 checklist as part of their operating procedures per 8.4 above.
- c. AS9006 assessments shall be performed by AEAs or aerospace auditors provided they have successfully completed AS9006 training and:

have a 4-year college degree or diploma in a technical field, which includes courses in, or utilization of, software development, programming, software testing, software quality assurance, system analysis, or have equivalent experience. Equivalent experience is defined as a minimum of eight years experience in aerospace software development or aerospace software quality. Experience must be related to aerospace software. Education/experience in commercial off-the-shelf systems focused solely on business systems or gaming software, unrelated to the aerospace industry is not acceptable.

A.6 (Continued):

AS9006 auditors shall also have specific training/testing in software knowledge consisting of one or more of the following:

- ASQ CSQE certification
 - TickIT auditor registration
 - IEEE Certified Software Development Professional CSDP
 - Professional software engineering registration (i.e., Texas)
 - Authorized by the Software Engineering Institute (SEI) to be a Lead Assessor or Lead Evaluator for the Software CMM, or a Lead Appraiser for the CMMI
- d. A test shall be given to record successful completion of the AS9006 training. The training course shall be designed per the requirements of AIR5493. The CRB providing the training shall send a letter to the AB attesting to the auditor's successful completion of training.
- e. Assessment teams for AS9006 must be in accordance with the paragraph 8.1 above except it must include 9006 qualified auditors. Assessment teams may include AEAs and AS9006 auditors who are qualified per this section, but not approved as Aerospace Auditors.