Axillon Aerospace Procedure

SUPPLIER QUALITY REQUIREMENTS DOCUMENT

Company Confidential

DOCUMENT	MPRC-10 (supersedes previous SP2 Supplier / Vendor Control)
VERSION	09
DATE	11 Jun 2026
FUNCTION	Procurement & Supplier Quality
PROCESS OWNER	**Sr Quality Manager**

REVISION RECORD SHEET

VERSION	DATE	DESCRIPTION	APPROVAL STATUS	TRAINING REQUIRED (Y/N)
01	20 Apr 2015	Release for Launch	APPROVED	-
02	03 Aug 2017	Updated in line with AS/EN/JISQ9100:2016	APPROVED	-
03	19 Mar 2018	Updated to include references to AS/EN/JISQ 91XX Clause 2 "Typo" amended "AS/EN/JISQ 9102" replaced by AS/EN/JISQ 9120; Clause Inserted 8.1.4.1 Prevention of Suspected Unapproved Parts; Clause inserted 8.1.4.2 Installation of Approved Parts; Section 8.1.4 reference to standard AS5553 added, also added to list of standards in section 1.1; Minor formatting changes; Clause 8.3.6 wording inserted "The requirements of AS/EN/JISQ91XX identified in clause 3.1 "Table 1" apply for ASD products, for other industries ISO9001:2015 is applicable"; Clause 1.4 re-worded in line with current Axillon Aerospace T's & C's and Trade Compliance procedures.	APPROVED	-
04	01 Jun 2020	Format update. Scope and Applicability sections moved to 1.1 & 1.2; Section 1.6 Trade Compliance (formerly section 1.4) – Amended to include requirement for pre-notification of international shipments; Section 2.1 Supplier Surveillance. Revocation of approval amended. Section 5.1 Leadership and Commitment; Section 5.3 Responsibility, Authority and communication; Section 7.5.3 Documented Information – Control of records updated to reference accuracy, media and notification of record disposal request; Section 8.5.1.1 Inspection updated; Section 8.5.1.2 Reduced Inspection updated; Section 8.5.1.3 Sample Inspection updated; Section 8.5.1.4 Variation Management updated; Section 8.5.1.8 updated to reference non-conformance; Section 8.5.1.7 Product Verification updated; Section 8.5.1.8 PFMEA updated; Section 8.5.1.9 Control Plans inserted; Section 8.5.1.10 Work Instructions inserted; Section 8.5.1.11 MSA inserted; Section 8.5.1.7 Product/Process verification – PPAP requirements added; Section 8.6 Release of Products and Services – Minimum requirements for Release paperwork and Commercial documentation amended; Section 8.7.2 Axillon Aerospace Rejected and/or Returned product – Challenger and liability criteria inserted; Section 9.1.2 Customer Satisfaction – Requirement to create Corrective action plans by the supplier has been amended; Section 10.3.1 – Zero Defects requirements added; Section 1.10 - Axillon Aerospace key customer requirements documents compliance; Section 11.1 - Industry Standards, AS13000 references added; Section 11.2 - Key Customer Requirements Documents.	APPROVED	-
05	06 Jul 2020	Restructured Clauses in section 6, 7, 8, 9, 10 and 11 to Mirror AS9100D (as per MPRC-10 Revision 3); 7.5.6.1 – Removed; 7.5.6.2. – Removed; 1.6 – Added REACH requirements Amended clause references throughout 8.4.2.1 Verification of purchased product: Amended formatting.	APPROVED	-

06	30 Dec 2024	Change to Axillon document. Replace Meggitt / Parker throughout. Updated Section 8.2.2 to require latest rev. of spec. if not on PO. Updated section 8.7.1 to clarify that any approved concession requires a copy to be shipped with the product.	APPROVED	-
07	11 Jul 2025	Minor Reformat; Added Training Required column to Revision Record; Replaced MFT-31 with PRO-F-10 in Sections 1.1 & 2.0; Added Section 7.5.3.3 Use & Control of Digital Datasets.	APPROVED	N
08	04 Nov 2025	Revise Section 2.3 Supplier Classification and Section 3.1 Table 1 to reflect site's current process; Added AS6174 to Section 8.1.4.	APPROVED	N
09	11 Jun 2026	Change company name and procedure scope to AARC throughout. Update special processes listing to reflect Composites business in section 3.2. Replace links with standard text for MFT-120, MFT-122 and MFT-206 in sections 1.6, 10.3.2, and 11.3. Revise Key Customer Requirements in section 11.2.	APPROVED	N

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1.0 PURPOSE

Axillon Aerospace Rockmart Composites, Inc. (AARC) supplier quality and delivery performance is fundamental to ensuring that AARC continues to meet and exceed the increasing demands of the highly competitive Aviation, Space and Defense (ASD) global marketplace. In support of this, AARC expects its suppliers to maintain an effective Aerospace Quality Management System (AQMS), considered as the cornerstone for delivering the highest levels of customer service in the supply of articles, services and processes.

AARC is committed to working with its suppliers to drive continuous improvement on quality, delivery and cost performance through improved processing and organizational efficiency.

AARC supports the certification of suppliers to the highest levels and considers certifications as a key asset during any supplier selection process. A lack of such certifications will invoke a raised level of surveillance of the supplier based on a higher level of perceived risk. The list below indicates the primary criteria which AARC use to ascertain a supplier's risk profile.

- The certification held by suppliers.
- Acceptance of AARC terms and conditions (including this document).
- Quality and delivery performance.

The requirements defined by this document are an integral part of the binding contract between suppliers and AARC and will be referenced in all AARC contracts and purchase orders.

AARC is one of the world's leading Aviation, Space & Defense (ASD) manufacturers, which:

- Design, manufacture and support Aircraft and associated articles for various Civil and Military customers.
- Is legally bound to demonstrate to Regulatory Authorities that they have the capability to design, manufacture and support articles to the maximum safety level (Airworthiness) and maintain the effective Airworthiness of the articles.

1.1 Scope

Requirements specified in this document are complementary (not alternative) to the current AS/EN/JISQ 9100:2016 series of standards for Aviation, Space and Defense suppliers (for non- aviation, space and defense suppliers ISO 9001:2015 shall apply) and contractual / applicable law and regulatory requirements.

This document also contains:

- Supplier requirements for AARC recognition of certification, as issued by an accredited Certification Body (CB), in accordance with International Aerospace Quality Group (IAQG) requirements.
- AARC expectations for all of its Suppliers today and in the future.

Allowance to deviate from the AARC requirements within this document is at the sole discretion of AARC and will have to be agreed with the relevant AARC Supplier Quality Assurance point of contact.

Deviation requests regarding MPRC-10 by the supplier shall be completed using PRO-F-10. The supplier shall use this document to identify all deviations and mitigation activity which has been/will be implemented.

AARC also requires, where applicable, Suppliers to conform to AARC "key customers of interest" requirements as requested via contract or Purchase Order flow down.

1.2 Applicability

This AARC Supplier Quality Requirements Document (SQRD) is applicable to all suppliers who furnish product, material, processes or services that contribute to product quality for AARC.

The quality system requirements specified herein are intended to form part of AARC contract requirements and are in addition to all (contractual or other) requirements which may need to be complied with by the supplier, including any legal, regulatory or administrative requirements. For the purposes of this document, a contract exists when the supplier accepts an obligation to supply products or services to AARC, whether under a purchase order, long-term agreement or otherwise.

The acceptance by the supplier of a contract stipulating application of this document (total or partial) indicates acceptance of the content of this document. It is a requirement for the supplier to communicate and flow down these requirements to its sub-tier sources. The supplier shall be able to provide the relevant evidence of such communication upon request by AARC.

It is the suppliers' responsibility to ensure it implements any revisions of this document and its content within its own organization. The latest version of this document is available via www.axillonaerospace.com.

1.3 Document Format

To facilitate its use, this document is structured according to the chapters of ISO 9001:2015 Quality Management Standard and the AS/EN/JISQ 9100:2016 Aerospace Quality Management Standard (Chapters 4-10). Additional AARC requirements are highlighted in bold italic text throughout Sections 5-10.

AARC requires compliance for all sections and sub-sections within this document, including the corresponding section or sub-section of the relevant AS/EN/JISQ 91XX standard (the minimum requirement for non-Aviation, Space and Defense suppliers is compliance with ISO 9001:2015).

Where the supplier organization is a combination of ASD Manufacturer, Maintenance and/or Distributor the relevant clauses of each AS/EN/JISQ 91XX documents apply

The statement which identifies this as a requirement is as follows:

"The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products, for other industries ISO 9001:2015 is applicable"

1.4 Access

AARC shall have the right of access to any supplier involved with AARC product. This shall include access to any applicable documentation. The supplier shall provide AARC customers (or the customers' authorized representatives) and/or Regulatory Authorities rights of access to premises where AARC work is being performed. Such access shall be used to verify that the quality activities being undertaken meet the requirements of the AARC contract.

Where a supplier is approved to the AS/EN/JISQ 91XX series of standards, then the supplier's Online Aerospace Supplier Information System (OASIS) database administrator shall grant AARC access rights to certification and assessment results.

1.5 Supplier Policy Compliance Requirements

In order to supply AARC with products or services all suppliers shall be able to demonstrate compliance to industry-wide acknowledged policies. A list of common industry-wide policies is demonstrated below; this is not a limited list:

- Anti-Bribery Act / Code of Ethics
- Anti-Fraud

- Conflict Minerals
- Counterfeit Avoidance
- Cyber Security
- Modern Slavery
- Substance Abuse
- Whistle-Blower Policy

1.6 Trade Compliance

The supplier shall not release any materials, equipment, hardware / technical data or drawings supplied by AARC to any other party (national or international, including sister companies or associated businesses) without the prior written approval from AARC.

The supplier shall not purchase materials, components, parts or processes from countries / regions prohibited under applicable National / International export control regulations for use in AARC product.

The supplier shall provide “Origin of Goods” statements during the RFP/RFQ processes to the Procurement Lead at AARC.

The supplier shall not, without prior written approval from AARC, change the source for a controlled product or service (national or international, including sister companies or associated businesses).

All technical documents provided to AARC shall have the relevant export control classification information and destination control statements added to them before they are released from the supplier.

Materials supplied from anywhere in the world may be subject to USA, UK or other local, regional and international trade regulations. When required, appropriate licenses, permits and permissions shall be obtained for the export from, and import to, an AARC facility. The supplier is responsible for obtaining required authorizations for the export from, and import to, the supplier’s facilities; and shall liaise with AARC to ensure all required authorizations are obtained. The Supplier shall provide any information required to obtain these authorizations upon request.

The following classification information is required to assist in technology controls, license determinations and the import / export of products and technology. Each party will provide the following information for their products and technology as well as any tooling / test equipment, firmware and software that will transfer as a result of an AARC purchase order and/or contract:

- Tariff / Commodity Code
- Export Control Number
- Country of Origin

For International shipments a copy of the commercial invoice in accordance with the requirements of Section 8.6 shall be submitted to the importing AARC facility before delivery occurs.

On an annual basis or when requested by the AARC Buyer, the supplier is required to provide re-certification to products supplied to AARC, by completing MFT-120 Supplier Trade Compliance Classification Request and returning to your AARC Buyer.

Where new products are sourced throughout the year, the supplier is required to complete MFT-122 Supplier Trade Compliance Classification Questionnaire prior to shipment of goods to AARC.

Where required by AARC the supplier shall ensure that:

- Hold a Current AARC Annual Certificate of Compliance

- Submit Confirmation of DDTC registration to AARC (applicable to U.S suppliers manufacturing ITAR materials)

1.7 Health, Safety and the Environment

The supplier shall be committed to providing a safe and healthy work environment to minimize accidents and injuries.

The supplier should respect the environment and work to minimize waste, prevent pollution and conserve energy. The supplier is required to comply with all applicable permits and authorizations, including material and waste handling. The supplier is required to meet the requirements of international, national and regional legislation that are applicable to the Health and Safety of the

product, processing and waste from such activities. This legislation includes, but is not limited to, RoHS, REACH and WEEE compliance where applicable. Registration to ISO 14001, and OHSAS 18001 or ISO 45001 is strongly encouraged.

REACH Candidate Lists and Substances Subject to Authorization

- Suppliers must provide Candidate List substance declarations to AARC upon first supply of articles (product) containing REACH substances >0.1% w/w.
- Suppliers must provide relevant supply continuity information concerning REACH Annex XIV Substances Subject to Authorization & those listed on any Recommendation for Annex XIV upon request. For further information please contact AARC.

1.8 Terms and Definitions

Suppliers of products / services used by AARC in Non-Aviation, Space & Defense applications are referred as “Industrial” suppliers later in this document, these suppliers are required to meet the terms defined in the ISO 9001:2015 standard as a minimum.

- **ASD Supplier** – Supplier / Subcontractor of components / assemblies or services for use within an Aviation, Space & Defense application.
- **Industrial Supplier** – Supplier / Subcontractor of components / assemblies or services for use within a Non-Aviation, Space & Defense application.

1.9 Forms and Form Templates

Forms and form templates referenced in this document are available from the applicable AARC Procurement Department.

1.10 Reference Documents

It is the responsibility of the supplier to ensure that they are working to the latest version of specified standards referenced within this document as well as contract requirements.

It is the responsibility of the supplier to obtain copies of non-AARC documents (i.e. Industry standards referred to in Section 11.1 below).

Requests for AARC or AARC customer specific specifications that are needed shall be requested from the applicable AARC Procurement Department.

AARC suppliers shall review and comply with this document AND any additional part specific, or customer requirements as indicated on the Purchase Order and/or relevant Drawing / Specification / Quality Plan.

A list of referenced AARC Key Customer Requirement Documents can be found in Section 11.2 below.

2.0 SUPPLIER APPROVAL

Dependent upon the supplier's business sector and classification, the supplier shall comply with the requirements of the standard(s) listed in the table in Section 3.0. Additional requirements may apply, and exceptions may be considered at the discretion of AARC and agreed on completion of PRO-F-10.

Approved suppliers and sub-tier suppliers shall establish, document and maintain a Quality Management System (QMS) that is independently assessed and certified. AARC shall only accept Certification Bodies which conform to ISO/IEC 17021 and/or are approved by IAF MLA signatory accreditation organizations such as ANAB, UKAS, etc.

NOTE: Although recommended, certification to AS/EN/JISQ 9100, AS/EN/JISQ 9110, AS/EN/JISQ 9115 or AS/EN/JISQ 9120 is not mandated

2.1 Supplier Surveillance

AARC shall maintain a supplier scorecard for all key suppliers. Dependent on supplier performance and risk to AARC, suppliers may be subject to continual surveillance.

AARC surveillance of suppliers shall include as appropriate, onsite audits, assessments or inspections as deemed necessary.

AARC may revoke the approval granted to a supplier (thus removing them from any Approved Supplier List) or place conditions on a supplier's approval(s) if the supplier violates the requirements of this document or fails to provide acceptable quality / delivery performance to any AARC facility.

Where required the supplier shall implement an improvement plan approved by AARC and submit a follow-up status report as defined and agreed by AARC.

2.2 Changes to the Supplier's Organization

Suppliers shall notify AARC within two (2) working days of any changes in its organization affecting key management personnel and approvals.

Suppliers shall notify AARC of any changes, prior to implementation, in its organization affecting manufacturing site location, manufacturing processes, approved sub-tier sources, or other such changes that affect the production materials or supply of services to any AARC facility.

The list of required information and timelines are defined in Section 8.1.6 (Control of Work Transfer).

2.3 Supplier Classification

AARC suppliers are classified by their scope of approval. A supplier's scope is defined by the category of procured product type. Scopes of approval include, but are not limited to:

- Adhesive/Films
- Castings
- Chemicals
- Cloth/Uncoated Fabric
- Coated Fabric
- Composites
- Composites/Prepreg
- Cord
- Distribution
- Electrical Components
- Fabrication
- Fasteners
- Foam
- Gaskets/Seals
- Lab/Testing
- Labeling
- Machining
- Machining & Tooling
- Machining and Fabrication
- Plastics
- Rubber
- Thread
- Valves
- Wire and Cable

3.0 AS/EN/JISQ 9100:2016 AND ISO 9001:2015 CERTIFICATION

As a member of the International Aerospace Quality Group (IAQG) and complying with IAQG recommendation, AARC recommends every supplier of products for Aviation, Space & Defense applications to be registered to

the AS/EN/JISQ 9100 series by an accredited Certification Body which is approved by IAQG. The scope of the certification shall include the product and/or service provided to AARC. As a minimum, all suppliers are required to comply with ISO 9001:2015; the registration shall be conducted by an accredited Certification Body approved by the national governing body for Quality Registrations.

The table below identifies the classifications for AARC suppliers, along with the recommended minimum QMS requirements for the respective business sector:

3.1 Table 1

Supplier Class Description	Aviation, Space & Defense (ASD) Supplier
Manufacturer (Engineering Design)	AS/EN/JISQ 9100:2016 with "Design and Development"
Manufacturer	AS/EN/JISQ 9100:2016 and/or ISO 9001:2015
Maintenance	AS/EN/JISQ 9110:2016
Distributor	AS/EN/JISQ 9120:2016

NOTE: In addition, regulatory authority approvals may be required in the applicable sector such as EASA (European Aviation Safety Agency) and FAA (Federal Aviation Administration).

3.2 Special Processes

Suppliers and sub-tiers shall ensure that the following special processes are carried out internally or externally under the scope of NADCAP accreditation and are carried out by NADCAP accredited processors unless otherwise agreed by AARC.

- Electronics (Printed Circuit Boards and Assemblies, Cables, Harnesses)
- Chemical Processing (Inc. anodizing, plating, painting, passivation, etc.)
- Coating
- Composite Build
- Heat Treating
- Material Testing Laboratory
- Conventional and Nonconventional Machining
- Non-Destructive Testing
- Elastomeric Seal Manufacture
- Welding/Brazing
- Sealants

4.0 QUALITY MANAGEMENT SYSTEMS (QMS)

4.1 Understanding the Organization and its Context

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

4.2 Understanding the Needs and Expectations of Interested Parties

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

4.3 Determining the Scope of the Quality Management System

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

4.4 Quality Management System and its Processes

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

5.0 LEADERSHIP

5.1 Leadership and Commitment

5.1.1 General

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

Match quality policy, quality objectives, quality planning and quality management reviews to the potential effects of the supplier's product on the AARC product into which they are incorporated.

5.1.2 Customer Focus

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

Ensure that product conformity and on-time delivery to AARC is measured and appropriate action is taken when the supplier's management become aware that planned results (e.g. quality and delivery) are not being, or shall not be, achieved. A designated person shall notify AARC in any instance where planned results are not, or may not be, met.

5.2 Policy

5.2.1 Establishing the Quality Policy

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

5.2.2 Communicating the Quality Policy

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

5.3 Organizational Roles, Responsibilities, and Authorities

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) Define the personnel responsible for product quality (across all production shifts) and ensure that they have the following:

- **Authority to stop production to correct quality problems**
- **Organizational freedom and unrestricted access to top management to resolve quality issues**

b) Establish a procedure for task and shift handovers to ensures that all necessary information is communicated (verbally and in written form) between the out-going and in-coming personnel.

6.0 PLANNING

6.1 Actions to Address Risks and Opportunities

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

6.2 Quality Objectives and Planning to Achieve Them

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

6.3 Planning of Changes

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

7.0 SUPPORT

7.1 Resources

7.1.1 General

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

Notify AARC of changes in any resources that may affect the products or services provided to AARC within 14 days of a notification of change to those resources.

a) Establish business continuity plans that identify, analyze, evaluate and/or mitigate risks related to business continuity that includes (but is not limited to) the following:

- **Product, facility or individual skill uniqueness**
- **Access to alternative production facilities**
- **Single points of failure (including sub-tier suppliers) or key processes**
- **Remote backup of computer data**
- **Access to alternative information technology systems**
- **Action plans and timescales for business recovery**
- **Contacts, process owners and procedures to follow in the event of an emergency**
- **A strategy to control, review periodically and communicate plans to all relevant personnel**

b) Perform a business risk assessment, the output of which will be used as part of the business continuity plan, that includes (but is not limited to) the following:

- **Risk identification - identify sources of risk, their cause and effects and their potential business impact**
- **Risk analysis - consider the likelihood and level of impact of the identified risks Risk evaluation - compare the level of risk found during the analysis process and prioritize risks treatment**
- **Risk treatment - prepare contingency and/or mitigation plans to reduce risk levels**
- **Monitor and review the risk management activities to ensure controls are effective**

c) Inform their AARC purchasing contact within 14 days regarding the following:

- **Changes to third party or other party certification including lapse / withdrawal / major audit findings**
- **Change of the nominated quality representative**
- **Significant change to the quality management system**
- **Change in ownership or discontinuation of business activities**
- **Risks that could impact upon the continuity of the supplier's business / operations**
- **Risks with the supply of substances used in the production or physical make-up of products, due to laws and regulations concerning the control or use of such substances that may be published from time-to-time**

d) Ensure that chemical substances constituting or contained in products supplied to AARC are not restricted under Annex XVII of REACH (Registration, Evaluation and Authorization of Chemicals).

e) Ensure that data related to the use of substances and mixtures that has been provided to the supplier by AARC is passed onto sub-tier / subcontract suppliers (when applicable).

f) Submit risk register and contingency plans to AARC on request.

g) Maintain records of risk management (see Section 7.5).

h) Organizational Structure: The supplier shall make available to AARC a complete and up to date description of the organizational structure, job roles and skill requirements for personnel contributing to product / services supplied to AARC (see Section 5.3).

7.1.2 People

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

7.1.3 Infrastructure

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

7.1.4 Environment for the Operation of Processes

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

The supplier shall maintain its workplace in a state of order, cleanliness and repair consistent with the product and production process needs.

NOTE: AARC recommends the implementation of improvement tools such as 6S (Six-S) and visual management (for workplace design / organizational improvement) as an approved means of compliance.

7.1.5 Monitoring and Measuring Resources

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

Calibration systems shall meet the applicable requirements of ISO 10012, ISO 17025 or ANSI/NCSL Z540.

NOTE: The supplier should ensure that all measurement systems applicable to AARC supplied materials have been tested for Repeatability and Reproducibility (R and R) in line with Industry Standards, such as AS 13003.

7.1.6 Organizational Knowledge

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

7.2 Competence

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a. Establish a documented procedure for identifying training needs, achievement and review of competence of all personnel performing work directly or indirectly affecting conformity to product or production process requirements

b. Create role profiles / accountabilities and provide on-the-job training for personnel performing work directly or indirectly affecting conformity to product or production process requirements, including any new or modified job and contract or agency personnel

c. Establish a business skills matrix to identify training requirements as well as identifying areas for succession planning and risk management / treatment to maintain continuity of supply

d. Maintain records of training and competence for the period that the relevant employee remains within the supplier's organization and for three (3) years after leaving the organization.

7.2.1 Vision Standards

Applicable to personnel conducting product verification / inspection activities:

- Perform a vision assessment (eye examination) on commencement of employment and at two (2) yearly intervals for personnel engaged in product verification / inspection activities to ensure visual acuity
- Ensure that the vision assessment (optometric examination) is performed by a trained / qualified person
- Ensure that optical aids used during the vision assessment to ensure visual acuity are also used during product verification / inspection activities
- Perform a (one time only) color perception test to ensure that personnel are capable of distinguishing and differentiating colors where color perception is required for product verification / inspection activities
- Maintain records of vision standards for the period that the relevant employee remains within the supplier's organization, plus three (3) years.

7.3 Awareness

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

7.4 Communication

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

7.5 Documented Information

7.5.1 General

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

7.5.2 Creating and Updating

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

7.5.3 Control of Documented Information

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

7.5.3.1 Control of Documents

- Where AARC modifies a document referenced within the contract, the supplier shall take the appropriate actions to ensure that the modification is applied in accordance with the contractual provisions and inform AARC of its application.
- Corrections to documents shall be recorded, dated and traceable to the originator (e.g. by using the signature or stamp) – see Sections 8.5.6.1/8.5.6.2 for requirements of operator certification and for stamp control. All amendments shall be made by a single line through the original text using black permanent ink, in such a way as to leave the original text legible. A stamp, signature (or electronic equivalent) and date shall be placed adjacent to that amendment.

7.5.3.2 Control of Records

- The supplier shall maintain, and have available on a timely basis, all records traceable to the conformance of Product / Parts / Services delivered to AARC, including delivery / post-delivery documentation, shall be kept for a minimum of 10 years from the date on which that document was published.
- The records shall be suitable in format, accuracy, and completeness to permit analysis. Where numerical results are required, the actual values obtained shall be recorded. Where tape, film or other media are required, they shall be identified with the characteristics measured. Where defective or non-conforming material is involved, the records shall include any analysis completed and corrective action taken.
- AARC reserve the right to require documentation for some products to be retained for the "life of the aircraft".
- Supplier records shall be made available to Regulatory Authorities and AARC Authorized Representatives, and their customers, within one (1) business day of request.
- Supplier shall notify AARC of records to be disposed of prior to disposal. Such notification shall occur at a minimum of 90 days prior to the proposed disposal. AARC reserves the right to request delivery of such records, in the event AARC chooses to exercise this right the supplier shall deliver such records to AARC at no additional cost on media agreed by both sides.
- Records shall be stored in secure areas to negate the effects of damage and deterioration from, for example, fire and floods and ensure ease of retrieval. Backup copies shall be stored in a separate facility.
- All data that is stored by electronic means shall be secure, regularly backed up, supported by a disaster recovery procedure that is defined, documented, implemented and regularly audited for compliance.
- In the event of supplier closure, insolvency or similar event, termination / expiry of the contract, all pertinent records shall be supplied to AARC.

NOTE: It is recommended that the suppliers apply the principles and practices of records management, as detailed in BS ISO 15489-1:2016.

7.5.3.3 Use & Control Of Digital Datasets

Digital Datasets shall be protected to ensure integrity and security. Digital Datasets must be stored, backed up, access controlled, and export controlled to ensure data cannot be inadvertently modified, translated or exchanged without proper approval by AARC. Suppliers that receive and handle digital data from AARC shall have a documented procedure for the control of these digital datasets. Items, such as .pdf versions of a drawing, are not considered digital data. Examples of digital data are typically electronic files that can be modified or manipulated (i.e. models, programs, etc.) therefore changing the controlled configuration.

8.0 OPERATION

8.1 Operational Planning and Control

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) Implement a process to control the whole product lifecycle. Consideration should be given, as a minimum, to the following:

- **Sales, Inventory and Operations Planning (SIOP)**
- **Master Production Schedule (MPS)**
- **Material Requirements Planning (MRP)**

b) A process to plan and manage production capacity shall be maintained and take into account availability of personnel, equipment and all customer demands.

c) The supplier shall, when requested, submit a product quality plan which shall be approved by AARC prior to delivery of any product.

8.1.1 Operational Risk Management

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall demonstrate how proactive obsolescence management is implemented, controlled and monitored. This should be an integral part of the design, development, manufacturing and product support processes, and shall be detailed when requested in an agreed obsolescence management plan.

NOTE: When conducting its periodic risk review the supplier should consider employing a structured assessment methodology, e.g. ISO 31000 and apply it internally, as well as to sub-contractors.

8.1.2 Configuration Management

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall establish a configuration management system to ensure:

- Technical and administrative functions identify, document, control, report and validate the physical and functional characteristics of a product.
- Engineering definition of products and their change history are known at any point in time and can be provided to AARC upon request.
- Verification that all aspects of a change have been assessed for completeness.

- Suppliers shall establish procedures to identify, document, review, approve and control all changes and modifications.

8.1.3 Product Safety

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

8.1.4 Prevention of Counterfeit Parts

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

As a minimum, all suppliers are required to comply with the requirements of AS6174. For electronic component suppliers, the requirements of AS6081 and AS5553 shall apply.

8.1.4.1 Prevention of Suspect Unapproved Parts

The requirements of AS/EN/JISQ 9110 apply for ASD products. For other industries ISO 9001:2015 is applicable.

8.1.5 Installation of Approved Parts

The requirements of AS/EN/JISQ 9110 apply for ASD products. For other industries ISO 9001:2015 is applicable.

8.1.6 Control of Work Transfer

The supplier shall plan and manage work transfers in a controlled manner so that the product conforms to requirements during and after the temporary or permanent transfer of the following types:

- From the supplier's facility to another facility / location.
- From the supplier's facility to a subcontractor / sub-tier supplier.
- From a subcontractor / sub-tier supplier to the supplier's facility.
- From one subcontractor / sub-tier supplier to another subcontractor / sub-tier supplier.
- Any transfer of work within the supplier's facility that could have an effect upon the continuity of supply or quality of the product (dependent on risk).

The supplier shall also consider the intent of this clause for significant changes to their ERP/MRP system that would affect or disrupt continuity of supply to AARC.

The supplier shall manage the risk of work transfer, notify and seek approval for any changes a minimum six (6) months in advance to AARC Procurement for approval. A timing plan for the proposed change, supported by mitigation plans that shall eliminate any quality, delivery or cost implications shall be provided to AARC.

The supplier shall, as a minimum, make available the following before and after the transfer:

- Description of the new location, with general layout and pictures or floor plan.
- A list of parts involved in the transfer.
- Timeline and plan for each step of the transfer.
- Last article inspection plan from the current location.
- A full first article inspection report plan prior to first production in the new location.

This activity shall be at the supplier's cost, and an agreed minimum safety stock shall be guaranteed to cover the transition period.

The supplier may only proceed with the work transfer (source change) when a response has been received from their AARC purchasing contact, the supplier shall comply with requirements specified in the response.

A single point of contact shall be identified by the supplier and shall regularly inform AARC of progress, key risks and associated mitigation plans.

The supplier shall ensure delivery performance is protected during and after any work transfer.

8.2 Requirements for Products and Services

8.2.1 Customer Communication

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) The supplier shall identify a management representative who will be the principal link between the supplier and AARC quality. This representative shall be the authorized contact on all matters affecting the quality and delivery of product shipped to AARC.

b) Changes that may affect either quality or delivery shall be documented and communicated to the applicable AARC quality and/or Procurement Representative prior to the change being made.

c) All communications between the supplier and AARC shall be written in the English language, unless legal requirements preclude this.

8.2.2 Determining the Requirements for Products and Services

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

If specification revision is not specifically called out on the PO, it is the supplier's responsibility to certify material to the latest released specification revision at the time of PO placement.

NOTE: The review shall ensure that special requirements of the products and services provided are determined and that operational risks (e.g. ability and capacity to deliver on time) have been identified.

8.2.3 Review of Requirements Related to the Product

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) Verbal agreements or instructions shall under no circumstances be construed as approval or authorization to proceed with any activity relating to product or service to be delivered to AARC.

b) Where the supplier determines that some AARC, or controlling specification, requirements cannot be fully met the supplier shall notify AARC for approval prior to manufacture / delivery. This shall include disposition of out-of-scope defects discovered during maintenance activities (where applicable).

8.2.4 Changes to Requirements for Products and Services

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

8.3 Design and Development of Products And Services

8.3.1 General

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

8.3.2 Design and Development Planning

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) The supplier shall maintain mechanisms, establish structured project teams, and/or demonstrate practices that consider the cross-functional nature of the product design throughout the product lifecycle.

b) The supplier shall maintain a current and approved design and development plan and "design to delivery" process flow diagram where required by AARC. This shall include a software quality plan when the product contains software (QMS Requirements can be found using AS/EN/JISQ 9115).

8.3.3 Design and Development Inputs

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

The supplier shall review all design specifications, requirements, drawings, statutory requirements, and quality requirements for completeness and confirm that there are no omissions. Any omissions identified shall be advised to AARC in writing. It is the supplier's responsibility to mitigate any product (design specific) requirements omissions.

8.3.4 Design and Development Controls

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

The supplier shall prepare and submit to AARC the following:

- Qualification Program Plan (QPP) – a plan for the qualification of each individual part number.
- Qualification Test Procedure (QTP) – document that describes all tests / verification to be performed in order to demonstrate the compliance of the part number to its design requirements.
- Qualification Test Report (QTR) – report of the result(s) of each QTP.
- Declaration of Design and Performance (DDP) – preliminary or final document to summarize the test, verification and results which declare the status of a part number with any applicable limitations.
- Acceptance Test Procedure (ATP) – detail of the testing methods employed during series manufacture to verify product compliance and based on those utilized during validation of the product.

8.3.4.1 When tests are necessary for verification and validation, these tests shall be planned, controlled, reviewed, and documented to ensure and prove the following:

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) The supplier shall perform technical reviews of all product and outputs from their design and development process.

b) Design reviews are only considered to be closed when all actions are completed, and documents have been approved.

c) Examples of reviews to be conducted include, but are not limited to:

- **Preliminary Design Review (PDR)**
- **Critical Design Review (CDR)**
- **Test Readiness Review (TRR)**
- **Production Readiness Review (PRR)**
- **Qualification Review (QR)**

d) Records of all reviews shall be made available to AARC.

e) AARC may request attendance at any of the above reviews.

8.3.5 Design and Development Outputs

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) Where the supplier is involved in the product design, the design and development outputs shall include the Design Failure Mode Effect Analysis (DFMEA) for the product produced by an appropriate cross functional team.

b) The DFMEA shall be used to identify any critical risk items, including identification of key characteristics, overall product performance, and product weight (mass) and determine and record specific actions to be taken for these items.

c) The design and development output shall consist of the necessary configuration and the design features of the product. This will include the manufacturing and assembly data necessary to enable the supplier's cross functional team to prepare the initial Process Failure Mode Effect Analysis (PFMEA), which will confirm manufacturability of the design. The PFMEA shall identify all process and product key characteristics required for manufacture.

d) Sole source and proprietary products / processes used or bought by AARC suppliers shall be communicated to and approved by an AARC Procurement Representative.

8.3.6 Design and Development Changes

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable

The supplier shall:

a) Design and development changes including software shall be identified and records shall be maintained.

b) Following the agreement of a production baseline, defined at the CDR, all changes are to be identified and classified as follows:

- **Class 1 (major) – change / modification, which affects the operational performance, interchange ability, fit, form or function.**

- **All class 1 (major) change / modification requests shall be submitted to and approved by AARC prior to incorporation.**
- **Class 1 changes shall result in a change of supplier part number. This includes software.**
- **Class 2 (minor) - all changes that cannot be defined as major.**
- **For class 2 (minor), a supplier can use their own change request form. The form shall contain sufficient information to define the proposed change.**
- **AARC shall be forwarded all class 2 changes for review prior to implementation.**
- **For all changes and prior to any change, the risk shall be assessed by the cross functional team by updating the D/PFMEA.**

c) The organization shall retain documented information relating to the following:

- **Design and development changes.**
- **The results of reviews.**
- **The authorization of the changes.**
- **The actions taken to prevent adverse impacts.**

8.4 Control of Externally Provided Processes, Products, and Services

8.4.1 General

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

8.4.1.1 Purchasing Process

a) When specified on the drawing or contract, suppliers shall use only sources approved by AARC or an AARC customer to perform special processes or procure raw material.

b) The supplier shall be responsible for the quality of all products purchased from sub-tier suppliers, including AARC or AARC customer sources.

c) The supplier shall monitor subcontractor / sub-tier Supplier performance through, at a minimum, the following indicators:

- **Delivered Product Quality**
- **Customer Returns**
- **Delivery Schedule Performance**

This shall include taking appropriate corrective action with poorly performing subcontractor / sub- tier suppliers.

d) The supplier shall demonstrate risk management in the selection and monitoring of subcontractors and sub-tiers.

e) The supplier shall implement appropriate controls for counterfeit parts prevention to assure product origin and conformance to AARC requirements and related engineering drawings.

f) Additional purchasing requirements for distributors:

- **Products shall only be purchased from approved distributors, when full traceability can be demonstrated back to the original manufacturer.**
- **Original manufacturer's Airworthiness Release certificate or equivalent shall be made available.**

8.4.2 Type and Extent of Control

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

8.4.2.1 Verification of Purchased Product

- Inspection – General

  When sample inspection is undertaken as a means of component verification / inspection, this may only be undertaken when the requirements of Section 8.5.1 (Control of Production and Service Provision) have been met and the sample plan has been authorized by AARC.

- Inspection – Material / Special Process

  a) Suppliers shall provide raw materials test reports / certification results / laboratory analysis requirements (e.g., tensile strength, stress rupture, hardness, chemical composition, etc.), as defined by the product definition and/or the purchase order.

  b) Where the supplier utilizes test reports to verify purchased product, the data in those reports shall be acceptable per applicable recognized specifications.

  c) The supplier shall periodically validate test reports for raw material. This shall be conducted by a source independent to that of the source testing of the material to assure the material is in conformance.

  d) Personnel responsible for the review of material and special process test reports shall be trained to interpret and evaluate test results for the purpose of ensuring that all drawing and/or specification requirements of the product are met.

- Source Inspection

  a) AARC retains the right to perform source inspection at the supplier's facility or at its sub-tier supplier's facility. AARC may assign its quality representative to be located at the suppliers' and sub-tier supplier's facility at any time during the life of the contract.

  b) AARC source inspection does not supplement or replace the supplier's own inspection system.

  c) The supplier shall give AARC a minimum of seven (7) days' notice of the date of inspection where source Inspection is a requirement of the contract.

  d) When source inspection is required, the supplier and sub-tier supplier shall make available to the AARC quality representative such area, facilities, equipment, inspection records, or other assistance requested in the course of verifying product conformance to requirements.

  e) In the event source inspection is invoked as a result of an identified supplier product issue or nonconformity, then the inspection and associated actions shall be at the supplier's cost.

8.4.3 Information for External Providers

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

8.4.3.1 Purchasing Information

a) The supplier shall ensure that the purchasing information / documentation communicates (flows down) AARC's requirements to all subcontractors / sub-tier suppliers.

b) Where AARC owns the design of a product being purchased from a supplier who further subcontracts all or portions of that work, the suppliers purchase order shall state that the products are for AARC "end use" and shall be controlled as per the applicable purchase order requirements, including any trade control requirements.

8.5 Production and Service Provision

8.5.1 Control of Production and Service Provision

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) Ensure AARC approval is obtained for all proposed amendments to Critical Part instructions.

b) Amendments to work instructions are to be completed by authorized personnel only. The following shall be required:

- **An amendment shall be made by a single line through the original text using permanent ink.**
- **A stamp, signature (or electronic equivalent) and date shall be placed adjacent to an amendment.**
- **Correction fluid shall not be used.**

8.5.1.1 Inspection

The supplier shall:

a) Measure 100% of all product characteristics related to all product to verify that requirements have been met. This shall be carried out at appropriate stages of the production process such as receipt inspection, in-process inspection, final inspection, etc., in accordance with the planned arrangements.

- **Inspection plans shall be utilized as requested by AARC.**
- **Inspection plans shall be in a format that is approved and agreed by AARC.**

b) Ensure that personnel performing product verification / inspection activities are appropriately trained and competent) to discriminate between an acceptable and unacceptable product.

- ***Personnel involved in final inspection shall be independent of the manufacturing process***.

c) Ensure Product verification activities that require visual verification shall be conducted in lighting conditions that provide an ambient white light intensity of not less than 1100 LUX (UK) with a light intensity of not less than 500 LUX measured at the surface of the component being inspected.

d) Ensure that monitoring / measuring equipment and the inspection standard to be achieved are subject to the same units of measurement (as stated on the product definition) and avoid the application of conversion calculations.

e) Ensure that monitoring / measuring equipment used for the final verification / inspection of product is independent to those used for product measurement during production activities or will be re-calibrated / verified prior to use where independence cannot be achieved.

f) Record the actual measurement results / values for the following:

- **Features on product classified as "Critical" on the product definition**
- **Features where a Coordinate Measuring Machine (CMM) is the method of inspection**

g) Reduced and sampling inspection can only be introduced if the requirements of the sub sections below ("Reduced Inspection" or "Sample Inspection") are met, and approval is given by AARC.

h) Maintain records of product verification.

i) Personnel involved in final inspection shall be independent of the manufacturing process.

8.5.1.2 Reduced Inspection

The Reduced Inspection process is *NOT* applicable to purchased standard catalogue hardware.

The supplier shall:

a) Only apply reduced inspection of variables as a means of product acceptance when: ¬ Process stability and capability can be demonstrated during product verification activities ¬ Process capability data has met the requirements specified by the AARC technical authority.

- **The proposed sample size and verification method of the product characteristic taken from every product within the batch has been documented in a control plan**
- **The control plan has been submitted to, and authorized by the AARC technical authority**

b) Only apply reduced inspection of formed characteristics [1] as a means of product acceptance when:

- **Appropriate control methods such as control of process settings, tooling, standard processes and/or error proofing have been introduced**
- **Measurable evidence demonstrates that the control methods are effective and continually produce a product that conforms to requirements**
- **The method by which the formed characteristic is produced plus the verification method and the verification intervals are documented in a control plan**
- **The control plan and measurable evidence of product conformance have been submitted to, and authorized by the AARC technical authority (on request)**

c) Ensure that reduced inspection activities related to fixed process controlled are appropriately controlled and authorized by their AARC technical authority, prior to being introduced

d) Ensure that reduced inspection is *NOT* applied to the following:

- **Product used for First Article Inspection**
- **Non-Destructive Testing inspection operations (unless specified in a controlling specification)**
- **Functional Testing**
- **Maintain records of reduced inspection as specified for product verification**

NOTE [1]: Reduced inspection of formed characteristics may apply to a group or family of products that are produced by the same process at the same source.

8.5.1.3 Sample Inspection

The Reduced Inspection process is *NOT* applicable to purchased standard catalogue hardware.

The supplier shall:

a) Only introduce sample inspection as a means of product acceptance when:

- **Process stability and capability can be demonstrated using variation management (see 8.5.1.4).**
- **The sample size and the verification method for each product characteristic under consideration has been documented in a control plan.**
- **The control plan and statistical data have been submitted to and authorized by the AARC technical authority.**

b) Ensure that sample inspection activities related to fixed process-controlled product are appropriately controlled and authorized by their AARC technical authority, prior to being introduced.

c) Ensure that sample inspection is *NOT* applied to the following:

- **Product used for First Article Inspection**
- **Non-Destructive Testing inspection operations (unless specified in a controlling specification)**
- **Functional Testing**
- **Product classified as critical**

d) Maintain records of sample inspection as specified for product verification.

8.5.1.4 Variation Management

The requirements of AS/EN/JISQ 9103 apply.

Variation Management is *NOT* applicable to:

1. Development products
2. Purchased standard catalogue hardware or deliverable software
3. Product provided by AARC (unless otherwise specified).

The supplier shall:

a) The supplier shall have a process to determine product and process Key Characteristics (KCs) as an output of the control plan.

- **Identify Key Characteristics (KCs) that have been designated by AARC**

b) Perform statistical process control (SPC) studies on KCs to demonstrate they are in a state of statistical control and that capability has been established as follows:

- **Apply statistical control of process that allows timely reaction to out of control conditions, ensuring appropriate containment, corrective action and escalation occurs to bring the process back to a state of statistical control.**
- **Calculate the process capability (Cp, Cpk) index only when the process is shown to be stable and in statistical control, using industry standard statistical control charts.**
- **Establish process capability using representative data gathered in time sequence from three or more concurrent batches / lots containing a combined total of at least twenty-five (25) products.**
- **Ensure that a process using variable data can demonstrate process capability of Cpk ≥ 1.33 or as specified by AARC.**
- **Monitor to ensure continued performance and apply continual improvement techniques to eliminate problems and improve stability / capability.**
- **Establish records of the results of SPC studies (control chart and capability analysis) conducted on current production processes.**

c) Ensure that processes that cease to be in control and/or capable resume normal product verification / inspection until the cause has been identified, corrected and process capability and control are re-established [1].

d) Record the results of KC monitoring in accordance with the requirements of AS/EN/SJAC 9103

e) Submit supporting evidence of KC variation management (control chart and capability analysis) at the earliest possible time after the initial FAIR to the AARC technical authority. KCs which do not demonstrate capability shall have a documented improvement plan and evidence submitted when capability is achieved.

f) Perform MSA studies prior to performing SPC and process capability studies.

g) Records of measurements shall be retained and provided to AARC as requested.

NOTE [1]: 100% inspection to be implemented for all KCs where capability cannot be proven.

8.5.1.5 Control of Equipment, Tools, and Software Programs

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) The supplier shall have a system for the management of pre-production and production tooling, jigs and fixtures including identification, protection, storage, tool life and modification.

b) The supplier shall identify key process equipment and provide resources for machine / equipment maintenance to develop an effective planned total preventative maintenance system. This shall, at a minimum:

- **Utilize predictive maintenance methods to continually improve the effectiveness and efficiency of production equipment.**
- **Have a measurement system in place for downtime, planned versus unplanned, etc.**
- **Ensure that preventive maintenance schedules are current and reflect all machines / equipment.**

8.5.1.6 Validation and Control of Special Processes

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) Supplier shall validate any processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement and, as a consequence, deficiencies become apparent only after the product is in use or the service has been delivered.

NOTE: These processes are often referred to as special processes.

NOTE: Special process audits shall be scheduled through the supplier's audit plan.

8.5.1.7 Production Process Verification (First Article and PPAP Requirements)

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

First/Last Article Inspection (FAIR/LAIR) and PPAP (Production Part Approval Process) applies to:

- Products designed and/or produced by a supplier for an AARC application
- All Assemblies and Sub-Assemblies
- Castings and Forgings
- Machined Parts
- Molded Parts and Assemblies
- Repair Instructions / Schemes

First/Last Article Inspection (FAIR/LAIR) and PPAP Requirements do *NOT* apply to:

- Purchased Standard Catalogue Hardware or Deliverable Software
- Raw Materials
- Elements of the process related to material or product provided by AARC

The supplier shall:

a) Implement the requirements of AS/EN/SJAC 9102 and, where specified by AARC, AS/EN/JISQ 9145 [1].

b) Perform and submit a FAI/PPAP on the first production product [2] to be delivered.

c) Perform a delta FAI following a process, source and/or drawing change [2].

d) Perform FAI/LAI dimensional inspection at the end of the production process using:

- **Capable measuring equipment**
- **Measuring equipment and inspection personnel independent [3] of that used in the production process**

e) Ensure that Coordinate Measuring Machines (CMM) inspection programs and programmers used for the FAI are independent [3] to those used for product measurement during the production process.

f) Ensure features that will become inaccessible [4] during subsequent production process operations are independently inspected prior to becoming inaccessible.

g) Perform a LAIR on a product that represents the production method at the end of production, when the source of complete production is planned to change or at the request of AARC.

h) Record all measurement equipment in the FAI/LAI inspection plan, including program version number where applicable.

i) The supplier shall prepare a manufacturing process flow diagram for the product [5]. The complete flow diagram shall include steps from material receipt to preparation of dispatch documentation. (A separate process flow diagram is required for each out-located process). The manufacturing process flow diagram shall show:

- **Inspection Points**
- **Process machinery, tooling, assembly stations, test benches, stores for sub-assemblies, rework area(s). Plant numbers or machine ID shall be included for all prime equipment**
- **First Pass Yield Data Collection Points**
- **Identification of Potential Bottlenecks**
- **Identification of operator skills sets**
- **Capacity plans for any equipment(s) not dedicated to the production of AARC product**
- **Include a cascade diagram with the FAIR to identify the bill of materials for the product**

j) Complete and submit a FAIR/LAIR to AARC.

k) Only release product into AARC against an approved FAIR.

l) Maintain records of FAIR/LAIR.

NOTE [1]: Or any other applicable standard according to sector or industry as specified by AARC PO requirements.

NOTE [2]: Only when it is not physically possible to perform the FAI on a single product, data from multiple products can be used, providing all parts have been manufactured using the same engineering definition, bill of material, supply chain and method of manufacture (including measurement method). The FAI report shall be annotated to signify the use of multiple products and provide traceability of the products used to obtain the inspection results.

NOTE [3]: Coordinate Measuring Machines used for FAI/LAI do NOT have to be independent to those used for product measurement during production activities.

NOTE [4]: Where inaccessible features may be affected by subsequent production operations, the method of verification shall be agreed with the design engineering authority and recorded in the report.

NOTE [5]: The process flow steps shall be designated in such a way that they can be cross referenced to the PFMEA.

8.5.1.8 Process Failure Mode Effect Analysis (PFMEA)

The supplier shall:

a) Use a cross-function team to establish a PFMEA that includes (but is not limited to) the following:
- **Process Identification**
- **Process Work Elements**
- **Potential Process Failure Mode**
- **Severity (S) – The seriousness of a Failure Mode**
- **Occurrence (O) – The likelihood that a given Failure Mode will happen**
- **Detection / Prevention (D) – The likelihood that the Failure Mode will be prevented / detected**
- **Risk Priority Number (RPN) – Severity (S) x Occurrence (O) x Detection (D) = Risk priority.**
- **Standard Scoring Criteria**

b) Develop a PFMEA for the production processes identified in the process flow diagram in advance of producing the product.

c) Evaluate and document the potential failure of a product / process and the effects of that failure.

d) Determine the risk priority related to the impact on the product, process and customer.

e) Take appropriate corrective action for high RPN"s to reduce or eliminate the chance of the potential failure occurring.

f) Review / Update and recalculate RPN"s for the PFMEA when changes are made to product definition, process operating conditions or when non-conformance has been identified.

g) Provide feedback to the customer along the purchase order cascade when appropriate risk mitigation cannot be provided.

h) Maintain records of PFMEA commencing from the date that the final product was delivered to AARC.

NOTE: A single PFMEA may apply to a group or family of products that are produced by the same process at the same source.

8.5.1.9 Control Plan

The supplier shall:

a) Use a cross-function team to develop control plans for the production processes for each product, which defines the controls to be used in advance of producing the product b) Ensure that the control plan takes into account (but is not limited to) the following elements:

- **PFMEA Outputs**
- **Authorized Reduced Inspection**
- **Authorized Sample Inspection**
- **Variation Management**

b) Ensure that the control plan contents include (but is not limited to):

- **Part / Process Number**
- **Process Name / Operation Description**
- **Product / Process Characteristics**
- **Control Method**
- **Reaction Plan**

c) Review and update control plans when any change occurs affecting product, production process, measurement, logistics, supply sources or PFMEA.

d) Maintain a process to review the effectiveness of these controls.

e) Maintain records of control plans from the date that the final product was delivered to AARC.

NOTE: A single control plan may apply to a group or family of products that are produced by the same process at the same source.

8.5.1.10 Work Instructions

The supplier shall:

a) Prepare documented work instructions [1] for personnel having the responsibility for the operation of processes that impact product quality.

b) Ensure work instructions are accessible for use at the workstation.

c) Ensure work instructions are derived and cross referenced to sources such as the drawing and/or the control plan.

NOTE [1]: Work instructions can include process flow diagrams, production documents such as production plans, travelers, routers, work orders, process cards) and inspection documents.

8.5.1.11 Measurement System Analysis (MSA)

The supplier shall:

a) Define the metrological requirements and the metrological function in accordance with ISO 10012.

b) Ensure that the personnel nominated to perform product verification activities are trained and competent in the use of the monitoring / measuring equipment.

c) Ensure that the monitoring / measuring equipment used to perform product activities is calibrated and traceable to international or national measurement standards.

d) Have personnel available who are trained and competent in measurement systems analysis techniques [1].

e) Validate the measurement system by performing statistical studies [1] related to a representative range of tolerances and features (including tightest tolerance measured) to analyze the variation present in the results of each type of monitoring / measuring and test equipment system. The participants in the study shall be representative of those using the measurement systems on a day-to-day basis.

f) Perform product feature specific statistical studies [1] to validate the measurement system where Key Characteristics (KCs) have been identified to the supplier by AARC.

g) Monitor [2] and maintain the capability of measurement equipment over time to ensure it performs as initially validated.

h) Perform a review of measurement capability when tolerances, personnel or environmental conditions have changed.

i) Record the results of statistical studies in a study report to identify how the study was undertaken and the conclusions.

j) Maintain records of MSA.

NOTE [1]: Measurement system analysis techniques and statistical studies refer to Gauge Repeatability & Reproducibility and/or Attribute Agreement Analysis.

NOTE [2]: In addition to calibration, the monitoring / measuring equipment shall be checked regularly against a calibrated reference of known size and form.

8.5.2 Identification and Traceability

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) All products are to be identified and traceable in accordance with drawing / design documentation or as agreed with AARC.

b) The traceability system employed shall reduce the probability of the need to conduct a full product recall in the event of product noncompliance.

c) Traceability shall be maintained for all product throughout production (including product quantities, split orders, nonconforming product, etc.) from raw material to finished product.

d) The supplier shall manage and record the serial numbers or batch numbers of the products, if numbers are provided by AARC or an AARC customer the supplier shall use these instead of their own serial or batch numbers.

e) The supplier shall ensure that it implements a methodology for preventing the generation of duplicate numbers.

f) Traceable items that, for reason of size and/or application do not allow the part number and serial number identification, shall be individually packaged and identified by an appropriate label.

NOTE: The supplier shall implement a process, or policy, for the control of "Split Batches".

8.5.2.1 Tooling Control

The supplier shall:

a) Establish a system for the management of pre-production and production tooling, jigs and fixtures that includes (but is not limited to) the following:

- **Unique Tool Identification**
- **Validation of Tool Prior to Release for Production**

- **Protection from Damage and Deterioration During Storage**
- **Maintained as Fit for Purpose**
- **Storage and Recovery**
- **Tool Set-Up**
- **Tool Life Control / Tool-Change Programs**
- **Tool Design Modification Documentation, including Engineering Change Level**
- **Tool Modification and Revision**

b) Ensure that tooling, jigs and fixtures owned by AARC and/or AARC customers (including shared ownership) are controlled as shown above, plus the following:

- **Identified as AARC owned**
- **Tooling Register established**
- **Used only for AARC applications**
- **Audited annually (stock take) and periodic preservation / condition checks for tooling held in storage**
- **Modifications only after written authorization by AARC**
- **Disposal only after written authorization by AARC**
- **Provision of tool information (including photographic information) to AARC on request**

c) Maintain tooling control records (AARC owned tooling).

8.5.3 Property Belonging to Customers or External Providers

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) The supplier shall ensure that AARC owned / issued tooling, jigs and fixtures are adequately registered and maintained with the period status given on request.

b) The jigs and fixtures shall be identified and controlled at all times.

c) The supplier shall return all documents, records, gauging, stamps, tooling or any other AARC supplied equipment (such as materials or product) upon written notification from AARC or when business with AARC has ceased.

8.5.4 Preservation

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) The supplier shall establish a process to detect and prevent Foreign Object Debris - Damage (FOD) or any type of contamination, for ASD materials this shall be in accordance with AS/EN/JISQ 9146.

b) The process shall contain the following elements as a minimum:

- **Production FOD Process Review**
- **Training of Applicable Personnel in FOD Prevention**
- **Material Handling and Product Protection**
- **Tool / Hardware Accountability**

- **Lost Items Search and Documentation Process**
- **Physical Entry Control into FOD Critical Areas**
- **Inspection for Foreign Objects**

c) Exposed pipe ends, electrical connectors, coaxial cable and exposed openings are to be sealed externally, where possible, to prevent contamination.

d) Products that are (or contain) Electrostatic Sensitive Devices (ESD) shall be clearly marked accordingly and packaged in accordance with national and international specifications.

- **ESD products shall only be removed from protective packaging in an ESD protected area. This includes goods receiving and final inspection.**

e) Limited life materials are to be identified and controlled so that 'out-of-life' materials are not used.

f) Material with a limited life shall be delivered to AARC with a minimum of 75% of its life remaining, or as formally instructed by AARC or controlling specification / drawing.

g) The supplier shall document details of the packing procedures, illustrations of internal packaging / product support and specify the materials to be used. The preparation of these procedures shall ensure appropriate packaging for sensitive product and no inclusion of prohibited packing materials.

8.5.5 Post-Delivery Activities

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

8.5.6 Control of Changes

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

8.5.6.1 Operator Certification

Where the supplier has an Operator Certification Program, this shall be documented and where requested this shall be made available to AARC for approval.

8.5.6.2 Stamp Control

The supplier shall maintain a procedure for effective control and administration of inspection stamps. Inspection stamps are all stamps which have been authorized within the supplier quality system, including electronic acceptance media.

- The procedure shall provide that stamps lost or withdrawn from use shall be quarantined for a defined period of time of not less than six (6) months.
- If signatures are used instead of stamps, a record of the authorized signatures with the person's position shall be part of the documented procedure.
- Where applicable, this procedure shall also provide for security controls for electronic signatures (i.e. passwords, etc.).

8.5.6.3 Document Change Requirements

- An amendment shall be made by a single line through the original text using permanent ink.
- A stamp, signature (or electronic equivalent) and date shall be placed adjacent to an amendment.
- Correction fluid shall not be used.

8.6 Release of Products and Services

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) Each shipment shall be accompanied by, at a minimum, a Certificate of Conformity and a Commercial Invoice / Packing List. Where deemed appropriate by the supplier these documents may be combined into one however the following shall apply in all cases.

b) The supplier shall provide a legible and reproducible Certificate of Conformance (C of C) with each shipment that states all items contained within the shipment are in compliance with all applicable requirements of the identified purchase order and were produced with materials that the seller confirm conformance to applicable specifications and provide objective evidence thereof. The Certificate of Conformance must be dated and contain the signature of an authorized representative of the seller.

- **Each shipment shall be accompanied by two (2) copies of release documentation. One (1) inside and one (1) outside the packaging.**

8.6.1 Release Documentation

The C of C shall contain the following information as a minimum:

- Unique traceable document reference number
- Supplier Name
- AARC Purchase Order Number (including purchase order item number)
- Description of the product (per purchase order number)
- Part Number (including drawing revision status (per purchase order number) as applicable
- Traceable reference (e.g. serial, batch, lot, heat, cast numbers)
- Quantity
- Conformance / Compliance

  NOTE: The following form of words are provided as an example:

  'THESE PRODUCTS HAVE BEEN MANUFACTURED, INSPECTED, TESTED AND UNLESS OTHERWISE STATED ABOVE CONFORM IN ALL RESPECTS WITH THE PURCHASE ORDER REQUIREMENTS.'

- Signature of person authorized to release the product to the customer (an Electronic signature shall be accepted)
- Additional information, as applicable, shall include:
  - **FAI or equivalent Report reference**
  - **Traceable reference (serial, batch, lot, heat, cast numbers - as applicable)**
  - **Raw material certificate reference**
  - **Relevant Shelf-life information**
  - **AARC PO specific requirements as appropriate**
  - **ATP reference**
  - **Concession / Production permit reference**

8.6.2 Commercial Invoice / Packing List Information

a) General Information

- **Date of Dispatch / Shipping Date**
- **Supplier Address and Telephone Number**
- **Delivery Address**
- **Part Number**
- **Price**
- **Currency**
- **Quantity**
- **Unit of Measure**
- **Country of Origin for the parts being supplied**

b) International Shipments to the USA

- **US 10-digit HTS classification**
- **Articles & Containers to be marked with Country of Origin**

8.6.2.1 AARC Furnished Material

Each shipment must be accompanied by a signed, legible and reproducible copy of a conformance certification stating that the items were produced from materials furnished by relevant AARC facility.

8.6.2.2 Distributor

The seller shall include documentation with each shipment that certifies items delivered under this contract conform to the requirements set forth in the procurement specification and any applicable detail specifications. The seller shall deliver a certificate of conformance from the OEM and/or OEM Authorized Distributor that identifies the locations of manufacture and procurement, applicable traceability information (i.e., date code, lot number, batch number, etc.), and part number.

8.7 Control of Nonconforming Outputs

8.7.1 The organization shall ensure that outputs that do not conform to their requirements are identified and controlled to prevent their unintended use or delivery.

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

The supplier shall establish a method of detecting product and process non-conformance, at a minimum, this shall include:

a) Containing nonconformities by segregating the product or process to prevent its unintended use or delivery.

b) Taking necessary actions to contain the effect of the nonconformity on other processes or products at supplier or sub-tiers.

c) Nonconforming parts, with their associated documentation and identification (e.g. Red label or tag), are to be segregated and contained until approved. Written disposition is to be given by the relevant engineering authority.

d) If a decision is made to scrap parts, prior to final disposal, proprietary parts shall be defaced in such a way that it precludes any possibility of reuse or rework. Any special considerations on nonconforming product imposed by AARC or by their customer shall be adhered to.

e) The supplier shall notify AARC immediately (within 24 hours or the next business day), in writing, when a nonconformity is discovered in the suppliers manufacturing processes or components / assemblies for a product already delivered. This notification shall include as a minimum:

- **A clear description of the Nonconformity**
- **Affected Part Number, Serial Number, Batch Number, Heat Lot, Manufacturing Date, etc.**
- **Delivered Quantity**
- **Purchase Order**
- **Containment Plan including Corrective Action(s)**
- **Deviations (Concession / Production Permit)**
- **If information is not yet determined, notify immediately with detail to follow**

f) The supplier shall have a process for the control of concessions and production permits (deviations). This shall include training of personnel in the role and responsibility they play in the process of control of concessions and permits.

- **Concession - is a temporary / conditional permission granted to use or release a limited quantity of material, detail parts or assemblies already manufactured which do not strictly comply with the approved drawings and/or specifications.**
- **Production permit - is a temporary / conditional permission granted, in advance of manufacture, to use materials or to make detail parts or assemblies which differ from the approved drawings and/or specifications.**

g) Only when a supplier is responsible for the design, and the nonconformance is classed as minor, can the supplier disposition products using their own nonconformance system. Requirements shall include:

- **Major concessions (affecting form, fit, function, airworthiness, safety, strength, life, interchangeability, maintenance, reliability and/or appearance that may cause the user concern over its serviceability). When a major concession has been raised and submitted to AARC, using an AARC format (unless otherwise agreed), then corrective action must be implemented, and the nonconformity closed prior to delivery of any parts.**
- **Minor concessions are not required to be submitted to AARC but shall be retained and made available to AARC. Nonconformities must be closed prior to delivery of any parts.**

h) Unless otherwise formally agreed, no nonconforming product, under cover of concession, shall be delivered until the concession has been formally accepted by AARC. Any approved concession requires a copy to be shipped with the product.

8.7.2 AARC Rejected and/or Returned Product

a) The supplier shall have a process for the control of customer (AARC) returned product identified as nonconforming product.

b) Suppliers shall be notified of identified product nonconformity by a Supplier Corrective Action Report (SCAR) or equivalent and/or their Scorecard.

- **If the supplier cannot identify the cause of the failure from the report, or does not accept liability, the supplier shall inform AARC within two (2) working days after receiving the**

notification and ensure the part is returned for evaluation. Otherwise, the supplier is deemed to have accepted responsibility for the nonconformity report.

c) The supplier shall respond to the nonconformity.

d) This process shall include returned items dispositioned as Fault Not Found (FNF); in particular those which have been returned on more than one occasion.

NOTE: AARC shall not accept redelivery of any product which fails at a AARC facility and has been returned to the Supplier on more than one occasion for the same nonconformity.

8.7.3 The organization shall retain documented information that:

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

9.0 PERFORMANCE EVALUATION

9.1 Monitoring, Measurement, Analysis, and Evaluation

9.1.1 General

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

The supplier shall implement standard quality management methods for product and process improvements such as 5 Why, Ishikawa (Fishbone diagram), 8D (or equivalent), 6S, and PFMEA, and ensure personnel are suitably trained in their use.

9.1.2 Customer Satisfaction

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

Unless specifically agreed with AARC the supplier shall at a minimum:

a) Monitor quality and delivery performance using:

- **Delivery (OTIF)**
- **Quality Escape (to AARC and from the Suppliers Sub-tiers)**
- **PPM**

b) Take appropriate corrective actions in the vent that non-conforming product has been delivered to AARC and/or when "On-Time In-Full" delivery performance is not being achieved.

c) Immediately notify their AARC purchasing contact when delivery schedules are not being achieved and submit a recovery plan.

d) Prepare for and participate in performance reviews conducted periodically by AARC.

e) Review the AARC Supplier Scorecard and implement improvement actions.

9.1.3 Analysis and Evaluation

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

9.2 Internal Audit

9.2.1 The organization shall conduct internal audits at planned intervals to provide information regarding the effectiveness of the quality management system.

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall establish a system to appropriately manage an internal audit program that includes product and process audits, to verify compliance on products and processes related to AARC delivered products.

9.2.2 The organization shall:

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) The audit program shall be prioritized based on product and process risk.

b) The program shall ensure all AARC products are audited at identified intervals and at appropriate stages of production using a sample product that has been selected at random from the current production process.

c) Auditors shall be independent of the function being audited and shall be suitably trained and experienced.

9.3 Management Review

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

The supplier shall:

a) When required by AARC, the supplier shall provide the appropriate quality data (charts, indicators, acceptance rate, shop findings, etc.) that demonstrates the suppliers internal quality performance and the corrective actions taken in order to prevent impacts at AARC.

10.0 IMPROVEMENT

10.1 General

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

10.2 Nonconformity and Corrective Action

10.2.1 When nonconformity occurs, including any arising from complaints, the organization shall:

The requirements of AS/EN/JISQ 9100:2016 Section 10.2.1 shall apply for aerospace products and for other industries ISO 9001:2015 shall apply.

The supplier shall:

a) The supplier shall use error proofing methods in their corrective action process where appropriate.

b) The supplier shall establish a customer protection plan to ensure continuity of supply while non-conformances are being investigated.

c) Personnel involved in the identification, review and closure process shall be suitably trained in the applicable quality methods.

d) The supplier shall review / update and be able to demonstrate the Process Failure Mode Effects and Analysis (PFMEA) and the control plan when corrective action has been identified.

e) Nonconformities identified by AARC may include product, process and audit nonconformity.

f) The supplier shall ensure that AARC requested corrective actions are responded to in the required time frame. Unless agreed by the AARC Quality department, or AARC auditor, the following timescales shall apply in all cases.

Nonconformity Type	Immediate Containment Plan	Root Cause / Corrective Action Plan submission	Nonconformity Closure
Product Related Failure	**≤ 2 calendar days (48 hours)***	**≤ 30 calendar days***	**≤ 45 calendar days*** **(or as agreed by AARC)**
Audit Finding	**N/A**		

***** Where number of days is counted from the issuance of a Nonconformity Report (NCR)

g) Unless requested by AARC, the supplier shall document all actions to rectify the nonconformity including utilizing 8D methodology and format as identified within AS 13000: Problem Solving Requirements for Suppliers.

h) Where a supplier quality performance is not meeting required targets, AARC shall initiate interaction with the Supplier to identify required corrective actions and improvements. This may include request for a formal action plan and/or an onsite assessment.

10.2.2 The organization shall retain documented information as evidence of:

The requirements of AS/EN/JISQ 91XX identified in clause 3.1 "Table 1" apply for ASD products. For other industries ISO 9001:2015 is applicable.

10.3 Continual Improvement

10.3.1 General

The requirements of AS 13000, AS 13003, 4 & 6 apply for ASD products. For other industries ISO 9001:2015 is applicable.

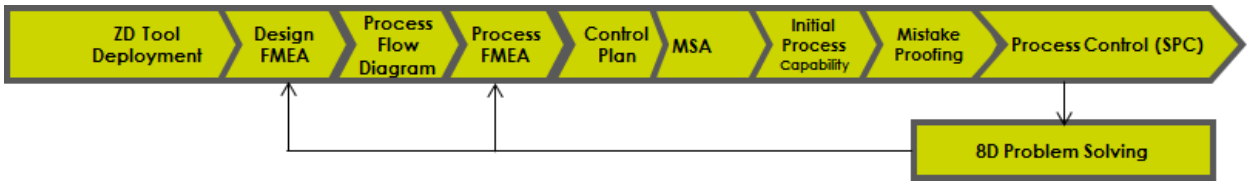
The supplier shall implement a program of continuous improvement in order to reduce variation and the delivery of defective materials / products / services to AARC.

In order to achieve this the supplier should establish a Zero Defects program for products in serial production.

The supplier ZD program should include the following elements:

- 3-year Data Review of Customer, Internal and Supplier Escapes
- Manufacturing Process Review (MPR) for all AARC products and processes
- Process Flow Diagram (PFD) for all AARC products.
- Process Failure Modes Effects Analysis (PFMEA) for all products
- Control Plans for all products
- Conduct Measurement System Analysis (MSA) for all inspection equipment used to measure and verify AARC product
- Initial and on-going Statistical Process Control (SPC)
- 'Mistake Proofing' to prevent defects from occurring
- Robust problem-solving techniques (8D)

Zero Defects Core Tool Model



A full suite of ZD tools, processes, reporting templates and training is available through your AARC supplier contact

10.3.2 Supplier Development

Where supplier performance has fallen below AARC requirements the supplier shall, as directed by AARC, participate in the AARC Supplier Development program.

This consists of:

- Direct involvement with a Supplier Development Engineer at the supplier's facilities and/or by WebEx in order to facilitate process improvements.
- Completion and regular reporting of Zero Defects implementation activities using AARC form MFT-206 Supplier Development Zero Defect Plan.
    - This document shall be submitted to the requesting facility as directed by AARC but at a minimum of monthly intervals until directed otherwise.

10.3.3 Lessons Learned

To assist in the continual improvement process and the drive to Zero Defects the supplier should maintain an active Lessons Learned improvement process and utilize a database of products, known capabilities, identified nonconformity and lessons learned for the purpose of continuous improvement.

11.0 REFERENCED DOCUMENTS

11.1 Industry Standards

These documents include, but may not be limited to, the following:

- ISO 9000 Quality Management Systems -- Fundamentals and Vocabulary
- ISO 9001 Quality Management Systems Requirements
- ISO 10012 Requirements for Measurement Processes and Measuring Equipment
- ISO 13485 Medical Devices -- Quality Management System Requirements
- ISO 15489 Information and Documentation. Records Management
- ISO17025 Requirements for the Competence of Testing & Calibration Laboratories
- ISO 31000 Risk Management -- Principles and Guidelines
- ISO 45001 Occupational Health and Safety Management
- AS 5553 Counterfeit Electronic Parts; Avoidance, Detection, Mitigation
- AS 6081 Counterfeit Electronic Parts; Avoidance Protocol, Distributors
- AS/EN/JISQ 9100 Requirements for Aviation, Space and Defense Organizations
- AS/EN/JISQ 9102 Aerospace First Article Inspection Requirement
- AS/EN/JISQ 9103 Variation Management of Key Characteristics
- AS/EN/JISQ 9110 Requirements for Aviation Maintenance Organizations
- AS/EN/JISQ 9115 Requirements for Aviation, Space and Defense Organizations-Software

- AS/EN/JISQ 9120 Requirements for Aviation, Space and Defense Distributors
- AS/EN/JISQ 9131 Non-Conformance Data Definition and Documentation
- AS/EN/JISQ 9145 Requirements for APQP and PPAP
- AS/EN/JISQ 9146 Foreign Object Damage (FOD) Prevention Program
- AS 13000 Problem Solving Requirements for Suppliers
- AS 13003 Measurement System Analysis (MSA)
- AS 13004 MEA & Control Plan
- AS 13006 Process Control methods
- ASME VIII Requirements for Pressure vessels
- ASME II A/B/C Material Specification
- ASME IX Requirements for Qualification Welding / Brazing
- ASME V Requirements for Non-Destructive Testing
- PED 97/23/EC Requirements for Pressure Equipment Directive
- IATF 16949 Transition Strategy ISO/TS 16949 › IATF 16949

11.2 AARC Key Customer Requirements Documents

These documents include, but may not be limited to, the following:

- LMCO/Sikorsky
  - PROCURE-2-011
- Bell/Textron
  - SQRM-001
- Embraer
  - EQRS

11.3 AARC Documents

- MFT-120 – Supplier Trade Compliance Classification Request
- MFT-122 –Supplier Trade Compliance Classification Questionnaire
- MFT-206 – Supplier Zero Defect Program
- PRO-F-10 – Supplier Quality Requirements Document Acknowledgement
- QA-SP2-F-03 – Supplier Certification of Conformance