		Manual	Subject / Document Name:	
		Document Number: MN-TNG-QA-02	Supplier Quality Manual	
Date Revised: 07/16/2024	Date Effective: 08/06/2024	NORDAM Corporate Supplier Quality		Element:
Revised Level: L	Page 1 of 39			
Approved by:	Title: VP Quality - Jim Thompson	Date 7/29/24	Title: Sr. Dir. Supply Chain - Repair, Brian Schlegel	Date 07/30/24
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Supplier Quality Management System Requirements

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		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 2 of 39

RATIONALE

This manual establishes The NORDAM Group LLC (hereafter referred to as NORDAM) Quality Management System (QMS) requirements for suppliers and all members of their supply chain who provide aerospace products, materials, processes or services to NORDAM locations world-wide.

Exceptions, or the use of any alternative method of compliance from the requirements of this manual in any of the three sections shall be documented by the supplier and submitted to the appropriate NORDAM Buyer. The NORDAM Buyer will forward the exemption request to the NORDAM Corporate Supplier Quality Department for approval. The NORDAM Corporate Supplier Quality Department will review, document, and notify the supplier of any approved deviations from the requirements contained herein. The supplier must receive the NORDAM Corporate Supplier Quality Department approval of any request for deviation prior to shipment.

Other unique requirements not contained in this Supplier Quality Manual may be flowed down to the supplier on the Purchase Order (PO) or other documents such as the Contract, Long Term Agreement (LTA), Fixed Pricing Agreement (FPA), Terms and Conditions (T&Cs) or customer specific procedures such as Quality Supplier Supplement (QSS) series documents.

Suppliers are encouraged to regularly review and understand all of the supplier requirements found at <http://www.nordam.com/>.

FORWARD

A total commitment to customer satisfaction and continuous quality improvement must be shared by NORDAM and all of its suppliers. Each of us form part of a larger supply chain and together we must maintain effective quality management systems to provide superior quality products to our end customers.

It is the intent of NORDAM to purchase products, materials and services from suppliers who share this vision and who can consistently meet NORDAM's high expectations.


		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 3 of 39

TABLE OF CONTENTS

RATIONALE2

FORWARD2

SECTION 1: MANUFACTURERS

1. SCOPE5

2. NORMATIVE REFERENCES5

3. TERMS AND DEFINITIONS6

4. CONTEXT OF THE ORGANIZATION6

5. LEADERSHIP6

6. PLANNING6

7. SUPPORT6

8. OPERATION7

9. PERFORMANCE EVALUATION15

10. IMPROVEMENT15

SECTION 2: MAINTENANCE ORGANIZATIONS

1. SCOPE18

2. NORMATIVE REFERENCES18

3. TERMS AND DEFINITIONS19

4. CONTEXT OF THE ORGANIZATION19

5. LEADERSHIP19

6. PLANNING19

7. SUPPORT19

8. OPERATION20

9. PERFORMANCE EVALUATION25

10. IMPROVEMENT25

SECTION 3: DISTRIBUTORS

1. SCOPE28

2. NORMATIVE REFERENCES28

3. TERMS AND DEFINITIONS28

4. CONTEXT OF THE ORGANIZATION29

5. LEADERSHIP29

6. PLANNING29


7. SUPPORT29

8. OPERATION29

9. PERFORMANCE EVALUATION33

10. IMPROVEMENT33

CHANGE HISTORY34

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 4 of 39	

SECTION 1

Quality Management Systems - Requirements for Organizations that Design, Develop and/or Produce Aviation, Space and Defense Products and Services

Section 1 is structured as a companion to SAE Aerospace Standard AS9100™Rev.D Quality Management Systems – Requirements for Aviation, Space and Defense Organizations, and is supplemented by unique NORDAM requirements as defined herein.


These specifications apply to all NORDAM suppliers and all members of their supply chain that design, develop, and/or produce aviation, space and defense products and services and who also provide post-delivery support, including the provision of maintenance, spare parts or materials for their own products. The supplier shall have and maintain a Quality Management System (QMS) compliant and certified to EN/AS/JISQ 9100 by a Certification Body (CB) accredited through IAQG.

Note: For some specific types of low safety risk products or services, other QMS standards such as ISO 9001 may be accepted if formally approved by the NORDAM Corporate Supplier Quality Department.

NORDAM suppliers and all members of their supply chain are to follow the full requirements of AS9100™Rev.D and the additional supplements noted in this section. The paragraphs in this section are numbered to correspond with the paragraphs of AS9100™Rev.D.

INTRODUCTION

- 0.1 General.
No additional requirements.
- 0.2 Quality Management Principles
No additional requirements.
- 0.3 Process Approach
No additional requirements.
- 0.4 Relationship with Other Management System Standards
No additional requirements.
- 0.5 Policies and Information
 - 0.5.1 Suppliers shall ensure that all members of their supply chain who supply parts to satisfy a NORDAM Purchase Order (PO) shall be compliant to this manual.
 - 0.5.2 The suppliers shall provide right of access to their facility and the facilities of all members of their supply chain for review, verification, and analysis of their quality management system, quality control, inspection system, and maintenance process. Right of access shall be granted to:
 - Federal Aviation Administration (FAA)
 - National Transportation Safety Board (NTSB)
 - Department of Transportation (DOT)
 - Department of Defense (DOD)
 - NORDAM (and qualified second or third parties) including NORDAM's customers
 The FAA, NTSB, DOT, DOD, NORDAM, European Aviation Safety Agency (EASA), National Aviation Authority (NAA), and NORDAM's customers have the right at all times to inspect and test all parts at any location to the extent permitted under export control regulations.
 - 0.5.3 NORDAM reserves the right to maintain a NORDAM representative on-site at the supplier's or sub-tiers facilities.
 - 0.5.4 NORDAM reserves the right to disapprove a Supplier's Quality System as well as the Quality System of any member of their supply chain.
 - 0.5.5 Suppliers shall maintain a drug-free workplace program to provide a safe workplace, discourage alcohol and drug abuse.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 5 of 39	

0.5.6 Suppliers shall permit NORDAM access to all data in OASIS databases.

0.5.7 STANDARD FOR ETHICAL BUSINESS CONDUCT. NORDAM is committed to conducting business fairly, impartially, ethically, and in a proper manner. All suppliers shall comply with NORDAM's Standard for Ethical Business Conduct found at www.nordam.com.

1. SCOPE

No additional requirements.

1.1 Application

This section of the manual contractually applies to NORDAM suppliers and all members of their supply chain who provide products, materials or services to prepare, build, support, or install parts onto an aircraft in accordance with NORDAM purchase order or contract requirements.

NORDAM suppliers are required to access the NORDAM website to review this and any other documents required to satisfy the PO requirements. The supplier shall perform a full documentation review of NORDAM specifications to ensure they are working to and flowing down to sub-tiers the latest revision documents including this manual.

Suppliers are responsible for notifying the NORDAM Buyer of changes in their or their sub-tiers business that can affect process or NORDAM product including, but not limited to any of the following:

- Senior leadership, (Director and above)
- Ownership
- Company Name
- Location or address
- Change in process or product
- Loss of any accreditation (AS9100, Nadcap etc.)
- Or any other quality system changes


Notifications shall be provided to the NORDAM Buyer in a written statement within thirty (30) days of any of these changes. Upon receipt of this written notification NORDAM will determine necessary actions.

Any exception to the supplier's AS9100 accreditation will constitute an exception to the same clause of this Supplier Quality Manual.

2. NORMATIVE REFERENCES

The following documents are valuable for the application of this document.

- IAQG SCMH, International Aerospace Quality Group – Supply Chain Management Handbook.
- ARP9114 – Direct Ship Guidance for Aerospace Companies
- AS9100 Quality Management Systems – Requirements for Aviation, Space, and Defense Organizations
- AS9102 – Aerospace First Article Inspection Requirement.
- AS9103 Aerospace Series – Quality Management Systems – Variation Management of Key Characteristics.
- AS9145 – Aerospace Series – Requirements for APQP and PPAP
- AS9146 – Foreign Object Damage (FOD) Prevention Program
- AS9163 – Aerospace Series – Certificate of Conformity Requirements
- AS13000 – Problem Solving Requirements for Suppliers
- AS13100 – AESQ Quality Management System Requirements for Aero Engine Design and Production Organizations
- ISO 9000 – Quality Management Systems — Fundamentals and Vocabulary
- ISO 9001 – Quality Management Systems — Requirements
- AS5553 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 6 of 39	

- AS6081 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts
- AS6171 – Test Methods Standard Electrical, Electronic, and Electromechanical (EEE) Parts
- AS6496 – Fraudulent/Counterfeit Electronic Parts
- AS6174 – Counterfeit Materiel
- DFAR 252.225.7014 – Specialty Metals

3. TERMS AND DEFINITIONS

No additional requirements.

4. CONTEXT OF THE ORGANIZATION

4.1–4.4 No additional Requirements

4.5 NORDAM reserves the right to flow down the requirements of APQP and/or PPAP by invoking AS9145 or specific OEM focused documents.

4.6 Independent Calibration and Testing Facility Accreditation:
Calibration and Testing suppliers delivering products or services to a NORDAM purchase order shall ensure its calibration and/or testing facilities are accredited in accordance with ISO/IEC 17025 by a Certification Body.

5. LEADERSHIP

No additional requirements.

6. PLANNING

No additional requirements.

7. SUPPORT

7.1 Resources

7.1.1 General

No additional requirements.

7.1.2 People

No additional requirements.

7.1.3 Infrastructure

No additional requirements.

7.1.4 Environment for the Operation of Processes

a.- b. No additional requirements;

c. Lighting intensity and cleanliness for work areas and inspection benches shall be evaluated by the management for suitability of the work performed. NORDAM reserves the right to flow down customer specific lighting requirements.

7.1.5 Monitoring and Measuring Resources

7.1.5.1 General

a.- b. No additional requirements

7.1.5.2 Measurement Traceability

a.- c. No additional requirements.

d. NORDAM reserves the right to flow down AS13003 – Measurement Systems Analysis Requirements for the Aero Engine Supply Chain.

7.1.6 Organizational Knowledge

No additional requirements.

7.2 Competence


No additional requirements.

7.3 Awareness

No additional requirements.

7.4 Communications

No additional requirements.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 7 of 39	

7.5 Documented Information

7.5.1 General

No additional requirements.

7.5.2 Creating and Updating

No additional requirements.

7.5.3 Control of Documented Information

7.5.3.1 a. - b. No additional requirements;

c. All quality records (non-electronic) shall be documented in ink or other permanent marking.

d. Corrections to work instructions or documents shall be recorded, dated and traceable to the person making the change (e.g., signature, stamp, etc.) in ink or other permanent marking method with the original data being legible and retrievable after the change.

e. Documents submitted to NORDAM that contain technical data shall include a statement near the beginning of the document such as "This document contains technical data" or an equivalent statement. This statement shall be repeated throughout the document.

United States (U.S.) organizations shall also identify the Export Control Classification Number (ECCN) or U.S. Munitions List (USML) classification.

Other organizations shall identify applicable export classifications related to the documents submitted to NORDAM.

7.5.3.2 a. - c. No additional requirements;

d. The supplier shall maintain an adequate records system. All NORDAM related records/documented information shall be retained in a safe and secure manner in electronic or paper format for a minimum of ten (10) years from completion of the NORDAM purchase order. For any deviation from the record retention requirement, suppliers must submit a request to deviate from the requirement to the NORDAM Buyer and approved by the NORDAM Corporate Supplier Quality Department. NORDAM contracts may require record retention to be extended beyond the ten (10) year retention period. Disposition of documents shall be carried out per NORDAM Terms and Conditions (T&Cs) found at <http://www.nordam.com/suppliers/>.

e. No additional requirements.

8. OPERATION

8.1 Operational Planning and Control

a. - j. No additional requirements;

k. Suppliers shall notify NORDAM prior to any planned work transfer or any planned change implementation within the supplier's organization or its supply chain. This includes manufacturing locations changes within the organization or changes in a supplier or a sub-tier supplier's location. The supplier shall have documented procedures for implementing this requirement, ensuring it is applied in their supply base and that decisions to interrupt flow of material from any existing source shall not take place until approved by NORDAM. NORDAM may choose to participate in the transfer activity to mitigate any risks associated with the transfer.

If the transfer of work involves transfer of NORDAM ITAR or other technical data to a party or location requiring an export license, NORDAM must approve the work transfer. If approved, NORDAM will assist suppliers in obtaining all required government licenses prior to transfer of work. NORDAM recommends a gated process to control work transfers. A guideline on implementing a process for work transfers can be found in the IAQG SCMH. (International Aerospace Quality Group – Supply Chain Management Handbook)


Work Transfers shall be submitted to NORDAM through Work Transfer Supplier Notification Form FR-TNG-SC-33 located at <http://www.nordam.com/>.

8.1.1 Operational Risk Management

No additional requirements.

8.1.2 Configuration Management

No additional requirements.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 8 of 39

8.1.3 Product Safety

No additional requirements.

8.1.4 Prevention of Counterfeit Parts

Suppliers shall prevent and mitigate the use of counterfeit parts. Suppliers shall comply with the latest revisions of AS5553, AS6081, AS6171 and AS6496 for electronic components and AS6174 for non-electronic products. Suppliers shall notify their NORDAM Buyer prior to the use of or shipment of product or material with broken traceability or from a non-authorized supplier. The NORDAM Buyer will forward the notification to the NORDAM Corporate Supplier Quality Department for review.

8.2 Requirements for Products and Services

8.2.1 Customer Communication

a. - e. No additional requirements;

f. Changes that may affect quality shall be documented and communicated to the applicable NORDAM Buyer who will forward to the NORDAM Corporate Supplier Quality Department for review and comment prior to implementation of the change. The changes may require a full or partial First Article Inspection (FAI) at the discretion of NORDAM.

Examples of Changes:

- Ownership
- Company name change
- Management
- Manufacturing location
- Process
- Product
- Inspection Techniques

g. All correspondence and communication between NORDAM and the supplier shall be in the English language. The supplier is responsible for providing supplier's specifications, procedures, and reports in the English language. In cases where the supplier maintains copies in their native language as well as in English and there is a conflict, the English language document shall take precedence.

8.2.2 Determining the Requirements for Products and Services

No additional requirements.

8.2.3 Review of the Requirements for Products and Services

No additional requirements.

8.2.4 Changes to Requirements for Products and Services

No additional requirements.

8.3 Design and Development of Products and Services

8.3.1 General

No additional requirements

8.3.2 Design and Development Planning

a. - j. No additional requirements;

Suppliers approved to manufacture parts or components under a Parts Manufacturer Approval (PMA) or a Type Technical Standard Order Authorization (TSOA) shall retain documents from the FAA stating authorization to manufacture those parts per CFR Part 21.


Suppliers not holding PMA may be requested to explain their process for control and manufacturing of parts including a review of the quality, inspection and testing systems.

8.3.3 Design and Development Inputs

No additional requirements.

8.3.4 Design and Development Controls

No additional requirements.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 9 of 39	

8.3.5 Design and Development Outputs
No additional requirements.

8.3.6 Design and Development Changes
No additional requirements.

8.4 Controls of Externally Provided Processes, Products, and Services

8.4.1 General

Suppliers are responsible for ensuring that procurements from sub-tier suppliers conform to all requirements of the NORDAM purchase order, including the provisions of this manual. Sub-tier suppliers shall meet NORDAM quality requirements and it is the responsibility of NORDAM suppliers to ensure their sub-tier suppliers are qualified per the NORDAM contract, purchase order, and requirements of this manual.

Mills located outside the USA

Suppliers shall contact the NORDAM Buyer to request approval from the appropriate NORDAM Quality Department when procuring metallic material obtained from mills located outside of the United States of America (USA) that do not hold a bi-lateral agreement with the FAA. (If required by Military Contract)

8.4.1.1 The Organization Shall:

No additional requirements.

8.4.2 Type and Extent of Controls

a. - d. No additional requirements;

e. for calibration services supplied on a NORDAM purchase order, suppliers shall maintain a National Institute of Standards and Technology (NIST), International Organization of Standardizations (ISO) or equivalent agency traceable calibration system capable of ensuring the accuracy of all measuring equipment utilized in the inspection and acceptance of NORDAM products.

8.4.3 Information for External Providers

a. – j. No additional requirements;

k. Ref. section 7.5.3 for retention information, retention periods and disposition requirements

l. – m. No additional requirements.

8.5 Production and Service Provision

8.5.1 Control of Production and Service Provision

a. – g. No additional requirements;


h. Direct Ship Authorization. Should there be a situation requiring a direct shipment from the supplier to a NORDAM customer, the supplier shall contact their NORDAM Buyer who will assist coordinating the direct shipment. NORDAM recommends using the latest revision of ARP9114 Direct Ship Guidance for Aerospace Companies as a guide.

i.-j No additional requirements;

k. Critical Item, Key Characteristics:

When NORDAM/Customer drawing/model, specification, and/or purchase order, includes critical/key characteristic requirements, suppliers shall comply with the requirements of the latest revision of AS9103. The supplier shall identify additional critical/key characteristics based on their knowledge of their manufacturing processes. Suppliers shall conduct effective variation management activities on identified critical/key process characteristics for dimensionally managed parts.

l.- q. No additional requirements.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 10 of 39	

8.5.1.1 Control of Equipment, Tools, and Software Programs

a. Control of Digital Media

Suppliers shall maintain records and procedures which control configuration and accuracy of software used to manufacture, test, or accept hardware.

b. Boeing Digital Product Definition (DPD) data.

To use Boeing furnished datasets as authority for design, manufacture or inspection, a supplier must comply with D6-51991.

c. Tools used at Suppliers as inspection media, must be submitted to the applicable NORDAM Buyer and approved by NORDAM Corporate Supplier Quality Department. Generally, tools must demonstrate maximum 1/3 tolerance of engineering; however, this requirement is program specific.

8.5.1.2 Validation and Control of Special Processes

a. – f. No additional requirements;

g. Supplier test results:

Results of testing, records, film, or other suitable documentation stating the acceptance or the rejection of the test performed shall accompany each shipment and shall include the name of the supplier that performed the testing as required on purchase orders, drawings, or specifications referenced. The NORDAM Buyer must be notified of any test failures prior shipment.

The test report shall include the following information as a minimum:

- Purchase order number,
- Requirements and actual results,
- Date of test,
- Specification and revision level, and
- Signature or name of company representative.

h. NORDAM / OEM Special Process Suppliers


Special Process can be defined as processes 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 has been delivered.

i. Qualification of Special Process Suppliers and Sub-Tier Special Process Suppliers:

NORDAM requires that all Special Process Suppliers be Nadcap accredited including sub-tiers that provide special processes. Additionally, OEM's may require Special Process Suppliers and their sub-tiers to use the OEM's approved Special Process Suppliers. The OEM's approved Special Process Suppliers are identified on their website. If the supplier is unable to access the OEM's website or if the Nadcap accreditation is not available, the supplier shall contact the NORDAM Buyer for assistance.

NORDAM identification of Special Processes are listed below as a reference. This list is subject to change and the supplier is encouraged to contact their NORDAM buyer with any questions.

- Non Metallic Materials Manufacturing
- Coatings
- Elastomer Seals
- Metallic Material Manufacturing
- Nonconventional Machining - Excluding AC7116/7 Waterjet
- Sealants
- Chemical Processing
- Composites
- Heat Treating

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 11 of 39

- Material Testing Laboratories
- Non Metallic Material Testing
- Non-Destructive Testing
- Surface Enhancement
- Welding

8.5.1.3 Production Process Verification

A First Article Inspection (FAI) shall be accomplished and performed in accordance with the latest revision of SAE AS9102. NORDAM reserves the right to request a full or partial FAI at any time particularly when product or quality management system escapes have occurred.

Delta FAI's will be required on all revisions to the drawing that alter the original FAI.

1) First Article Documentation

Suppliers shall maintain records to comply with the latest revision of AS9102 First Article Inspection Requirement. The supplier's completed first article inspection documentation using AS9102 forms shall accompany the shipment.


The First Article Inspection Report (FAIR) shall include all dimensions/tests specified on the purchase order, drawings/models, and specifications referenced by the purchase order or drawing/model. At a minimum, inspected parts shall be identified in a manner to maintain traceability to the individual reports.

All content represented in Forms 1, 2 and 3 shall be completed. Where no data is reported, indicate N/A for that field.

Suppliers holding a NORDAM PO are responsible for assuring completion of the FAIR per this requirement for all finished part characteristics generated by its supply chain. On Site Source Inspection may be required by PO, contract, or other official communication.

In addition to AS9102 requirements, each report shall also include the following:

- i. A photograph of the product part marking.
 - ii. A photograph of the part.
 - iii. For an assembly level FAI, all lower level and detail FAI's shall be included in the FAIR.
 - iv. CMM or other electronic measuring reports if used, shall be supplied with the FAIR.
 - v. A copy of the Purchase Order.
- 2) Additional requirements for AS9102 Form 1
 - i. Field 8, VPC and Revision level (if any)
 - ii. Field 11, Supplier Code: Record assigned Supplier Code.
 - iii. Field 12, P.O. Number: Record Purchase Order and Line Number.
 - 3) Additional requirements for AS9102 Form 3
 - i. Field 10, for each characteristic recorded, the FAI inspection measuring equipment used as media of inspection shall be added for each characteristic recorded, and the FAI inspector identification (e.g. signature, stamp, electronic authorization, etc.) used to signify the person that accomplished the inspection.
 - ii. NORDAM requires that all suppliers understand and adopt measuring systems that are capable and repeatable to ensure the data recorded is accurate. NORDAM may challenge FAI results if inadequate measuring instruments or techniques are employed. SAE standard AS13003 and Automotive Industry Action Group (2010). Measurement System Analysis 4th edition are excellent resources.
 - iv. All notes, applicable or not, from Drawings, Build of Materials (BOM), Parts List (PL), and Vendor Part Configuration (VPC).
 - 4) The purchase order or other official communication may mandate additional FAI requirements.
 - 5) Supplier Control Drawings (SCD) parts require a full FAI for all detail parts and processes contained within the unit.
 - 6) For guidelines on completing an FAI, refer to AS9102 and the International Aerospace Quality Group (IAQG) Supply Chain Management Handbook (SCMH).

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 12 of 39

- 7) For FAI's submitted via Net-Inspect
 - i. Add "The NORDAM Group –Tulsa" to your customer list.
 - ii. Allow "Customer Approval" of the FAI.
 - iii. Assign the correct program or select "No Program Assigned".
 - iv. Contact the NORDAM Buyer and inform them that the FAI has been loaded into Net Inspect and is ready for review.

8.5.2 Identification and Traceability

Product Identification:

Part number identification shall be accomplished per the applicable engineering or referenced specification. If no method is specifically referenced, the supplier shall contact their NORDAM Buyer who will obtain the information. Part identification shall be traceable to appropriate supplier quality records.

Final acceptance of all items to be delivered to NORDAM shall be indicated by means of the supplier's unique identifier or stamp on all products.

As a minimum requirement, product manufactured for NORDAM shall be identified with the following:

- a. Part number per the purchase order,
- b. Drawing revision,
- c. Advanced Drawing Change Notice (ADCN) or equivalent, at date of manufacture, if applicable,
- d. Manufacturer part number, if applicable,
- e. Date of Manufacture,
- f. Supplier's traceable number (i.e. work order or job number, lot control number, serial number, batch number),
- g. NORDAM's nonconforming material number, if the item was processed per the Nonconforming Material section of this manual,
- h. Indication of acceptance by supplier's quality system i.e., inspection stamp, marking or other traceable indicator.

If parts cannot be identified due to size, or when identification of the part itself would result in damage or mutilation, the identification shall be placed with the item. This requirement is in addition to any part marking instructions listed on the applicable drawing or specification.

When multiple material heat/batch lots are consumed, the supplier shall have a process and record system that is directly traceable to the manufacturing heat lot/batch number(s), used in support of the work order(s).

8.5.3 Property Belonging to Customers or External Provisions

a. NORDAM Furnished Material (NFM)


NORDAM material issued to a supplier for fabrication and/or processing is required to be controlled so the furnished material is used only for NORDAM products. The supplier shall notify the NORDAM Buyer of any missing or damaged materials.

The use of NFM does not absolve the supplier from the obligation of performing receiving inspection of NFM product.

b. NORDAM Furnished Tooling (NFT)

Suppliers are responsible for the following related to NORDAM furnished tooling:

- i. ensure the proper care and upkeep;
- ii. track and maintain all tooling while in supplier's possession;
- iii. notification to NORDAM Buyer of any loss or damage upon discovery;
- iv. make records available to NORDAM or a NORDAM authorized representative upon request;

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 13 of 39

- v. returning furnished tooling at the conclusion of contract, unless notified otherwise in writing by the NORDAM Buyer;
- vi. conduct a physical inventory of tooling, as directed by the NORDAM contract and/or Buyer, and submit a list identifying the tool number to the NORDAM Buyer, who in turn will submit to NORDAM Tooling Logistics;
- vii. any additional requirements noted in the NORDAM purchase order.

c. Control of US Government Tooling

Suppliers shall control US government tooling in accordance with FAR 52.245-1 Government Property or as instructed per a NORDAM purchase order.

d. Control of Boeing Tooling

Suppliers shall adhere to the requirements of Boeing D950-11059-1 BDS Special Tooling Requirements and D33200-1 Boeing Supplier's Tooling.

e. Control of other Customer Tooling

Suppliers shall adhere to the requirements of the Customer Supplier Quality Manual or Customer Tooling Manual from which the tooling belongs. If the Customer Supplier Quality Manual or Customer Tooling Manual is not available, contact the NORDAM Buyer for instruction.

f. Tool Maintenance or Modification / Rework

Suppliers are required to perform visual review of tool before and after each use to ensure parts produced from the tooling meet the quality expectation of the tooling. If tooling is degraded or substandard, or part quality is impacted by tooling, suppliers are to contact the NORDAM Buyer immediately advising of the situation. Suppliers are required to obtain authorization from the applicable NORDAM Buyer prior to returning of tools or performing maintenance on any tools belonging to NORDAM, Government, or customer.

Vendor owned tooling that is in place with NORDAM exclusive use agreements will not be modified in any way that will impact the end result of the part being fabricated, without the concurrence of NORDAM tooling/engineering. Minor maintenance for general tool upkeep is excluded on vendor owned tooling for notification requirements.


g. Tool Storage

Tools shall be stored according to the following minimum requirements:

- i. The supplier shall apply a suitable grease and protective coating, as applicable.
- ii. No tooling made of a composite material which must endure vacuum integrity for autoclave pressurized or oven negative pressure at elevated temperatures will be allowed to be stored outdoors.
- iii. Tooling destined for outdoor storage will require NORDAM concurrence prior to such storage.

8.5.4 Preservation

- a. no additional requirements;
- b. for products supplied to a NORDAM purchase order the supplier shall have a procedure to control and prevent the introduction of foreign materials during the manufacture, assembly, test, and shipment of the product compliant to the latest revision of AS9146. These procedures shall assure that the final product is free of any debris or foreign objects.
- c. for material stored below room temperature, the supplier shall include temperature recorder(s) with the shipment. Suppliers shall position the temperature recorder(s) to provide accurate indication of the material condition for each lot.
- d. no additional requirements;
- e. limited shelf life materials shall have at least seventy-five (75)% of remaining shelf life available at the time of shipment unless the NORDAM Buyer authorizes an exception. The NORDAM Buyer shall note the purchase order text to alert receiving inspection of exception.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 14 of 39

- f. Suppliers may be required to provide Safety Data Sheet (SDS) (formerly MSDS or Material Safety Data Sheet) for products, as applicable.
- g. If the term “Hazardous Material” applies to any item(s) ordered by NORDAM, it is required that an SDS accompany product shipment.
- h. Packaging and Delivery
Suppliers shall ensure that all products are packaged and shipped properly using the following requirements:
 - i. Each product shall be clearly identified.
 - ii. Package
 - o All packaging shall provide physical, chemical and cleanliness protection to prevent damage to or deterioration of the products during transportation and storage.
 - o Package each purchase order line item separately.
 - o No contact between parts during shipping. (i.e. metal-to-metal).
 - iii. Container Materials & Weight
 - o Use proper and appropriate containers to prevent damage to packaged product and in accordance with International Plant Protection Convention (IPPC) for Wood Packaging Materials (WPM).
 - o Use proper and appropriate dunnage as cushioning to prevent shifting of products and damage in transit.
 - Shipments over seventy-five (75) pounds should be divided into multiple containers or secured and shipped on a pallet in such a manner that shall prevent damage.
 - o These guidelines do not relieve the supplier of responsibility for properly controlling the packaging and shipping function in a manner that prevents damage in handling and in transit. Shipments arriving not in accordance with the above, or with obviously inadequate packaging, are subject to rejection and return at the cost of the supplier.


8.5.5 Post-Delivery Activities
No additional requirements.

8.5.6 Control of Changes
No additional requirements.

8.6 Release of Products and Services
a. - b. No Additional requirements;
c. Certificate of Conformance (CofC or CoC)

Suppliers shall provide a CofC as per the latest revision of AS9163 and with the following information for products:

- i. Manufacturer’s part number if different than the NORDAM part number.
- ii. Special Process documentation for each part containing:
 - A copy of subcontractor’s special process CofC containing all of the specifications, and revision levels, and
 - A list of all special processors who contributed to the shipped part, the specification, and revision level.
- iii. Country of Origin as defined in the U.S. Export Regulations. This is the country where the goods are manufactured (not where the goods are purchased or shipped from).
- iv. Harmonized Tariff Schedule (HTS) Code – A digital hierarchy that provides a structure for describing goods in trade for U.S. Customs regarding duty amounts, quotas and statistical purposes. This is required for importing and exporting of goods to and from the United States as well as needed to determine any finished good that is comprised of the raw material or product for qualification of any U.S. preferential programs.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 15 of 39	

- v. Export Control Classification Number (ECCN) – A five (5) character alpha-numeric number that is used on the Commercial Control List (CCL) to classify U.S. goods and determine if an Export license is required for export.

NOTE: Where NORDAM is not the design authority, but provides the supplier with specifications, blueprints or DPD data for manufacturing the product, the supplier is responsible for Export Control Classification of the product.

- vi. Lot and/or batch number.
- vii. Kit shipments, as defined, is a collection of different part numbers shipped to NORDAM in one box as defined by the NORDAM buyer and shall include a pick list containing part number, quantity, and traceability reference for each part to the supplier's internal manufacturing records.
- d. For NON-U.S. suppliers of products to NORDAM:
The CofC must contain the Harmonized System (HS) code, or HS Classification applicable for the country where the product is manufactured.
In addition, the Country of Origin is required, which is the Country where the products are manufactured.

8.7 Control of Nonconforming Outputs

- 8.7.1. a. - d. No additional requirements;
- e. NORDAM MRB disposition is required when material is found to depart from engineering drawing/model, specification, or purchase order requirements and cannot be reworked back to the original requirements.

The supplier shall submit nonconformances to the NORDAM Buyer and await NORDAM MRB disposition on any nonconformance to NORDAM requirements.

f. Nonconforming Delivered Products:

In the event a nonconforming condition is detected after delivery or use has started, the supplier shall notify the NORDAM Buyer immediately, not to exceed twenty-four (24) hours, upon discovery of the condition.

NOTE: Product found to be discrepant may be returned to the supplier for rework or replacement at no cost to NORDAM.

- 8.7.2. a. - d. No additional requirements.

9. PERFORMANCE EVALUATION

9.1 Monitoring, Measurement, Analysis, and Evaluation

No additional requirements.

9.2 Internal Audit

No additional requirements.

9.3 Management Review

No additional requirements.

10. IMPROVEMENT

10.1 General

No additional requirements.


10.2 Nonconformity and Corrective Actions

Note: NORDAM reserves the right to flow down the use of AS13000 – Problem Solving Requirements to suppliers as guidance.


10.3 Continual Improvement

No additional requirements.

END of Section One

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 16 of 39	

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		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 17 of 39	

SECTION 2

Quality Management Systems - Requirements for Aviation Maintenance Organizations

Section 2 is structured as a companion to SAE Aerospace Standard AS9110™Rev.C Quality Management Systems – Requirements for Aviation Maintenance Organizations and is supplemented by unique NORDAM requirements as defined herein.

These specifications apply to all NORDAM suppliers and all members of their supply chain whose primary business is providing maintenance, repair and overhaul services for aviation commercial and military products. This includes all sub-tier organizations with and without National Airworthiness Authority (NAA) repair station certification.

The supplier shall have and maintain a Quality Management System (QMS) compliant and certified to EN/AS/JISQ 9110 by a Certification Body (CB) accredited through IAQG.


Note: For some specific types of low safety risk products or services, other QMS standards such as a FAA issued Repair Station Certificate may be accepted if formally approved by the NORDAM Corporate Supplier Quality Department.

NORDAM suppliers and all members of their supply chain are to follow the full requirements of AS9110™Rev.C and the additional supplements noted in this section. The paragraphs in this section are numbered to correspond with the paragraphs of AS9110™Rev.C.

INTRODUCTION

- 0.1 General.
No additional requirements.
- 0.2 Quality Management Principles
No additional requirements.
- 0.3 Process Approach
No additional requirements.
- 0.4 Relationship with Other Management System Standards
No additional requirements.
- 0.5 Policies and Information
- 0.5.1 Suppliers shall ensure that all members of their supply chain who supply parts to satisfy a NORDAM Purchase Order (PO) are compliant to this manual.
- 0.5.2 The supplier shall provide right of access to their facility and the facilities of all members of their supply chain for review, verification, and analysis of their quality management system, quality control, inspection system, and maintenance process. Right of access shall be granted to:
 - Federal Aviation Administration (FAA)
 - National Transportation Safety Board (NTSB)
 - Department of Transportation (DOT)
 - Department of Defense (DOD)
 - NORDAM (and qualified second or third parties) including NORDAM's customers

The FAA, NTSB, DOT, DOD, NORDAM, European Aviation Safety Agency (EASA), National Aviation Authority (NAA), and NORDAM's customers have the right at all times to inspect and test all parts at any location to the extent permitted under export control regulations.
- 0.5.3 NORDAM reserves the right to maintain a NORDAM representative on-site at the supplier's or sub-tiers facilities.
- 0.5.4 NORDAM reserves the right to disapprove a Supplier's Quality System as well as the Quality System of any member of their supply chain.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 18 of 39

- 0.5.5 Suppliers shall maintain a drug-free workplace program to provide a safe workplace, discourage alcohol and drug abuse.
- 0.5.6 Suppliers shall permit NORDAM access to all data in OASIS databases.
- 0.5.7 **STANDARD FOR ETHICAL BUSINESS CONDUCT.** NORDAM is committed to conducting business fairly, impartially, ethically, and in a proper manner. All suppliers shall comply with NORDAM's Standard for Ethical Business Conduct found at www.nordam.com.

1. SCOPE

No additional requirements.

1.1 Application

This section of the manual contractually applies to NORDAM suppliers and all members of their supply chain who provide maintenance to products, materials or services to support the repair maintenance/overhaul of parts onto an aircraft in accordance with NORDAM purchase order or contract requirements.

NORDAM suppliers are required to access the NORDAM website to review this and any other documents required to satisfy the PO requirements. The supplier shall perform a full documentation review of NORDAM specifications to ensure they are working to and flowing down to sub-tiers the latest revision documents including this manual.

Suppliers are responsible for notifying the NORDAM Buyer of changes in their or their sub-tiers business that can affect process or product affecting NORDAM including, but not limited to any of the following:

- Senior leadership, (Director and above)
- Ownership
- Company Name
- Location or address
- Change in process or product
- Loss of any accreditation (AS9110, ISO9001 etc.)
- Or any other quality system changes


Notifications shall be provided to the NORDAM Buyer in a written statement within thirty (30) days of any of these changes. Upon receipt of this written notification NORDAM will determine necessary actions.

Any exception to the supplier's AS9110 accreditation will constitute an exception to the same clause of this Supplier Quality Manual.

2. NORMATIVE REFERENCES

The following documents are valuable for the application of this document.

- IAQG SCMH, International Aerospace Quality Group – Supply Chain Management Handbook.
- AS9110 – Quality Management Systems – Requirements for Aviation Maintenance Organizations
- AS9146 – Foreign Object Damage (FOD) Prevention Program
- AS13000 – Problem Solving Requirements for Suppliers
- ISO 9000 – Quality Management Systems – Fundamentals and vocabulary
- ISO 9001 – Quality Management Systems – Requirements
- 14 CFR Part 120 – Drug and Alcohol Testing Program
- 14 CFR Part 145 – Repair Stations
- AS5553 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts
- AS6081 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts
- AS6171 – Test Methods Standard Electrical, Electronic, and Electromechanical (EEE) Parts
- AS6496 – Fraudulent/Counterfeit Electronic Parts
- AS6174 – Counterfeit Materiel
- DFAR 252.225.7014 – Specialty Metals

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 19 of 39	

3. TERMS AND DEFINITIONS

No additional requirements.

4. CONTEXT OF THE ORGANIZATION

4.1–4.4 No additional requirements.

4.5 Certificated contract maintenance suppliers shall maintain FAA certified or equivalent repair station in accordance with 14 CFR Part 145. The supplier shall maintain a current status of their agency Certificate, Operations Specifications, Capabilities List, Repair Station Manual, and Training Manual. Being a National Aviation Authority (NAA) certificated FAA or equivalent repair station does not relieve the supplier from the responsibility of complying with all NORDAM purchase order requirements and requirements of this manual.

4.6 Independent Calibration and Testing Facility Accreditation:

Calibration and Testing suppliers delivering products or services to a NORDAM purchase order shall ensure its calibration and/or testing facilities are accredited in accordance with ISO/IEC 17025 by a Certification Body.

5. LEADERSHIP

No additional requirements.

6. PLANNING

No additional requirements.

7. SUPPORT

7.1 Resources

7.1.1 General

Drug and Alcohol program suppliers based in the United States must maintain a Drug and Alcohol program in accordance with 14 CFR Part 120. Evidence shall be maintained to verify drug and alcohol testing program requirements are implemented. Suppliers shall also provide evidence of flow down to sub-tier suppliers that perform contract maintenance for suppliers on NORDAM's customer's parts.

7.1.2 People

No additional requirements.

7.1.3 Infrastructure

No additional requirements.

7.1.4 Environment for the Operation of Processes

a-b. No additional requirements;

c. Lighting intensity and cleanliness for work areas and inspection benches shall be evaluated by the management for suitability for the work performed. NORDAM reserves the right to flow down customer specific lighting requirements.

7.1.5 Monitoring and Measuring Resources

No additional requirements.

7.1.6 Organizational Knowledge

No additional requirements.

7.2 Competence

No additional requirements.

7.3 Awareness

No additional requirements.


7.4 Communications

No additional requirements.

7.5 Documented Information

7.5.1 General

No additional requirements.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 20 of 39	

7.5.2 Creating and Updating

No additional requirements.

7.5.3 Control of Documented Information

7.5.3.1

a. – b. No additional requirements;

c. All quality records (non-electronic) shall be documented in ink or other permanent marking.

d. Corrections to work instructions or documents shall be recorded, dated and traceable to the person making the change (e.g., signature, stamp, etc.) in ink or other permanent marking method with the original data being legible and retrievable after the change.

e. Documents submitted to NORDAM that contain technical data shall include a statement near the beginning of the document such as “This document contains technical data” or an equivalent statement. This statement shall be repeated throughout the document.

United States (U.S.) organizations shall also identify the Export Control Classification Number (ECCN) or U.S. Munitions List (USML) classification.

Other organizations shall identify applicable export classifications related to the documents submitted to NORDAM.

7.5.3.2 a. – c. No additional requirements;

d. The supplier shall maintain an adequate records system. All NORDAM related records/documented information shall be retained in a safe and secure manner in electronic or paper format for a minimum of ten (10) years from completion of the NORDAM purchase order. For any deviation from the record retention requirement, suppliers must submit a request to deviate from the requirement to the NORDAM Buyer and approved by the NORDAM Corporate Supplier Quality Department. NORDAM contracts may require record retention to be extended beyond the ten (10) year retention period. Disposition of documents shall be carried out per NORDAM Terms and Conditions (T&Cs) found at <http://www.nordam.com/supplier/>.

e. No additional requirements.

8. OPERATION

8.1 Operational Planning and Control

a. – j.) No additional requirements;

k. Suppliers shall notify NORDAM prior to any planned work transfer or any planned change implementation within the supplier's organization or its supply chain. This includes Maintenance or Sub-Contract Maintenance locations changes within the organization or changes in a supplier or a sub-tier supplier's location. The supplier shall have documented procedures for implementing this requirement, ensuring it is applied in their supply base and that decisions to interrupt flow of material from any existing source shall not take place until approved by NORDAM. NORDAM may choose to participate in the transfer activity to mitigate any risks associated with the transfer.

If the transfer of work involves transfer of NORDAM ITAR or other technical data to a party or location requiring an export license, NORDAM must approve the work transfer. If approved, NORDAM will assist in obtaining all required government licenses prior to transfer of work.

NORDAM recommends a gated process to control work transfers. A guideline on implementing a process for work transfers can be found in the IAQG SCMH. (International Aerospace Quality Group – Supply Chain Management Handbook)

Work Transfers shall be submitted to NORDAM through Work Transfer Supplier Notification Form FR-TNG-SC-33 located at <http://www.nordam.com/>.

8.1.1 Operational Risk Management

No additional requirements.


8.1.2 Configuration Management

No additional requirements.

8.1.3 Product Safety

No additional requirements.

8.1.4 Prevention of Counterfeit Parts

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 21 of 39

Suppliers shall prevent and mitigate the use of counterfeit parts. Suppliers shall comply with the latest revisions of AS5553, AS6081, AS6171 and AS6496 for electronic components and AS6174 for non-electronic products. Suppliers shall notify their NORDAM Buyer prior to the use of or shipment of product or material with broken traceability or from a non-authorized supplier. The NORDAM Buyer will forward the notification to the NORDAM Corporate Supplier Quality Department for review.

8.1.5 Prevention of Suspected Unapproved Parts

No additional requirements.

8.1.6 Installation of Approved Parts

No additional requirements.

8.2 Requirements for Products and Services

8.2.1 Customer Communication

a. – e. No additional requirements;

f. Changes that may affect quality shall be documented and communicated to the applicable NORDAM Buyer who will forward to the NORDAM Corporate Supplier Quality Department for review and comment prior to implementation of the change.

Examples of Changes:

- Ownership
- Company name change
- Management
- Manufacturing location
- Process
- Product
- Inspection Techniques

g. All correspondence and communication between NORDAM and the supplier shall be in the English language. The supplier is responsible for providing supplier's specifications, procedures, and reports in the English language. In cases where the supplier maintains copies in their native language as well as in English and there is a conflict, the English language document shall take precedence.

8.2.2 Determining the Requirements for Products and Services

No additional requirements.

8.2.3 Review of the Requirements for Products and Services

No additional requirements.

8.2.4 Changes to Requirements for Products and Services

No additional requirements.

8.3 Design and Development of Products and Services

8.3.1 General

No additional requirements

8.3.2 Design and Development Planning

a. – j. No additional requirements;

k. Specialty metals used to fabricate Military components shall be melted in the United States or a qualified country per DFAR 252.225.7014. (If required by Military Contract)

8.3.3 Design and Development Inputs

No additional requirements.

8.3.4 Design and Development Controls


No additional requirements

8.3.5 Design and Development Outputs

No additional requirements.

8.3.6 Design and Development Changes

No additional requirements.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 22 of 39

8.4 Controls of Externally Provided Processes, Products, and Services

8.4.1 General

Suppliers are responsible for ensuring that procurements from sub-tier suppliers conform to all requirements of the NORDAM purchase order, including the provisions of this manual. Sub-tier suppliers shall meet NORDAM quality requirements and it is the responsibility of NORDAM suppliers to ensure their sub-tier suppliers are qualified per the NORDAM contract, purchase order, and requirements of this manual.

Mills located outside the USA

Suppliers shall contact the NORDAM Buyer to request approval from the appropriate NORDAM Quality Department when procuring metallic material obtained from mills located outside of the United States of America (USA) that do not hold a bi-lateral agreement with the FAA. (If required by Military Contract)

8.4.1.1 The organization shall:

No additional requirements

8.4.2 Type and Extent of Controls

a. – d. No additional requirements;

e. For calibration services supplied on a NORDAM purchase order, suppliers shall maintain a National Institute of Standards and Technology (NIST), International Organization of Standardizations (ISO) or equivalent agency traceable calibration system capable of ensuring the accuracy of all measuring equipment utilized in the inspection and acceptance of NORDAM products.

8.4.3 Information for External Providers

a. - f. No additional requirements;

g. Ref. section 7.5.3 for retention information, retention periods and disposition requirements

h. – l. No additional requirements.

8.5 Production and Service Provision

8.5.1 Control of Production and Service Provision

a. – g. No additional requirements;

h. Direct Ship Authorization. Should there be a situation requiring a direct shipment from the supplier to a NORDAM customer, the supplier shall contact their NORDAM Buyer who will assist coordinating the direct shipment. NORDAM recommends using the latest revision of ARP9114 Direct Ship Guidance for Aerospace Companies as a guide.

i.- q No additional requirements.

8.5.1.1 Control of Equipment, Tools, and Software Programs

No additional requirements.

a. Control of Digital Media

Suppliers shall maintain records and procedures which control configuration and accuracy of software used to manufacture, test, or accept hardware.

b. Boeing Digital Product Definition (DPD) data.


To use Boeing furnished datasets as authority for design, manufacture or inspection, a supplier must comply with D6-51991.

c. Tools used at suppliers as inspection media, must be submitted to the applicable NORDAM Buyer and approved by NORDAM Corporate Supplier Quality Department. Generally, tools must demonstrate maximum 1/3 tolerance of engineering; however, this requirement is program specific.

8.5.1.2 Validation and Control of Special Processes

a. – f. No additional requirements;

g. Supplier test results:

		Manual		Document Name:
		Document Number: MN-TNG-QA-02		Supplier Quality Manual
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 23 of 39

Results of testing, records, film, or other suitable documentation stating the acceptance or the rejection of the test performed shall accompany each shipment and shall include the name of the supplier that performed the testing as required on purchase orders, drawings, or specifications referenced. The NORDAM Buyer shall be notified of any test failures prior to shipment.

The test report shall include the following information as a minimum:

- Purchase order number,
 - Requirements and actual results,
 - Date of test,
 - Specification and revision level, and
 - Signature or name of company representative.
- h. NORDAM / OEM Special Process Suppliers
Special Process can be defined as processes 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 has been delivered.
- i. Qualification of Special Process Suppliers and Sub-Tier Special Process Suppliers:
NORDAM requires that all Special Process Suppliers be Nadcap accredited including sub-tiers that provide special processes. Additionally, OEM's may require Special Process Suppliers and their sub-tiers to use the OEM's approved Special Process Suppliers. The OEM's approved Special Process Suppliers are identified on their website. If the supplier is unable to access the OEM's website or if the Nadcap accreditation is not available, the supplier shall contact the NORDAM Buyer for assistance.


NORDAM identification of Special Processes are listed below:

- Non Metallic Materials Manufacturing
- Coatings
- Elastomer Seals
- Metallic Material Manufacturing
- Nonconventional Machining - Excluding AC7116/7 Waterjet
- Sealants
- Chemical Processing
- Composites
- Heat Treating
- Material Testing Laboratories
- Non Metallic Material Testing
- Non-Destructive Testing
- Surface Enhancement
- Welding

8.5.1.3 Production Process Verification.
Not applicable.

8.5.1.4 Evaluation of a New Capability
No additional requirements.


8.5.2 Identification and Traceability
No additional requirements.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 24 of 39	

8.5.3 Property Belonging to Customers or External Provisions

- a. **NORDAM Furnished Material (NFM)**
NORDAM material issued to a supplier for fabrication and/or processing is required to be controlled so the furnished material is used only for NORDAM products. The supplier shall notify the NORDAM Buyer of any missing or damaged materials.
The use of NFM does not absolve the supplier from the obligation of performing receiving inspection of NFM product.
- b. **NORDAM Furnished Tooling (NFT)**
Suppliers are responsible for the following related to NORDAM furnished tooling:
 - i. ensure the proper care and upkeep;
 - ii. track and maintain all tooling while in supplier's possession;
 - iii. notification to the NORDAM Buyer of any loss or damage upon discovery;
 - iv. make records available to NORDAM or a NORDAM authorized representative upon request;
 - v. returning furnished tooling at the conclusion of contract, unless notified otherwise in writing by NORDAM Buyer;
 - vi. conduct a physical inventory of tooling, as directed by the NORDAM contract and/or Buyer, and submit a list identifying the tool number to the NORDAM Buyer, who in turn will submit to NORDAM Tooling Logistics;
 - vii. any additional requirements noted in a NORDAM purchase order.
- c. **Control of US Government Tooling**
Suppliers shall control US government tooling in accordance with FAR 52.245-1 Government Property as instructed per NORDAM purchase order.
- d. **Control of Boeing Tooling**
Suppliers shall adhere to the requirements of Boeing D950-11059-1 BDS Special Tooling Requirements and D33200-1 Boeing Suppliers Tooling.
- e. **Control of other Customer Tooling**
Suppliers shall adhere to the requirements of the Customer Supplier Quality Manual or Customer Tooling Manual from which the tooling belongs. If the Customer Supplier Quality Manual or Customer Tooling Manual is not available contact the NORDAM Buyer for instruction.
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- g. **Tool Storage**
Tools shall be stored according to the following minimum requirements:
 - i. The supplier shall apply a suitable grease and protective coating, as applicable.
 - ii. No tooling made of a composite material which must endure vacuum integrity for autoclave pressurized or oven negative pressure at elevated temperatures will be allowed to be stored outdoors.
 - iii. Tooling destined for outdoor storage will require NORDAM concurrence prior to such storage.

8.5.4 Preservation

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 25 of 39	

No additional requirements.

8.5.5 Post-Delivery Activities

No additional requirements.

8.5.6 Control of Changes

No additional requirements.

8.6 Release of Products and Services

No additional requirements.

8.7 Control of Nonconforming Outputs

No additional requirements.

9. PERFORMANCE EVALUATION

9.1 Monitoring, Measurement, Analysis, and Evaluation

No additional requirements.

9.2 Internal Audits

No additional requirements.

9.3 Management Review

No additional requirements.

10. IMPROVEMENT

10.1 General

No additional requirements.


10.2 Nonconformity and Corrective Actions

Note: NORDAM reserves the right to flow down the use of AS13000 – Problem Solving Requirements for suppliers as guidance.


10.3 Continual Improvement

No additional requirements.

END of Section Two

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 26 of 39

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		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 27 of 39

SECTION 3

Quality Management Systems - Requirements for Aviation, Space and Defense Distributors

Section 3 is structured as a companion to SAE Aerospace Standard AS9120™Rev.B Quality Management Systems – Requirements for Aviation, Space and Defense Distributors and is supplemented by unique NORDAM requirements as defined herein.


These specifications apply to all NORDAM suppliers and all members of their supply chain that procure parts, materials and assemblies and resells these products to a customer in the aviation, space and defense industries. This includes organizations that procure products and split them into smaller quantities including those that coordinate a customer-controlled service on the product. The supplier shall have and maintain a Quality Management System (QMS) compliant and certified to EN/AS/JISQ 9120 by a Certification Body (CB) accredited through IAQG.

Note: For some specific types of low safety risk products or services, other QMS standards such as ISO 9001 may be accepted if formally approved by the NORDAM Corporate Supplier Quality Department.

NORDAM suppliers and all members of their supply chain are to follow the full requirements of AS9120™Rev.B and the additional supplements noted in this section. The paragraphs in this section are numbered to correspond with the paragraphs of AS9120™Rev.B.

INTRODUCTION

- 0.1 General.
No additional requirements.
- 0.2 Quality Management Principles
No additional requirements.
- 0.3 Process Approach
No additional requirements.
- 0.4 Relationship with Other Management System Standards
No additional requirements.
- 0.5 Policies and Information
- 0.5.1 Suppliers shall ensure that all members of their supply chain who supply parts to satisfy a NORDAM PO are compliant to this manual.
- 0.5.2 The supplier shall provide right of access to their facility and the facilities of all members of their supply chain for review, verification, and analysis of their quality management system, quality control, inspection system, and maintenance process. Right of access shall be granted to:
 - Federal Aviation Administration (FAA)
 - National Transportation Safety Board (NTSB)
 - Department of Transportation (DOT)
 - Department of Defense (DOD)
 - NORDAM (and qualified second or third parties) including NORDAM's customers
The FAA, NTSB, DOT, DOD, NORDAM, European Aviation Safety Agency (EASA), National Aviation Authority (NAA), and NORDAM's customers have the right at all times to inspect and test all parts at any location to the extent permitted under export control regulations.
- 0.5.3 NORDAM reserves the right to maintain a NORDAM representative on-site at the supplier's or sub-tiers facilities.
- 0.5.4 NORDAM reserves the right to disapprove a Supplier's Quality System as well as the Quality System of any member of their supply chain.
- 0.5.5 Suppliers shall maintain a drug-free workplace program to provide a safe workplace, discourage alcohol and drug abuse.
- 0.5.6 Suppliers shall permit NORDAM access to all data in OASIS databases.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 28 of 39

0.5.7 STANDARD FOR ETHICAL BUSINESS CONDUCT. NORDAM is committed to conducting business fairly, impartially, ethically, and in a proper manner. All suppliers shall comply with NORDAM's Standard for Ethical Business Conduct found at www.nordam.com.

1. SCOPE

No additional requirements.

1.1 Application

This section of the manual contractually applies to NORDAM suppliers and all members of their supply chain who procure parts, product, materials or assemblies, and resells these products to a customer in the aviation, space and defense industries in accordance with NORDAM purchase orders or contract requirements. NORDAM suppliers are required to access the NORDAM website to review this and any other document required to satisfy the PO requirements. The supplier shall perform a full documentation review of NORDAM specifications to ensure they are working to and flowing down to sub-tiers the latest revision documents including this manual.

Suppliers are responsible for notifying the NORDAM Buyer of changes in their or their sub-tiers that can affect process or product affecting NORDAM including, but not limited to any of the following:

- Senior leadership, (Director and above)
- Ownership
- Company Name
- Location or address
- Change in process or product
- Loss of any accreditation (AS9120, ISO 9001 etc.)
- Or any other quality system changes

Notification shall be provided to the NORDAM Buyer in a written statement within thirty (30) days of any of these changes. Upon receipt of this written notification NORDAM will determine necessary actions.

Any exception to the supplier's AS9120 accreditation will constitute an exception to the same clause of this Supplier Quality Manual.


2. NORMATIVE REFERENCES

The following referenced documents are indispensable for the application of this document.

- IAQG SCMH, International Aerospace Quality Group – Supply Chain Management Handbook.
- AS9120 Quality Management Systems – Requirements for Aviation, Space, and Defense Distributors
- AS13000 Problem Solving Requirements for Suppliers
- ISO 9000 Quality management systems — Fundamentals and vocabulary
- ISO 9001 – Quality Management Systems — Requirements
- AS5553 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts
- AS6081 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts
- AS6171 – Test Methods Standard Electrical, Electronic, and Electromechanical (EEE) Parts
- AS6496 – Fraudulent/Counterfeit Electronic Parts
- AS6174 – Counterfeit Material
- DFAR 252.225.7014 – Specialty Metals

3. TERMS AND DEFINITIONS

No additional requirements.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 29 of 39	

4. CONTEXT OF THE ORGANIZATION

No additional requirements.

5. LEADERSHIP

No additional requirements.

6. PLANNING

No additional requirements.

7. SUPPORT

7.1 Resources

No additional requirements.

7.2 Competence

No additional requirements.

7.3 Awareness

No additional requirements.

7.4 Communications

No additional requirements.

7.5 Documented Information

7.5.1 General

No additional requirements.

7.5.2 Creating and Updating

No additional requirements.

7.5.3 Control of Documented Information

7.5.3.1 a. - b. No additional requirements;

c. All quality records (non-electronic) shall be documented in ink or other permanent marking.

d. Corrections to work instructions or documents shall be recorded, dated and traceable to the person making the change (e.g., signature, stamp, etc.) in ink or other permanent marking method with the original data being legible and retrievable after the change.

e. Documents submitted to NORDAM that contain technical data shall include a statement near the beginning of the document such as "This document contains technical data" or an equivalent statement. This statement shall be repeated throughout the document.

United States (U.S.) organizations shall also identify the Export Control Classification Number (ECCN) or U.S. Munitions List (USML) classification.

Other organizations shall identify applicable export classifications related to the documents submitted to NORDAM.

7.5.3.2 a. - c. No additional requirements;

d. The supplier shall maintain an adequate records system. All NORDAM related records/documented information shall be retained in a safe and secure manner in electronic or paper format for a minimum of seven (7) years from completion of the NORDAM purchase order. For any deviation from the record retention requirement, suppliers must submit a request to deviate from the requirement to the NORDAM Buyer and approved by the NORDAM Corporate Supplier Quality Department. NORDAM contracts may require record retention to be extended beyond the seven (7) year retention period. Disposition of documents shall be carried out per NORDAM Terms and Conditions (T&Cs) found at <http://www.nordam.com/suppliers/>.

e. No additional requirements.


8. OPERATION

8.1 Operational Planning and Control


No additional requirements.

8.1.1 (Not used)

8.1.2 Configuration Management

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 30 of 39

- 8.1.3 No additional requirements.
(Not used)
- 8.1.4 Prevention of Counterfeit Parts
Suppliers shall prevent and mitigate the use of counterfeit parts. Suppliers shall comply with the latest revisions of AS5553, AS6081, AS6171 and AS6496 for electronic components and AS6174 for non-electronic products. Suppliers shall notify their NORDAM Buyer prior to the use of or shipment of product or material with broken traceability or from a non-authorized supplier. The NORDAM Buyer will forward the notification to the NORDAM Corporate Supplier Quality Department for review.
- 8.1.5 Prevention of Suspected Unapproved Parts
No additional requirements
- 8.2 Requirements for Products and Services
- 8.2.1 Customer Communication
- a. – e. No additional requirements;
- f. Changes that may affect quality shall be documented and communicated to the applicable NORDAM Buyer who will forward to the NORDAM Corporate Supplier Quality Department for review and comment prior to implementation of the change. The changes may require a full or partial First Article Inspection (FAI) at the discretion of NORDAM.
- Examples of Changes:
- Ownership
 - Company name change
 - Management
 - Manufacturing location
 - Process
 - Product
 - Inspection Techniques
- g. All correspondence and communication between NORDAM and the supplier shall be in the English language. The supplier is responsible for providing supplier's specifications, procedures, and reports in the English language. In cases where the supplier maintains copies in their native language as well as in English and there is a conflict, the English language document shall take precedence.
- 8.2.2 Determining the Requirements for Products and Services
No additional requirements.
- 8.2.3 Review of the Requirements for Products and Services
No additional requirements.
- 8.2.4 Changes to Requirements for Products and Services
No additional requirements.
- 8.3 Design and Development of Requirements for Products and Services
- 8.3.1 General
- 8.3.2 Design and Development Planning
- a. – j. No additional requirements;
- k. Specialty metals used to fabricate Military components shall be melted in the United States or a qualified country per DFAR 252.225.7014. (If required by Military Contract)
- 8.3.3 Design and Development Inputs
No additional requirements.
- 8.3.4 Design and Development Controls
No additional requirements.
- 8.3.5 Design and Development Outputs
No additional requirements.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 31 of 39	

8.3.6 Design and Development Changes

No additional requirements.

8.4 Control of Externally Provided Processes, Products, and Services

8.4.1 General

Suppliers are responsible for ensuring that procurements from sub-tier suppliers conform to all requirements of the NORDAM purchase order, including the provisions of this manual. Sub-tier suppliers shall meet NORDAM quality requirements and it is the responsibility of NORDAM suppliers to ensure their sub-tier suppliers are qualified per the NORDAM contract, purchase order, and requirements of this manual.

Mills located outside the USA

Suppliers shall contact the NORDAM Buyer to request approval from the appropriate NORDAM Quality Department when procuring metallic material obtained from mills located outside of the United States of America (USA) that do not hold a bi-lateral agreement with the FAA. (If applicable by Military Contract)

8.4.1.1 The organization shall:

No additional requirements

8.4.2 Type and Extent of Control

No additional requirements.

8.4.3 Information for External Providers

a. – j. No additional requirements;

k. Ref. section 7.5.3 for retention information, retention periods and disposition requirements.

8.5 Production and Service Provision

8.5.1 Control of Production and Service Provision

a. - g. No additional requirements;

h. Direct Ship Authorization. Should there be a situation requiring a direct shipment from the supplier to a NORDAM customer, the supplier shall contact their NORDAM Buyer who will assist coordinating the direct shipment. NORDAM recommends using the latest revision of ARP9114 Direct Ship Guidance for Aerospace Companies as a guide.

i. – n. No additional requirements.

8.5.1.1 Control of Equipment, Tools, and Software Programs

No additional requirements.

8.5.2 Identification and Traceability

No additional requirements.

8.5.3 Property Belonging to Customer or External Providers

No additional requirements.

8.5.4 Preservation

a. No additional requirements;


b. for products supplied to a NORDAM purchase order the supplier shall have a procedure to control and prevent the introduction of foreign materials during the storage, inspection, and shipment of the product in line with AS9146. These procedures shall assure that the final product is free of any debris or foreign objects.

c. for material stored below room temperature, the supplier shall include temperature recorder(s) with the shipment. Suppliers shall position the temperature recorder(s) to provide accurate indication of the material condition for the lot.

d. no additional requirements;

e. limited shelf life materials shall have at least seventy-five (75) % of remaining shelf life available at the time of shipment unless the NORDAM Buyer authorizes an exception. The NORDAM Buyer shall note the purchase order text to alert receiving inspection of exception.

f. Suppliers may be required to provide Safety Data Sheet (SDS) (formerly MSDS or Material Safety Data Sheet) for products, as applicable.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 32 of 39

- g. If the term “Hazardous Material” applies to any item(s) ordered by NORDAM, it is required that a SDS accompany product shipment.
- h. Packaging and Delivery
Suppliers shall ensure that all products are packaged and shipped properly using the following requirements:
 - iv. Each product shall be clearly identified.
 - v. Package
 - o All packaging shall provide physical, chemical and cleanliness protection to prevent damage to or deterioration of the products during transportation and storage.
 - o Package each purchase order line item separately.
 - o No contact between parts during shipping. (i.e. metal-to-metal).
 - vi. Container Materials & Weight
 - Use proper and appropriate containers to prevent damage to packaged product and in accordance with International Plant Protection Convention (IPPC) for Wood Packaging Materials (WPM).
 - Use proper and appropriate dunnage as cushioning to prevent shifting of products and damage in transit.
 - Shipments over seventy-five (75) pounds should be divided into multiple containers or secured and shipped on a pallet in such a manner that shall prevent damage.
 - i. These guidelines do not relieve the supplier of responsibility for properly controlling the packaging and shipping function in a manner that prevents damage in handling and in transit. Shipments arriving not in accordance with the above, or with obviously inadequate packaging, are subject to rejection and return at the cost of the supplier.

8.5.5 Post-Delivery Activities

No additional requirements.

8.5.6 Control of Changes


No additional requirements.

8.6 Release of Product and Services

a. – b. No Additional requirements;
Certificate of Conformance (CofC or CoC)

Suppliers shall provide a CofC as per the latest revision of AS9163 and with the following information for products:

- i. Manufacturer’s part number if different than the NORDAM part number.
- ii. Country of Origin as defined in the U.S. Export Regulations. This is the country where the goods are manufactured (not where the goods are purchased or shipped from).
- iii. Harmonized Tariff Schedule (HTS) Code – A digital hierarchy that provides a structure for describing goods in trade for U.S. Customs regarding duty amounts, quotas and statistical purposes. This is required for importing and exporting of goods to and from the United States as well as needed to determine any finished good that is comprised of the raw material or product for qualification of any U.S. preferential programs.
- iv. Export Control Classification Number (ECCN) – A five (5) character alpha-numeric number that is used on the Commercial Control List (CCL) to classify U.S. goods and determine if an Export license is required for export.
- v. Lot and/or batch number.
- vi. Kit shipments, as defined, is a collection of different part numbers shipped to NORDAM in one box as defined by the NORDAM buyer and shall include a pick list containing part number, quantity, and traceability reference for each part to the supplier’s internal manufacturing records.
- c. For NON-U.S. suppliers of products to NORDAM:
The CofC must contain the Harmonized System (HS) code, or HS Classification applicable for the country where the product is manufactured.

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 33 of 39	


- In addition, the Country of Origin is required, which is the Country where the products are manufactured.
- 8.7 Control of Nonconforming Outputs
No additional requirements.

9 PERFORMANCE EVALUATION
No additional requirements.

10 IMPROVEMENT


- 10.1 General
No additional requirements.
- 10.2 Nonconformity and Corrective Actions
Note: NORDAM reserves the right to flow down the use of AS13000 – Problem Solving Requirements for suppliers as guidance.
- 10.3 Continual Improvement
No additional requirements.

END of Section Three


		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 34 of 39	

CHANGE HISTORY


REV DATE	REV LEVEL	DESCRIPTION OF CHANGE	CHANGED BY:
03/26/2015	H	Complete rewrite to be structured as a companion to AS9100C, AS9110B & AS9120A standards.	I. Colón
04/17/2018	I	Rewrite section 1 to match AS9100D. Rewrite section 2 to match AS9110C Rewrite section 3 to match AS9120B	I. Colón
08/27/2020	J	Changes indicated by mark on the side of this Manual. Formatting Changes	I. Colón
03/01/2021	K	<u>Section1 Section 2</u> <ul style="list-style-type: none"> • Realigned 8.5.1 to AS standard, moved items from 8.5.4 preservation to 8.5.1 and revised CPK statement • Complete rewrite 8.5.1.2. h. • Added 8.5.1.3 3) i: To: Field 10, for each characteristic recorded, the FAI inspection measuring equipment used as media of inspection shall be added. • Clarified 8.5.1.3 3) ii. To: Field 14 for each characteristic recorded, the FAI inspector identification (e.g. signature, stamp, electronic authorization, etc.) used to signify the person that accomplished the inspection. • Format change to 8.5.1.3 iii. • Deleted Special Process from: “ NORDAM requires that all Special Process suppliers and their Special Process sub-tiers shall hold Nadcap accreditation. Should the Special Process supplier not hold Nadcap accreditation or want to use a non Nadcap accredited Special Process Sub-tier supplier, the supplier shall obtain written approval from NORDAM Corporate Quality Department prior to performing any special process work.in section 8.5.1.2 i • Updated section 8.5.2 from: Part number per the purchase order, • Drawing revision and Advanced Drawing Change Notice (ADCN) or equivalent, at date of manufacture, • Manufacturer part number, if applicable, • Supplier’s traceable number (i.e. work order or job number, lot control number, serial number, batch number), • Indication of acceptance by supplier’s quality system, • NORDAM’s nonconforming material number if the item was processed per Nonconforming Material section of this manual. 	I. Colón

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 35 of 39	


		<ul style="list-style-type: none"> Complete rewrite of 8.6 <p><u>Section 1</u> <u>Section 2</u> <u>Section 3</u></p> <ul style="list-style-type: none"> Revised 0.5.2 for formatting Revised 1.1 for format change Revised 8.5.2 h. Indication of acceptance by Supplier's quality system, i.e., Inspection stamp marking or other traceable indicator. 8.5.4 Complete rewrite Complete rewrite to 8.6 <p><u>Section 2</u></p> <ul style="list-style-type: none"> Added 0.5.5 Contract Maintenance IAW with 14 CFR 120 	
07/16/2024	L	<p><u>Header</u></p> <ul style="list-style-type: none"> Removed VP Supply Chain Added Sr. Dir. Supply Chain <p><u>TABLE OF CONTEXT</u></p> <ul style="list-style-type: none"> Update to reflect current changes in sections <p><u>Section 1</u></p> <ul style="list-style-type: none"> <u>Added</u> - Note: For some specific types of low safety risk products or services, other QMS standards such as ISO 9001 may be accepted if formally approved by the NORDAM Corporate Supplier Quality Department. Changed from <u>-</u> These suppliers and all members of their supply chain are to follow the full requirements of AS9100™Rev.D and the additional supplements noted in this section. The paragraphs in this section are numbered to correspond with the paragraphs of AS9100™Rev.D. <p><u>Section 1.1</u></p> <ul style="list-style-type: none"> Removed - Suppliers who are not accredited under the AS9100 Standard and request an exception or deviation from any clause of this Supplier Quality Manual shall submit a formal request sent to the appropriate NORDAM Buyer to forward to the Corporate Quality Department for review. <p><u>NORMATIVE REFERENCES</u></p> <ul style="list-style-type: none"> Removed – AS9117 - Delegated Product Release verification; AS13001 - Delegated Product Release Verification Training Requirements; and AS13004 - Process Failure Mode and Effects Analysis (PFMEA) and Control Plans 	

		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 36 of 39


		<ul style="list-style-type: none"> Added - AS9145 – Aerospace Series – Requirements for APQP and PPAP; AS13100 – AESQ Quality Management System Requirements for Aero Engine Design and Production Organizations; AS6081 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; AS6171 – Test Methods Standard Electrical, Electronic, and Electromechanical (EEE) Parts; AS6496 – Fraudulent/Counterfeit Electronic Parts; AS6174 – Counterfeit Materiel; and DFAR 252.225.7014 – Specialty Metals <p>CONTECT OF THE ORGANIZATION</p> <ul style="list-style-type: none"> Added – 4.6 - Independent Calibration and Testing Facility Accreditation: Calibration and Testing suppliers delivering products or services to a NORDAM purchase order shall ensure its calibration and/or testing facilities are accredited in accordance with ISO/IEC 17025 by a Certification Body. Changes in section 8.5.1.3 2) iii Changes in section 8.5.1.3 4) Changes in section 8.5.2 Identification and Traceability Additions and removals in Section 8.5.4 Preservation Deletions and changes in Section 8.6 Release of Products and Services <p>Section 2</p> <ul style="list-style-type: none"> Added -_Note: For some specific types of low safety risk products or services, other QMS standards such as a FAA issued Repair Station Certificate may be accepted if formally approved by the NORDAM Corporate Supplier Quality Department. Changed from - These suppliers and all members of their supply chain are to follow the full requirements of AS9110™Rev.C and the additional supplements noted in this section. <p>Section 1.1</p> <ul style="list-style-type: none"> Removed - Suppliers who are not accredited under the AS9110 Standard and request an exception or deviation from any clause of this Supplier Quality Manual shall submit a formal request sent to the appropriate NORDAM Buyer 	
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		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 37 of 39

		<p>to forward to the Corporate Quality Department for review.</p> <p><u>NORMATIVE REFERENCES</u></p> <ul style="list-style-type: none"> • Removed – AS9102 Aerospace First Article Inspection Requirement; AS9103 Aerospace Series – Quality Management Systems – Variation Management of Key Characteristics; AS9117 Delegated Product Release verification; AS13001 Delegated Product Release Verification Training Requirements; AS9145 Aerospace Series – Requirements for APQP and PPAP; AS13004 Process Failure Mode and Effects Analysis (PFMEA) and Control Plans; and AS13006 Process Control Methods • Added - 14 CFR Part 120 – Drug and Alcohol Testing Program; 4 CFR Part 145 – Repair Stations; AS5553 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; AS6081 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; AS6171 – Test Methods Standard Electrical, Electronic, and Electromechanical (EEE) Parts; AS6496 – Fraudulent/Counterfeit Electronic Parts; AS6174 – Counterfeit Materiel; DFAR 252.225.7014 – Specialty Metals • Additions and changes in section 4 CONTEXT OF THE ORGANIZATION • Changes in 7.1.1 General Drug and Alcohol Program • Added section 8.1.5 Prevention of Suspected Unapproved Parts • Changes in Section 8.3.2 Design and Development • Additions in Section 8.5.1.3 Production Process Verification • Deletions in Section 8.6 Release of Products and Services • Deletions in Section 8.7.1 Control of Nonconforming Outputs <p><u>Section 3</u></p> <ul style="list-style-type: none"> • Added - Note: For some specific types of low safety risk products or services, other QMS standards such as ISO 9001 may be accepted if formally approved by the NORDAM Corporate Supplier Quality Department. • Changed from - These suppliers and all members of their supply chain are to follow the full requirements of AS9120™Rev.B and the additional supplements noted in this section. 	
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		Manual		Document Name:
		Document Number: MN-TNG-QA-02		Supplier Quality Manual
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality	Page 38 of 39

		<p>The paragraphs in this section are numbered to correspond with the paragraphs of AS9120™Rev.B.</p> <p><u>Section 1.1</u></p> <ul style="list-style-type: none"> Removed - Suppliers who are not accredited under the AS9120 Standard and request an exception or deviation from any clause of this Manual shall submit a formal request sent to the appropriate NORDAM Buyer to forward to the Corporate Quality Director for review. <p><u>NORMATIVE REFERENCES</u></p> <ul style="list-style-type: none"> Added - ISO 9001 – Quality Management Systems— Requirement; AS5553 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; AS6081 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; AS6171 – Test Methods Standard Electrical, Electronic, and Electromechanical (EEE) Parts; AS6496 – Fraudulent/Counterfeit Electronic Parts; AS6174 – Counterfeit Materiel; DFAR 252.225.7014 – Specialty Metals Deletions and changes in Section 8.5.1 Control of Product and Service Provision Addition of Section 8.5.1.1 Control of Equipment, Tools, and Software Programs Addition of section 10.2 and 10.3 <p><u>In Section 1 & 2</u></p> <ul style="list-style-type: none"> Section 7.1.4 Environment for the Operation of Processes <ul style="list-style-type: none"> NORDAM reserves the right to flow down customer specific lighting requirements. Removed addition of Section 7.1.5.1 c General Changes in 8.1.4 Prevention of Counterfeit Parts Additions in Section 8.5.1 Control of Product and Service Provision Changes in section 8.5.1.1 Control of Equipment, Tools, and Software Programs Additions and deletions in section 8.5.3 Deletions in Section 9.1 Monitoring, Measurement, Analysis, and Evaluation <p><u>In section 1 & 3</u></p> <ul style="list-style-type: none"> Additions in Section 8.3.2 Design and Development Deletions and changes in Section 8.6 Release of Products and Services 	
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		Manual		Document Name:	
		Document Number: MN-TNG-QA-02		Supplier Quality Manual	
Revision: L	Date Revised: 07/16/2024	Date Effective: 08/06/2024	Originator: NORDAM Corporate Supplier Quality		Page 39 of 39

		<p><u>Sections 2 & 3</u></p> <ul style="list-style-type: none"> • Added section 8.1.5 Prevention of Suspected Unapproved Parts <p><u>Sections 1, 2, and 3</u></p> <ul style="list-style-type: none"> • <u>Grammatical, typographical, and format changes</u> • 0.5.7 <ul style="list-style-type: none"> ○ Changed from – All suppliers shall comply with the standard while performing obligations to NORDAM. ○ Removed - picture of Ethics & Compliance on NORDAM.com • Section 1.1 <ul style="list-style-type: none"> ○ Changed from - Notifications shall be provided to the NORDAM Buyer in a written statement within seventy-two (72) hours of any of these changes. Upon receipt of this written notification NORDAM will determine necessary actions. • Section 7.5.3.2 d. <ul style="list-style-type: none"> ○ Added- Disposition of documents shall be carried out per NORDAM Terms and Conditions (T&Cs) found at http://www.nordam.com/suppliers/. • Changes in 8.1.4 Prevention of Counterfeit Parts • Additions in Section 8.4.1 General • Additions in Section 8.4.3 Information for External Providers 	
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