

ASQR 4.6 A220 Suppliers Quality Requirements

Initial Revision, September 2019

Amendment 1, May 2021

REVISION HIGHLIGHTS:

ISSUE: 1 DATE: Sept. 2019

AMD: 1 DATE: May 2021

| # Page | SECTION/ PARAGRAPH REVISED | DESCRIPTION OF CHANGE |
|----------------------------------|---|--|
| | Entire document | Copyright date updated Changed Amd. # and date (Amd. 1, May 2021) Standardized syntax for acronyms; "Definition of acronym (acronym)" Correction of various grammar errors, typos and incomplete references |
| Cover page | Amendment | Changed Amd. # and date |
| i | Rev Highlights | Page added |
| ii – iii – iv | Table of Contents | Table of Contents updated |
| vi | Approval page | Name of Head of Quality changed |
| vii | Administrative Office | Airbus Canada general phone number changed, SQA email address changed |
| viii | Documentation Control and Communications, | Reference to electronic communication to all suppliers removed Reference to Glossary added |
| ix-x | List of Effective Pages | Completely updated |
| x-xi | Index of Revisions | General changes listed |
| 2-3-16-17-20 | Sections 4.1.1.1, 4.1.1.2, 8.6.2, 8.6.7 | Clarification of terms related to contracts vs purchase orders |
| 2-4-5-6-7-9-10-11-12-14-24-25-26 | Sections 4.1, 4.3.1, 4.3.6, 4.4.1, 7.3, 8.2, 8.5.4, 9.2.1, Appendix A | Clarification of terms related to Engineering process specifications |
| 1 | Section 3 | Reference to Glossary and Acronyms changed |
| 9 | Section 4.4.1 | Added Quality Escape, NOE and ADL requirements in Matrix |
| 10 | Sections 5 and 6 | Sections renamed and added as per AS standard |
| | Section 7 | Section renamed to reflect AS standard |
| | Section 7.2 | Reference to QAD 3.8.6.2CS removed (internal document) |
| 11-13 | Section 8.1 | AM references changed in table |
| | Section 8.2 | Reference to generic email and Note 1 removed |
| | Section 8.5.3 | New reference to AS9145 in replacement for obsolete QD 4.6-74CS |
| 14 | Section 8.5.4 | Reference to SQA email removed and reference to contract authority added |
| 15 | Section 8.6.1 | Supplier class K added to Packing Slip requirement |
| 20 | Section 8.6.7 | Clarification of responsibility for drop shipments |
| 20-21-22-23 | Section 8.7.1 | Entire section revised Clarifications on Quality Escape added |
| | Section 8.7.1.1 | New section added to clarify NOE |
| | Section 8.7.1.2 | Disclosure Letter section renumbered (8.7.2.2) Clarifications on ADL requirements added |
| | Section 8.7.4 | Reference to internal document CS_MD-500-003 removed |
| 24 | Section 9.1.1 | Sub-headers removed Suppliers involved with "aircraft interiors", "skins" and "aircraft exteriors" removed and replaced with suppliers involved with "Cabins", "Structures" and "Systems & Propulsion" Specific Quality requirements now listed on A220 Supplier Quality Assurance webpage |
| 24 | Section 9.2.1 | Clarification to sub-tier delegation |
| 28 | Appendix B – Forms | Reference to A220 Supplier Quality Assurance website added Form F4.6-31CS name changed Reference to form BT0271-01 removed (obsolete) |
| 29 to 36 | Appendix C – Glossary and Acronyms | Old Appendix C – Quality Standards deleted Replaced by Appendix C – Glossary and Acronyms, Table 1 and Table 2 |

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Approval Page

This document is approved in accordance with the Airbus Canada Quality Management System.

Approved by:

Date:

Grégorio Sanchez

(dd/mm/yyyy)

Head of Quality

Transport Canada Civil Aviation Manufacturer Approval
number 24-16

Administrative Office

All correspondence related to this document shall be addressed to:

- + Head of Quality Airbus Canada
13100. Boul. Henri-Fabre Mirabel,
Quebec, Canada
J7N 3C6
- (1 450-435-A220 (2220) and add Toll free 1-833-313-A220 (2220)
- 7 1-450-476-7308

To communicate with A220 Supplier Quality Assurance (SQA)
sqa.a220@airbus.com

To access A220 Supplier Quality Requirements documentation
<http://supplier.aero.bombardier.com/A220-SQA>

To access to A220 Program Approved Suppliers List (A220 ASL)
www.Airbus.com

To access A220 Engineering specifications
https://supplier.aero.bombardier.com/A220_isupply/

Any change to this document as a result of this correspondence will be reflected in subsequent revisions.

Documentation Control and Communications

It is the supplier's responsibility to ensure continuous compliance to the latest revision of this document and any of the referenced documents herein. On behalf of Airbus Canada, documents are accessible on the Bombardier website <http://supplier.aero.bombardier.com/A220-SQA>.

Amendments to the document are indicated with a vertical line in the page margin. Only affected pages will be identified by the latest document amendment number, while all other pages will retain the previous assigned document amendment number. Amendments are applicable at the time of their publication, however, compliance by the supplier is required no later than 90 days after the publication.

It is the supplier's responsibility to understand and comply to all clauses, terms and conditions specified within a contract (as defined in Glossary) and with all other applicable requirements agreed between Airbus Canada and the supplier.

Before bidding on, manufacturing, or delivering products and/or parts, it is essential that the supplier fully understands and complies with the requirements of this document and any associated technical documents.

Suppliers must grant full access to Airbus Canada, and to the National Aviation Authorities, such as but not limited to, the Federal Aviation Administration (FAA), Transport Canada Civil Aviation (TCCA), European Aviation Safety agency (EASA), Civil Aviation Authority of China (CAAC), to their facilities and their sub-tier facilities, and all documentation related to the contract.

This ASQR4.6 initial revision fully replaced and superseded with immediate effect Bombardier's *QD4.6-40-Quality Requirements for Suppliers* in respect to all active contracts for the A220 program.

The Airbus Canada Manual (AM) and Data Item Description (DID) documents are applicable to the A220 program, unless otherwise noted in each document. If the AM document has not yet been released, the older Bombardier Manual (BM) still applies and the link will take you to this document. A220 Engineering Specifications may refer to Bombardier Engineering Specifications. In such case, supplier is responsible to ensure its documentation management and to comply with the latest specification revision.

The Airbus Canada Head of Quality is granted full authority by the Certificate Holder to manage the present document.

Certificate addressed herein is:

TCCA Manufacturer Approval number 24-16;

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| Initial | Amd 1 | May 2021 | <ul style="list-style-type: none"> Change HO Quality and generic phone number Clarification of term contract vs purchase order, and terms related to Engineering process specifications. Correction of grammar and typo errors, including acronyms syntax Replaced Appendix C Quality Standards (with reference to A220 Supplier Quality Assurance webpage) by Appendix C Glossary of Terms and Acronyms (Table 1 and Table 2), including harmonization of acronyms syntax throughout document Introduced AS9145 in replacement of obsolete QD4.6-74CS Introduced new requirement (Notice of Escape) |

| Revision | Amendment | Date | Comments |
|----------|-----------|-----------|--|
| Initial | 0 | Sept 2019 | First release of A220 Suppliers Quality Requirements <ul style="list-style-type: none">ASQR 4.6 Supersedes QD4.6-40QD appellation change for ASQRASL located at airbus.comRemove requirement to update company profile via Supplier Quality Assurance PortalRemove 8.7.1.2 Process Escape Modification |

1. SCOPE

Suppliers are required to implement and maintain a Quality Management System (QMS) that supports each element of the applicable International Aerospace Quality Group (IAQG) standards AS/ENJISQ/KSQ9100 , AS/EN/SJAC9120 or International Organization for Standardization (ISO) ISO 9001 standard, as defined by or in the supplier's classification and must also address the Airbus Canada applicable specific requirements provided herein. Supplier's Quality Management System must be at the latest applicable standard revision and be certified by an accredited Certification/Registration Body (CRB).

The Quality Management System, product and parts requirements specified herein are intended to be complementary to all contract requirements, and other requirements which may require compliance by the supplier, including any legal, regulatory or administrative requirements.

Direct suppliers are required to use electronic media, but not limited to the Supplier Network Collaboration (SNC), Net-Inspect and E-source where applicable.

2. REFERENCE

- TCCA CAR 561 Manufacture of Aeronautical Products.
- FAA 14 CFR Part 21 Subpart G Production Certificates, and Subpart K Parts Manufacturer Approval.
- EASA Part 21 Subpart G Production Organization Approval.
- AS/ENJISQ/KSQ9100 – Quality Management Systems – Requirements for Aviation, Space and Defense organizations.
- AS/EN/SJAC9102 – Aerospace First Article Inspection Requirement.
- AS/EN/SJAC9120 –Quality Management Systems – Requirements for Aviation, Space and Defense Distributors.
- ISO 9001 – Quality Management Systems – Requirements.
- ISO 17025 - General requirements for the competence of testing and calibration laboratories.
- Nadcap – Industry-managed approach to conformity assessment.

3. TERMS AND DEFINITIONS

For the list of acronyms and glossary of terms related to this document, refer to Appendix C - Glossary and Acronyms of this document.

4. CONTEXT OF THE ORGANIZATION

4.1 Supplier Approval Status Maintenance

All suppliers entering into contract for the supply of aeronautical products, the testing of, or the performance of controlled processes to such products, as well as the supply of controlled raw materials for the manufacturing of aeronautical products, must first be approved by Airbus Canada as applicable and classified in accordance to section 4.3. This requirement must be applied in accordance to Appendix A.

Qualifications to controlled A220 Process Specifications (A2PS) are street address specific as well as building specific. Such activities cannot be transferred to another street address or to another building within the same address that is not approved for the applicable controlled process specification.

Each approved supplier is subject to periodic Supplier Control Review (SCR) to ensure continued compliance to the applicable Quality and Engineering requirements.

Any certified organization is required to provide detailed certification and assessment results (e.g., audit reports and associated Non Conformance Reports (NCRs) to Airbus Canada upon request. Electronic access to this information via the International Aerospace Quality Group (IAQG) Online Aerospace Supplier Information System (OASIS) database is preferable. When impractical, electronic copies of the requested certification and assessment results can be supplied.

4.1.1 Revising Supplier Approval Status

At any time, Airbus Canada may, at its sole discretion, revise the status of an approved supplier and take any of the following actions:

- Inactivate supplier;
- Apply a surveillance status;
- Apply a probation status.

In making such a decision, any criteria deemed relevant may be considered, including:

- Quality and delivery performance;
- Unsatisfactory response, late response, or failure to respond to Corrective Action Requests (CAR) or Requests for Supplier Action (RSA);
- Suspected unapproved parts activities;
- No direct or indirect business activity for an extended period;
- Change in supplier's manufacturing or processing capability;
- Change in supplier's manufacturing location;
- Unsatisfactory audit results (Nadcap, AS, SCR);
- Safety concerns or issues.

The revision of a supplier approval status as stated above will result in the supplier being removed from the A220 ASL.

4.1.1.1 Surveillance

Being placed under surveillance results in the following consequences:

- Production and deliveries on existing contracts may continue, however, no new bid solicitations can be placed with the supplier;

- The supplier must:
 - Implement a corrective action plan or an improvement plan approved by Airbus Canada;
 - Submit a follow-up status report as defined and agreed with Airbus Canada.
- As required and at the supplier's cost, audit and/or SCR frequency by Airbus Canada organization may increase.

4.1.1.2 Probation

Being placed under probation results in the following consequences:

- Production and deliveries on existing contracts may continue, however, no new bid solicitations can be placed with the supplier;
- At Airbus Canada's discretion:
 - Assign Airbus Canada employee(s) or a third party on behalf of Airbus Canada to manage and oversee the supplier's action plan, at the supplier's site, until such time that Airbus Canada regains confidence in the supplier's Quality Management System, product conformance and process control;
 - Impose Source Inspection on each or on specific deliveries for the duration of the probation at the supplier's cost.
- The supplier must:
 - Implement a corrective action or an improvement plan approved by Airbus Canada;
 - Submit a follow-up status report as defined and agreed with Airbus Canada;
- As required and at the supplier's cost, audit and/or SCR frequency by Airbus Canada organization may increase

4.2 Change to Supplier's Organization

Supplier must notify Airbus Canada, via its contract authority, of any changes in its organization affecting:

- Manufacturing site location (NOTE 1);
- Manufacturing processes (NOTE 2);
- Quality Management System certification such as but not limited to:
 - Nadcap, Aerospace Standard, Regulatory Authorities;
- Facility permits and registration status;
- Approved sub-tier suppliers;
- Any other changes affecting the supplier's scope of approval;
- Enterprise Resource Planning (ERP) or Enterprise system change.

The notification must describe the nature of the change including;

- Justification;

- Scheduled date and point of incorporation;
- Impact on Manufacturing;
- Impact on Quality;
- Impact on Logistics.

NOTE 1: The list of required information and timeline are defined in section 8.2.

NOTE 2: A Class C - Manufacturer wishing to initiate a change to an Airbus Canada Engineering Material Manual/Engineering Materials Control Manual (A2EMM-001) qualified material must notify its contract authority.

4.3 SUPPLIER CLASSIFICATION

4.3.1 Supplier Class A – SUBCONTRACTORS

Definition:

A supplier that manufactures products, tests, or performs controlled processes, in accordance to Airbus Canada engineering specifications and/or drawings and/or A220 Program contract. (NOTE 1)

Quality Management System Requirements:

Supplier's Quality Management System must be AS/ENJISQ/KSQ9100 certified, via an accredited Certification/Registration Body (CRB) for AS/ENJISQ/KSQ9100. Independent laboratories must be ISO 17025 certified.

It is permissible for Process Shops to hold a Nadcap AC7004 Quality Management System certification in lieu of an AS/ENJISQ/KSQ9100 certification.

It is permissible for independent laboratories to hold a Nadcap AC7006 Quality Management System certification in lieu of ISO 17025.

Nadcap accreditation (NOTE 2) via the Performance Review Institute (PRI) is required for the following controlled processes:

- AC 7101 Material Testing Laboratory;
- AC 7102 Heat Treating;
- AC 7108 Chemical Processing;
- AC 7109 Coating;
- AC 7110 Welding;
- AC 7114 Non-Destructive Testing;
- AC 7116 Nonconventional Machining;
- AC 7117 Shot Peening;
- AC 7118 Composites;
- AC 7122 Non Metallic Materials Testing.

NOTE 1: Sub-tier suppliers performing non-controlled processes do not require Airbus Canada approval. However, a supplier using such sub-tier supplier is responsible to ensure full compliance to the A220 process specification requirements.

See the "List of controlled process specifications" requiring approval posted at <http://supplier.aero.bombardier.com/A220-SQA>.

A220 Engineering Specifications may refer to Bombardier Engineering Specifications. In such case supplier is responsible to ensure its documentation management and comply with the latest specification revision.

NOTE 2: For Nadcap accreditation applicability, refer to the document “List of controlled process specifications” posted at <http://supplier.aero.bombardier.com/A220-SQA>.

4.3.2 Supplier Class B – EQUIPMENT SUPPLIERS

Definition:

A supplier who designs, manufactures, assembles and tests aeronautical product using its own engineering specifications and drawings.

Quality Management System Requirements:

Supplier's Quality Management System must be AS/ENJISQ/KSQ9100 certified, via an accredited Certification/Registration Body (CRB) for AS/ENJISQ/KSQ9100.

A Class B – Equipment Supplier is required to comply with Airbus Canada Procurement Control Drawings (PCD) or technical documents as defined in applicable Airbus Canada Manual (AM).

NOTE: This classification also includes suppliers providing software and avionics.

4.3.3 Supplier Class C – MANUFACTURERS

Definition:

A supplier who manufactures the following product in accordance to industry standards and specifications or to A220 specification:

- Catalog Items;
- Raw Materials;
- Process Materials controlled by A2EMM-001:
 - Chemicals and/or consumables.
- Castings;
- Forgings;
- Hardware.

Quality Management System Requirements:

Supplier's Quality Management System must be AS/ENJISQ/KSQ9100 or ISO 9001 certified (NOTE 1), via an accredited Certification/Registration Body (CRB) for AS/ENJISQ/KSQ9100 or ISO 9001 as applicable.

Nadcap accreditation via the Performance Review Institute (PRI) is required for the following (NOTE 2):

- AC7107 Material Testing Laboratory;
- AC7102 Heat Treating;
- AC 7117 Non-Destructive Testing;
- AC 7200 Sealant Manufacturers;
- AC 7202 Value-Added Sealant Distributors.

This classification includes suppliers manufacturing hardware in accordance to their own specifications.

NOTE 1: Class C - Manufacturers only certified to ISO 9001 must implement a process for the prevention of counterfeit or suspect counterfeit part use and their inclusion in product(s) delivered to the customer.

NOTE 2: For Nadcap Accreditation applicability, refer to the document "List of Material Specifications" with additional quality requirements" posted at <http://supplier.aero.bombardier.com/A220-SQA>

4.3.4 Supplier Class D – DISTRIBUTORS

Definition:

A supplier who resells, as is new:

- Raw materials;
- Products;
- Parts.

Quality Management System Requirements:

Supplier's Quality Management System must be AS/EN/SJAC9120 or AS/ENJISQ/KSQ9100 certified, via an accredited Certification/Registration Body (CRB) for AS/ENJISQ/KSQ9100.

It is acceptable for a distributor to cut material to the required length and width, provided material configuration and traceability is maintained. No other material processing is allowed.

Re-packaging of bulk raw material products subject to shelf life is prohibited.

4.3.5 Supplier Class E – MAINTENANCE ORGANIZATION

Definition:

A supplier who repairs, maintains or completes:

- In service aircraft;
- In service aircraft components.

Quality Management System Requirements:

Must be a maintenance/repair station organization approved by local Regulatory Authorities (ref. section 8.6.3.3). The organization's activities are limited to its scope of work listed in the approved certificate.

4.3.6 Supplier Class F – STRUCTURAL SUPPLIER

Definition:

A supplier who designs and/or manufactures structural components or assemblies under the A220 Program design authority, using the applicable engineering specifications, standards and drawings, and is responsible for their manufacture and/or assembly.

Quality Management System Requirements:

Supplier's Quality Management System must be AS/ENJISQ/KSQ9100 certified, via an accredited Certification/Registration Body (CRB) for AS/ENJISQ/KSQ9100.

Nadcap accreditation via the Performance Review Institute (PRI) is required for the following controlled processes:

- AC 7101 Material Testing Laboratory;

- AC 7102 Heat Treating;
- AC 7108 Chemical Processing;
- AC 7109 Coating;
- AC 7110 Welding;
- AC 7114 Non-Destructive Testing;
- AC 7116 Nonconventional Machining;
- AC 7117 Shot Peening;
- AC 7118 Composites;
- AC 7122 Non Metallic Materials Testing.

NOTE: For Nadcap accreditation applicability, refer to the document "List of controlled process specifications" posted at <http://supplier.aero.bombardier.com/A220-SQA>

4.3.7 Supplier Class G – INDIRECT PRODUCT

Definition:

A supplier providing products, parts and/or services intended for Aerospace business but not to be installed on an aircraft. This classification also includes suppliers providing Ground Support Equipment (GSE).

Quality Management System Requirements:

Supplier's Quality Management System must be ISO 9001 certified, via an accredited Certification/Registration Body.

4.3.8 Supplier Class H – COMMERCIAL OFF THE SHELF (COTS)

Definition:

A supplier, who sells, as is, new commercial goods and catalog items (not intended for Aerospace business) to be installed on an aircraft.

A commercial good meets the following COTS definition:

- Is not specifically designed or produced for use as an aeronautical product;
- Is made to a specification or catalogue description and marked under an identification scheme of the maker;
- The failure of which does not adversely affect the continued safe flight, take-off and/or landing of the aircraft.

Quality Management System Requirements:

No specific requirements.

4.3.9 Supplier Class J – LOGISTICS PROVIDER

Definition:

A Logistic provider is either:

1. An Airbus Canada supplier contracted by the component manufacturer, whose activity is ordering, warehousing and shipping, as is, the Airbus Canada ordered product, without recertifying it. (NOTE 1)

2. A supplier that performs a contracted function on behalf of Airbus Canada, controlling the flow of resources (people, products, services, processes, etc.) and/or the point of origin and the point of destination in order to meet the requirements stipulated in the contract. (NOTE 2)

The scope of work for the second type of Class J suppliers may involve, but is not limited to, the integration of:

- Information;
- Transportation;
- Inventory management;
- Warehousing (material storage);
- Material handling;
- Packaging;
- Hazardous materials processing;
- Kitting.

Quality Management System Requirements:

When stipulated in contract, Class J - Logistics Providers under contract with Airbus Canada must meet applicable requirements of *QD4.6-62CS-Requirements for Logistic Providers*.

NOTE 1: No specific quality requirements other than to provide the manufacturer's documentation with the product. Product traceability is to be maintained per the component manufacturer's agreements with its contracted party.

NOTE 2: A Class J - Logistics Provider for which the contracted function involves the supply of aeronautical products must maintain traceability (C of C, material certifications, etc.) of all products and/or parts from the manufacturer to the point of use.

4.3.10 Supplier Class K – BUYER FURNISHED EQUIPMENT (BFE) SUPPLIER

Definition:

A customer of an aircraft who purchases its own products to be installed on its aircraft, and delivers it directly or indirectly to Airbus Canada.

Quality Management System Requirements:

The Quality Management System requirements and product warranty of the parts to be installed rely exclusively under the customer's responsibility.

4.4 QUALITY MANAGEMENT SYSTEM, AS APPLICABLE PER CLASSIFICATION

4.4.1 Applicability Matrix

Requirements by Supplier Classification

| Section | Class | | | | | | | | | | |
|--|-------|-------------------------|---|---|---|---|---|---|---|---|--|
| | A | B | C | D | E | F | G | H | J | K | |
| 7.1 Documentation Records Requirements | X | X | X | X | X | X | X | | X | | |
| 7.2 Supplier Resources Working Within Airbus Canada Facilities | X | X | | | | X | | | | | |
| 7.3 Control of Documented Information | X | X | X | X | X | X | | | X | | |
| 8.1 Configuration Management | | X | | | | X | | | | | |
| 8.2 Control of Transfer of Work | X | X | X | | X | X | | | | | |
| 8.4.1 Sources of Supply | X | X | X | X | | X | | | | | |
| 8.5.1 First Article Inspection Report (FAIR) | X | X | | | | X | | | | | |
| 8.5.2 Source Inspection | X | X | X | | X | X | | | | | |
| 8.5.3 Production Part Approval Process (PPAP) | X | X | X | | | X | | | | | |
| 8.5.4 Validation and Control of Controlled Processes | X | | | | | X | | | | | |
| 8.5.5 Identification and Traceability | X | X | X | X | X | X | | | | | |
| 8.6.1 Documents Required with Shipment | X | X | X | X | X | X | | X | | X | |
| 8.6.2 Certificate of Conformity (C of C) | X | X | X | X | X | X | | | | X | |
| 8.6.3 Authorized Release Certificate | X | X | | X | X | X | | | | | |
| 8.6.4 Packing Slip | X | X | X | X | X | X | | | | X | |
| 8.6.5 Direct Ship Authorization (DSA) | | APPLICABLE UPON REQUEST | | | | | | | | | |
| 8.6.6 Strip Report | | X | | | X | | | | | | |
| 8.6.7 Drop shipment | | APPLICABLE UPON REQUEST | | | | | | | | | |
| 8.7.1 Quality Escape | X | X | X | X | X | X | | | X | | |
| 8.7.1.1 Notification of Escape (NOE) | X | X | X | X | X | X | | | X | | |
| 8.7.1.2 Airbus Canada Disclosure Letter (ADL) | X | X | X | X | X | X | | | X | | |
| 8.7.2 MRB Authority | X | X | | | | X | | | | | |
| 8.7.3 Items Returned to the Supplier for Repair or Rework | X | X | | | X | X | | | | | |
| 8.7.4 Non-Conformances | X | X | X | X | | X | | | X | | |
| 9.1 Inspection | X | X | X | X | X | X | | | | | |
| 9.2.1 Re-delegation of Inspection Authority | X | | X | | | X | | | | | |

5. LEADERSHIP

Requirements from the AS/ENJISQ/KSQ9100, AS/EN/SJAC9120 or ISO 9001 standards, as applicable to the activities being performed.

6. PLANNING

Requirements from the AS/ENJISQ/KSQ9100, AS/EN/SJAC9120 or ISO 9001 standards, as applicable to the activities being performed.

7. SUPPORT: APPLICABILITY MATRIX REQUIREMENT SPECIFICATION

7.1 Documentation Records Requirements

The supplier must maintain quality records including, but not limited to, Quality, Manufacturing and Engineering records/data. The records shall be retained for a period of not less than ten (10) years from completion of purchase order, unless otherwise specified in the contract. The supplier must impose this requirement onto its sub-tier suppliers.

The records/data must be translated and made available upon request in English language. Supplier's native language is accepted for original records.

7.2 Supplier Resources Working Within Airbus Canada Facilities

It is the supplier's responsibility to ensure that personnel appointed to an Airbus Canada facility by (or on behalf of) the supplier to perform work on the supplier's product is competent, trained, and experienced for the work to be performed.

Supplier competence management procedures to grant authorization must be available upon request.

In addition, before any work is to be performed by the supplier's incumbent, the host site will provide relevant training and awareness to applicable internal processes.

7.3 Control of Documented Information

The supplier must ensure that technical revisions of specifications (e.g. A2PS, A2MS, A2EMM-001, AM, ASTM, AS, and any other revision controlled documents used to manufacture aeronautical products) are implemented/incorporated within six (6) months from the date the revised specification is published. When the revised process is not performed within the six (6) month delay, full compliance to the revised process must be met at its first use.

A record of revision reviews shall be maintained which includes date of reference document revision, date of incorporation in supplier's management system, brief summary of actions taken to demonstrate the revision review was completed. No documented revision review is required for non-technical revisions.

8. OPERATION

Suppliers for which an ISO certification is acceptable must implement a process for ensuring its personnel is aware of:

- Its contribution to product or service conformity;
- Its contribution to product safety;
- The importance of ethical behavior.

8.1 Configuration Management

Configuration Management practices are documented in Airbus Canada Manuals (AM). Suppliers must comply with the technical and administrative direction and surveillance to:

- Identification and documentation of configuration of product or article, and established configuration change implementation;
- Control of engineering change processes;
- Historical records of change processing and implementation;
- Verifying processes of compliance with specifications and other related documents.

For Engineering Configuration Management Requirements, refer to the Configuration Management practices available at https://supplier.aero.bombardier.com/A220_isupply/

| Document number | Document Title |
|-------------------|--|
| AM6010.03.03.09 | Configuration Management Requirement for Vendor Approval |
| AM4050.02.02.13 | Data Exchange Procedure |
| AM6010.03.03.17 | Notification of Change (NOC) |
| AM10012.08 series | Suppliers Data Exchange |

8.2 Control of Transfer of Work

Suppliers must advise their contract authority six (6) months in advance of any transfer of operations (e.g. from one organization facility to another, from the organization to a supplier) and allow sufficient time for the review and approval by A220 Program. The supplier will present a detailed transfer plan to the contract authority addressing as a minimum:

- Description of the new location, with general layout and pictures or floor plan;
- A list of parts involved in the transfer;
- Timeline and plan for each step in the transfer including:
 - Production stop date at the original site;
 - Equipment movement;
 - New location set-up;
 - List of Airbus Canada controlled processes to be performed;
 - Re-calibration, re-qualification of equipment and tooling;
 - Work force training and certification;

- Last Article Inspection (old location) plan;
- First Article Inspection Report plan (in new location);
- Risk assessment and mitigation plan.

These activities will be at the supplier's cost. Sufficient necessary stock will be produced to cover the transition period and to avoid any potential impact to the A220 Program.

The supplier's approval status will be re-evaluated, and additional measures may be requested if the change creates an undue burden to the A220 Program. Any additional effort resulting in such re-evaluation will be at the supplier's cost.

8.3 New Product Development

A220 Program may impose additional quality requirements during design and development projects. These requirements will be developed as specific project requirements and published as:

- Quality Requirements Documents (QRD);
- Program directives;
- Certification plans;
- Conformity plans;
- Others, as required;

These quality requirements, once published, will be communicated to the supplier by the contract authority and will be provided in writing or via electronic means.

8.4 CONTROL OF EXTERNALLY PROVIDED PROCESSES, PRODUCTS AND SERVICES

8.4.1 Sources of Supply

Suppliers working to A220 Program contracts and/or to Airbus Canada drawings and/or specifications, must refer to Appendix A – Sources of Supply, to determine which sub-tier sources of supply are acceptable.

8.5 PRODUCTION AND SERVICE PROVISION

8.5.1 First Article Inspection Report (FAIR)

The supplier will prepare a formal FAIR for detail part, sub-assembly, and assembly in accordance with the latest issue and revision of the AS/EN/SJAC9102 process and report requirement standard.

Kits also require a FAIR. A Kit FAIR consists of:

- Actual configuration (kit number);
- A list of all detail parts and/or sub-assembly part numbers;
- A FAIR, in accordance with AS/EN/SJAC9102, for each detail part and/or sub-assembly part number and the required quantity;
- All hardware part numbers including the lot number and the required quantity.

Kits placards FAI should include at a minimum the following critical features:

- Provide the drawing revision level of each detail printed into the kit on the kit parts list.
- Provide C of C or raw materials used in form 2 of AS/EN/SJAC9102.
- Provide the color validation for the process of this printing
- Provide a dimensional scale validation for the process of this printing
- Provide the evidence that each of the characteristics listed on the condition of supply of the kit has been checked
Ex: size of print sheets, quantity for each placard part number.
- Provide the kit nesting printout in PDF format attachment into Net-Inspect
- In addition: It is not required to provide the detail part FAI into Net-Inspect if it was already covered by an Airbus kit approved FAI. The parent kit shall be used to substantiate the first article production acceptance.

FAIRs must be submitted using the electronic on-line FAIR system "Net-Inspect". Unless agreement for a different timeline was made with the relevant quality representative responsible for the FAI acceptance, the FAIR must be submitted or the quality representative be made aware of the FAIR readiness date, ten (10) working days prior to the shipping date. A decision to proceed with the Source Inspection, to issue a special authorization to ship or to provide a desktop customer approval for the FAI, will be made by Quality within two (2) working days upon receipt of notice. No parts are to be shipped by supplier without an authorization to ship request (ATS) approved by Airbus Canada.

It is the supplier's responsibility to correctly plan its production schedule, to avoid impact to the production schedule due to the delay of the acceptance of the shipment via the FAI approval. To obtain access to the tool and training, contact Net-Inspect at: <http://www.net-inspect.com>. Net-Inspect is the only approved vehicle to submit FAIR unless otherwise authorized in writing by the contract authority.

NOTE: The FAIR must include (in the comments box 13, Form 2) the actual weight and the last issue of the part, which can be located in the Parts List of the drawing.

8.5.2 Source Inspection

Airbus Canada retains the right to invoke Source Inspection at the supplier's facility. Airbus Canada may assign a Quality representative at the supplier's facility at any time during the life of the contract. To invoke or revoke Source Inspection of an approved and qualified supplier, the form *F4.6-24 Source Inspection and Surveillance Status Document Invoke/Revoke* will be provided to the supplier. When Source Inspection is required, the supplier must make available facilities, equipment, inspection records, or other assistance requested in the course of verifying product or article conformance.

When Source Inspection is required, the supplier must inform the respective Conformance Management Representative ten (10) working days in advance when a product or article is ready to ship.

A decision to proceed with the Source Inspection or to issue a special authorization to ship will be made by Conformance Manager within two (2) working days upon receipt of notice from the supplier that a product or article is ready to ship.

The acceptance of a product or article does not indicate final acceptance nor does it relieve suppliers of their responsibility for quality.

8.5.3 Production Part Approval Process

When requested, suppliers must comply with Aerospace Standard AS9145 - Requirements for Advanced Product Quality Planning and Production Part Approval Process.

8.5.4 Validation and Control of Controlled Processes

Suppliers must advise their contract authority when a change affecting the qualification status of A220 Program qualified equipment or personnel occurs:

- Qualified equipment removed from or added to the process;
- Qualified equipment relocation;
- Change of key personnel subjected to qualification per the Engineering Requirement Document (A2ERD) or other Engineering Specification.

8.5.5 Identification and Traceability

Each product or article must be individually identified in accordance with the drawings, specifications, contractual requirements, and all applicable requirements.

The product or article identification consists of a technical definition as indicated on the purchase order and the following table:

| Additions, Exceptions and Specifics by Supplier Classification | Applicability |
|--|------------------|
| If exists: Shelf life expiry date along with the required storage conditions | A, B, C, D, F |
| Serial number, Lot number or traceability number | A, B, C, D, E, F |
| If an NCR is associated with MRB acceptance, its number shall be on a tag. | B, E |
| If an NCR is associated with MRB acceptance, its number shall be on the part. | A, F |
| Supplier identification | A, B, F |
| Nomenclature number is not required for raw materials and process materials. | A, C, D, F |
| All roll formed sections must be stenciled with appropriate part number and lot number along the entire length of part. | C, D |
| Hazardous Material information is required on paint and chemical containers or other hazardous materials. (Safety Data Sheet (SDS) or equivalent). | C, D |
| For kits, container must be identified with "kit number" and with a traceability number. | A, B, C, D, F |

8.6 RELEASE OF PRODUCTS AND SERVICES

8.6.1 Documents Required with Shipment

Any pertinent documents related to a purchase order, including other contractual requirements (supplier purchase order to sub-tier, sub-tier C of C, test report and inspection report, etc.) must be kept on file and made available upon request as per section 7.1.

The supplier must provide two (2) copies of the shipping documentation, one (1) inside and one (1) outside the packaging of each shipment.

For serialized components, when specified, use form BT0338 - *Supplier As Built Conformity List and Serialization Data* to capture serialization structure at component delivery per AM3010.03.86.05 (Data Delivery Package).

| Additions, Exceptions and Specifics by Supplier Classification | Applicability |
|---|---------------------|
| i. Supplier's C of C is not required for new or repaired parts when an Authorized Release Certificate (ARC) as per section 8.6.3 is supplied. | A, B, C, D, E, F, K |
| ii. Packing Slip | A, B, C, D, E, F, K |
| iii. New or repeated First Article Inspection Report when required per section 8.5.1 | A, B, F |
| iv. Authorization to Ship form when required. (NOTE 1) | A, B, E, F |
| v. A logbook is required for new engine, Auxiliary Power Unit (APU) or battery. (NOTE 2) | B, E |
| vi. Test report from manufacturer or from an approved independent testing laboratory for raw material and hardware is required as applicable in related manufacturing and/or procuring specification. | C, D |
| vii. Copy of any applicable NCR with disposition (section 8.7.4), (NOTE 3) | A, B, C, F |
| viii. Safety Data Sheet (SDS) is required with each shipment of Hazardous Material | C, D |
| ix. Strip report when required per section 8.6.6 | B, E |
| x. New commercial goods proof of purchase | H |

NOTE 1: The supplier must use form F4.6-20 *Authorization to Ship Request (ATS)* when shipping product/article:

- With Waived Source Inspection;
- With an open VNCR;
- With outstanding work.

The supplier must complete form F4.6-20 *Authorization to Ship Request (ATS)* acknowledgement portion and return it to Airbus Canada with the documents of the applicable product. Supplier must carry out instructions as stipulated on returned form from Airbus Canada. This form is not applicable for suppliers under qualification.

NOTE 2: Any inspected, tested, repaired, rebuilt, altered or modified engine, APU, or battery must be returned with the original logbook with (including) but not limited to the following:

- Entry of all work carried out;
- Changes to life-limited parts;
- Changes to serialized parts;
- Record of Service Bulletins compliance and/or incorporation;
- Record of Airworthiness Directives incorporated;
- Entry for contract specific requirements;
- Entry for Applicable Regulatory requirements;
- Entry for return to service.

NOTE 3: Suppliers using the Supplier Portal for the non-conformances do not need to provide hardcopy of the NCRs.

8.6.1.1 Specific Documents for Major Components and Structural Suppliers

Structural suppliers must provide specific documentation with shipment as defined in the following documents:

- QD4.6-61CS *As Built Configuration List (ABCL) Database User Guide*

- QD4.6-60CS *Requirements for Development Programs Major Suppliers*, also include when specified, documents related to
 - AM3010.03.86.01 Supplier Quality Product Plan (QPP) Requirements
 - AM3010.03.86.02 Process Capability Proofing Report
 - AM3010.03.86.03 Key Characteristics, Critical Interface Points & Process Capability Report
 - AM3010.03.86.04 Failure Modes and Effects Analysis (FMEA)
 - AM3010.03.86.05 Delivery Data Package
 - AM6040.02.03.05 MRB Delegation of Suppliers

8.6.1.2 Specific Documents for Aircraft Interior Suppliers

Aircraft interior components suppliers must provide specific documentation with shipment as defined in QD4.6-66CS *Delivery Documentation Requirements Applicable to Aircraft Interior Components*.

8.6.2 Certificate of Conformance (C of C)

The Supplier must provide a C of C stating the products and/or parts conform to applicable drawings and/or specifications as required by the contractual requirements.

The C of C must include additional required configuration identification, i.e. Part Number, Dash Number, and Modification (MOD) status to which the delivered product and/or part was manufactured.

Authorized Quality personnel must sign the C of C (Quality stamp and initials are also acceptable). Electronic signature is acceptable providing the supplier has documented procedures to control the acceptance authority media.

A supplier C of C will be provided with Loadable Software Aircraft Parts (LSAP) and software provided on a compact disk (CD) or other physical device. LSAP software is either uploaded directly to the Airbus Canada eVault or on an aircraft component. No physical part is received. For LSAP uploaded to the eVault, the C of C needs to describe the contents of the LSAP "Crate" zip file, e.g. software part number(s) contained in the zip file and subordinate file folders.

All items listed below are mandatory items to be mentioned on the C of C:

- a) Supplier's name;
- b) Supplier's address (address shown in the applicable source approval authority document, such as the A220 ASL, A2EMM-001, Qualified Products List (QPL), Drawing, Specification, etc.);
- c) Purchase order number and revision;
- d) Airbus Canada engineering or supplier's part number as per purchase order requirements;
- e) Quantity delivered by traceability number (must be exactly as identified on the part);
- f) Technical definition as indicated on the purchase order;
- g) Statement specifying, where applicable, that the products and/or parts meet the Code of Federal Regulations (CFR) flammability requirements of CFR 25.853(a), CFR 25.853(c) or CFR 25.856. (if applicable).

Items required if exist and/or required in purchase order:

- h) Purchase Order item number;
- i) Shelf-life expiry date (NOTE);
- j) NCR number raised by supplier;
- k) Serial number.

| Additions, Exceptions and Specifics by Supplier Classification | Applicability |
|---|---------------------|
| i. Unit of measure | B, C, D |
| ii. Manufacturer's name and address | D |
| iii. For kits, the C of C must list all part numbers, their respective quantity and part serial numbers where required. | A, B, C, D, E, F, K |
| iv. Manufacturer's lot or batch number is not required for catalog items. | C, D |

NOTE: For products with a shelf life, unless specified otherwise on the purchase order, delivered to:

- Distribution Center, the 25% rule (75% shelf life remain available) is applicable.
- Production site the 33% rule (66% shelf life remain available) is applicable
- Suppliers must use F4-6.20 *Authorization to Ship Request (ATS)* form when required.

8.6.3 Authorized Release Certificate

When an Authorized Release Certificate is provided, a C of C is not required per item “i” of the table in section 8.6.1.

The issuance of an Authorized Release Certificate enables the end user to determine the product's and part's airworthiness approval.

8.6.3.1 New Products and Parts

When a supplier is a Production Approval Holder (PAH) or equivalent approval holder in compliance with current local Civil Aviation Authority (CAA) regulations, the supplier will provide an Authorized Release Certificate. The PAH is responsible to make sure each product and part conforms to its approved design and is in a condition for safe operation.

8.6.3.2 Inspected, Tested, Overhauled, Repaired, Rebuilt, Altered or Modified Products and Parts including Rotables

The supplier must provide an original Authorized Release Certificate at all times.

- Logbooks must be provided per section 8.6.1.
- A strip report must be provided for APU, batteries and all other used products and parts, excluding standard parts, raw material and commercial parts per section 8.6.6.

8.6.3.3 Aftermarket Support

A supplier's Repair and Maintenance entity must hold a regulatory approval and certificate, and where required, CAA approval of individual parts, in compliance with current local CAA regulations for the type and complexity of the work performed. The supplier must provide a copy of its regulatory approval certificates and approval limitation records or equivalent documents to Airbus Canada.

In addition, the supplier must be the holder of, and obtain as necessary, an equivalent regulatory approval issued by a foreign CAA, also known as 'dual release', in current and emerging major markets as they evolve for support of aircraft in the country of registry. Local and foreign CAA approvals are requisites in support of Airbus Canada worldwide customer repairs and maintenance.

An aeronautical part, including a rotatable part, subjected to maintenance and repair work provided to Airbus Canada or one of its representatives must be:

- Free of damage while remaining within its design limits (NOTE 1 & 2);
- Not traceable to or removed from an aircraft involved or suspected of being involved in an accident or incident.

All maintenance and repair work must be performed by an approved Class E – Maintenance Organization on the A220 ASL and be currently approved by a local civil aviation regulatory authority for the type of work executed.

NOTE 1: Repairs and maintenance are to be performed in accordance with Design Data approved or accepted by the CAA for which the component is being released to service.

NOTE 2: Ambiguous and/or missing repair instructions as well as out of scope repairs from Coordinate Measuring Machine (CMM) must be addressed with the related product Original Equipment Manufacturer (OEM). Evidence of addressed issues are to be kept on file by the Repair/Maintenance Organization.

8.6.4 Packing Slip

The supplier must provide two (2) copies of the packing slip, one (1) inside and one (1) outside the packaging of each shipment. All items, which are listed below, are considered mandatory items. When a portion of the items is absent from the Packing Slip, this will not be considered a non-conformance as long as those items are recorded on additional documentation supplied with the shipment:

- a) "Ship from" address (Supplier's name and address);
- b) "Ship to" address;
- c) Purchase order number;
- d) Part number shown on the purchase order;
- e) Shipment quantity;
- f) The Airbus Canada unit of measure;
- g) All serial numbers or quantity delivered (unit of measure per purchase order) by traceability number.

And, if it exists and/or is required by the purchase order:

- h) Purchase order line item number;
- i) Number of boxes for the purchase order line item;
- j) Supplier Top Drawing Number;
- k) Weight;
- l) Waybill number;
- m) Carrier;
- n) Advance shipping notice.

NOTE: No Packing Slip is required for Loadable Software Aircraft Parts (LSAP), as no physical part is received.

8.6.5 Direct Ship Authorization (DSA) and Direct Delivery Authorization (DDA)

When the need arises, Airbus Canada will supply DSA or limited DDA authorization to the supplier.

A DSA delegates inspection of the part to the supplier, lists the conditions the supplier must meet, and provides Airbus Canada Statement of Conformity declaration.

DDA is a written authorization granted in accordance with European Aviation Safety Agency (EASA) regulations. The Production Organizations Approval supplier will make sure each product and part conform to its approved design and is in a condition for safe operation.

The supplier must maintain records and a proof of certification must accompany the delivered product and/or part:

- A proof of certification for a product and a part under the authority of DSA constitutes a C of C plus a copy of the DSA letter.
- A proof of certification for a product and a part under the authority of DDA constitutes an EASA Authorized Release Certificate (ARC).

NOTE: In both cases, the DSA or DDA authority must be indicated on the certificates.

8.6.5.1 Additional Requirements for Spares Delivery

When requested by Airbus Canada or when acting on a Direct Delivery Authorization (DDA), the supplier holding appropriate regulatory approval must provide an Authorized Release Certificate in accordance with domestic or foreign regulation requirements

In the case where the supplier does not hold the appropriate regulatory approval, the supplier must provide, attached with the C of C, a copy of the drawing and the Conditions of Supply (COS) applicable to the respective parts, to allow Airbus Canada to verify the conformity of the products/parts in support to airworthiness certification activity.

8.6.6 Strip Report

Inspected, Tested, Overhauled, Repaired, No Fault Found, Adjusted, or Reworked products and parts must be returned to Airbus Canada with a strip report, including the following items, and compliant with current local Civil Aviation Authority (CAA) regulations, when required:

- a) A summary of work performed, including minor adjustment;
- b) A summary of the repairs;
- c) A list of replaced parts;
- d) Alteration performed;
- e) Tests performed;
- f) Approved documentation used (including maintenance manuals, service bulletins, approved drawings, etc.).

Reworked product is a product or part still under the control of Airbus Canada manufacturing. Maintenance and Repair rules do not apply.

Failure Analysis Report (FAR) – Further to strip reports and upon request either by purchase order or Request for Supplier Action (RSA), a FAR is to be provided to the applicable Airbus Canada representative thirty (30) days after receipt of the returned product(s). The FAR must address the following:

- a) Description of failure / event;

- b) Summary of analysis / activities to determine root cause;
- c) Corrective action taken / to be taken to eliminate risk of recurrences;
- d) Containment plan for product(s) or article(s) that remain at risk of failure;
- e) Summary of analysis determining potential risk with similar product lines;
- f) List of in service actions, if applicable.

NOTE: Per section 7.1, strip report quality records must be available upon request. They are mandatory for approved Class E – Maintenance Organization.

8.6.7 Drop Shipment

When a change to the shipping destination shown on the contract is required, the sender and the recipient must use form F4.6-22 *Drop Shipment Advice and Receipt Acknowledgement* or the Advance Shipping Notice (ASN) electronic document where deployed.

For all drop shipment activities, Airbus Canada maintains responsibility for involved supplier approvals and traceability until reception at the receiving location.

8.7 CONTROL OF NONCONFORMING OUTPUTS

8.7.1 Quality Escape (detected post-release)

The Quality Escape is to be understood as any product(s) released by a supplier or sub-tier supplier and that has been subsequently identified to be or suspected to be nonconforming to an Airbus Canada product requirement that was applicable when the product was released and that have an impact on product delivered to Airbus Canada.

The direct supplier to Airbus Canada, including distributors (NOTE 1) must immediately notify in writing Airbus Canada, quality escape(s) from their own facilities and their respective sub-tier suppliers (NOTE 2) by sharing the:

- Form F4.6-31CS - *Airbus Canada Quality Escape Declaration*, section I – Document identification and section II - Notification of Escape (NOE) completed to its Airbus Procurement Operations Focal Point and to A220_product_integrity@abc.airbus.
 - The e-mail header/subject must mention Notification of Escape (NOE).

Following Notification of Escape analysis, if an Airbus Canada Disclosure Letter is requested by Airbus Canada, the supplier shall provide to Airbus Canada the:

- Form F4.6-31CS - *Airbus Canada Quality Escape Declaration*, with section III – Airbus Canada Disclosure Letter section completed to its Airbus Procurement Operations Focal Point and to A220_product_integrity@abc.airbus.
 - The e-mail header/subject must mention Airbus Canada Disclosure Letter (ADL).

Upon closure of the non-conformity, the supplier is to provide a closing statement with the status of the non-conformance parts, as well as the status, if required, of the long-term corrective action.

NOTE 1: Distributors are responsible to communicate their supplier's notification to Airbus Canada.

NOTE 2: The receiving supplier of a drop shipped component subjected to a Disclosure Letter from the component manufacturer will be asked to provide the related component(s) traceability details. The provided information will serve Airbus Canada in retrieving the nonconforming product(s) within its facilities.

8.7.1.1 Notification of Escape (NOE)

The Notification of Escape section must include as a minimum:

1. Affected aircraft programs, affected part number(s) and part name(s), ATA affected, preliminary estimation of delivered quantity
2. A clear description of the non-conformity
3. Preliminary proposed disposition of non-conformity

8.7.1.2 Airbus Canada Disclosure Letter (ADL)

The Airbus Canada Disclosure Letter section must include as a minimum:

- a) Confirmed affected aircraft programs, part number(s) along with the traceability number (serial number, lot number, batch number, heat lot, manufacturing date, test reports, etc.);
- b) Delivered quantity, reference PO number and origin of PO, shipping date and shipping address for each suspect serial number, lot number, manufacturing date, etc.;
- c) Short-term corrective action (containment plan), including replacement parts availability (schedules), recovery plan and effectivity (i.e.: serial number, batch/lot number, manufacture date);
- d) Inspection procedure, test data sheets along with acceptance criteria, as required;
- e) Requirements for components/parts delivered to operators/client/repair stations, etc.;
- f) Potential impact on aircraft safety, if known;
- g) Statistical safety risk analysis (applicable to Line Replaceable Unit (LRUs), major components and structures that are proprietary vendor design parts/components);
- h) Root cause analysis (provide supporting data analysis);
- i) Corrective action implementation (effectivity serial number, lot number, data code, etc.);
- j) Long-term corrective action and preventive action must include details and schedules (provide evidence);
- k) Vendor Service Bulletin (where applicable);
- l) Reworked or repaired parts under disclosure letter and returned to Airbus Canada facilities or sent directly to Operators must have unique alphanumeric identifier (agreed upon with supplier and Airbus Canada). Marking shall be permanent and resistant to fuel and hydraulic fluid. Identifier and marking must be agreed to by the supplier and Airbus Canada.

8.7.2 Material Review Board (MRB) Authority

No supplier is authorized to disposition major non-conformances. All major non-conformances must be submitted to Airbus Canada using the non-conformance tool in the Supplier Portal as defined in section 8.7.4.

Class A suppliers with quality and engineering capability to disposition minor non-conformances and who have access to the applicable A220 program design engineering data, may submit an MRB plan in order to obtain MRB delegation authority.

Class B suppliers are granted MRB authority for minor non-conformances, without further requirements. At any time and at the sole discretion of Airbus Canada, a supplier without Regulatory Design Approval may be required to submit an MRB plan for review and approval in order to maintain MRB delegation authority.

Class F suppliers must submit an MRB plan in order to obtain MRB authority.

Requirements for obtaining MRB authority are defined in QD4.6-60CS - *Requirements for development Programs Major Suppliers* & AM6040.02.03.05.

All suppliers with MRB authority (including Class B suppliers) must document the dispositions in accordance with their procedures.

Suppliers without MRB authority must submit all NCRs for disposition as defined in section 8.7.4. Suppliers are encouraged to propose a disposition when submitting an NCR.

Supplier delegation of MRB authority to sub-tier suppliers is not authorized without obtaining prior approval from the Airbus Canada Supplier Quality Assurance and Liaison Engineering groups.

8.7.3 Items Returned to the Supplier for Repair or Rework

Items returned for repair or rework (refer to section 8.6.6) must be returned to new condition and all applicable requirements including a strip report as required must be provided.

Items determined to be No Fault Found (NFF), where supplier is not able to validate rejection, require written authorization through the contract authority prior to returning the part.

Multiple NFFs (three (3) or more) or Dead On Arrival (DOA) (two (2) or more) on the same unit will be discarded for permanent non-acceptance at supplier's cost. The supplier is expected to initiate a continuous improvement project when experiencing multiple NFFs or DOAs on the same part number or family of parts.

8.7.3.1 Items Reworked by the Supplier within the Airbus Canada Facility

Rejected item(s) by Airbus Canada Quality Organization that are reworked by the supplier's representative within Airbus Canada facilities, remain under the applicable Airbus Canada Logistics Organization control.

For rejections requiring the supplier's disposition for the rework, the disposition must be provided in the NCR via the Supplier Portal.

When the rework is successfully completed, the supplier's representative will perform his buyoff. The supplier's representative buyoff will constitute the conformity statement for the rework. As a minimum, the supplier's representative buyoff text must include a statement that the rework was completed per engineering disposition.

Supplier to conform to section 7.2.

8.7.4 Non-Conformances

Direct suppliers must register to the Supplier Portal and assign quality personnel to use the non-conformance management functionality. Training on how to use the tool for submitting non-conformances is provided through the Supplier Portal help.

Suppliers must create their NCR via the Supplier Portal or HMS (NOTE 1). Once completed by the supplier, the NCR will be submitted into the electronic Non-Conformance Management System (NCMS). From there, NCR disposition will be returned to the supplier via the Supplier Portal. At any time in the NCR process the supplier may be requested to:

- Provide more information on an NCR (NOTE 2);
- Propose a disposition on an NCR;
- Modify a disposition that the supplier had previously proposed on an NCR;
- Approve or reject a disposition on an NCR;
- Carry on an NCR disposition (this activity is referred to in the Supplier Portal as "Buyoff").

Shipping is not authorized until the NCR disposition has been received and performed or is granted by Airbus Canada via completed form F4.6-20 *Authorization to Ship Request (ATS)* in conjunction, if applicable, with Airbus Canada internal "Outstanding Work Directives (Process & Requirements)".

Form F4.6-20 *Authorization to Ship Request (ATS)* for Open NCR or incomplete product or article must be submitted electronically through the Supplier Portal. If applicable, supplier must carry out instructions as stipulated on returned form to Airbus Canada.

NCRs may result in a Request for Supplier Action (RSA) on corrective actions. These requests for a supplier using the supplier portal will be transmitted using the Supplier Portal.

For suppliers not yet using the Supplier Portal:

- The electronic NCR form F8960-1CS *Non-Conformance Report* must be transmitted via email to the contract authority. The NCR disposition will be emailed back to the supplier. The completed NCR must be included as part of the delivery documentation (refer to section 8.6.1). For corrective actions, paper RSA form F4.6-21 *Request for Supplier Action* will be used as described in the forms section of this document. For more information on the RSA form, refer to Appendix B.

NOTE 1: HMS applicable for supplier approved inspector Category 8B (as defined in section 9.3).

NOTE 2: NCR identified as Customer Support Notification (CSN) must be transmitted using the Supplier Portal or HMS.

9. PERFORMANCE EVALUATION

Performance Evaluation requirements from the AS/ENJISQ/KSQ9100, AS/EN/SJAC9120 or ISO 9001 standards, as applicable to the activities being performed, as well as those provided herein apply to all approved suppliers.

9.1 Inspection

The supplier is responsible for inspection to make sure that conformance to requirements is met when delivering products or parts.

Airbus Canada reserves the right to inspect products, parts and/or records at any time and place to verify conformance.

9.1.1 Quality Standard (QS)

A Quality Standard defines the quality characteristics of a finished product that do not affect form, fit or function of a product. These characteristics must be complied with in order to consistently meet or exceed customer expectations.

The QS may also define the methods and facilities needed to evaluate these quality characteristics, the type of records required, and establish the methods needed to control and maintain product quality until delivery.

Suppliers involved in the manufacturing of:

- Cabins;
- Structures;
- Systems and Propulsion;

must ensure to meet the specific quality requirements defined in these documents, as applicable for its product(s).

Refer to A220 Supplier Quality Assurance webpage: <https://supplier.aero.bombardier.com/A220-SQA/> for listing of A220 Quality Standards.

9.2 Major Inspection

Inspection of characteristics that cannot be verified except by destructive test of each article or extensive disassembly. Airbus Canada recognizes critical processes, defined by engineering specifications (A2PS), as processes requiring major inspection delegation.

9.2.1 Re-Delegation of Inspection Authority

Delegation to sub-tier suppliers is not authorized for major inspections. Only Airbus Canada approved suppliers to the relevant critical process specifications, as listed on the A220 ASL, are authorized for major inspections.

The supplier is solely responsible for conformance to requirements, including all activities of its sub-tier suppliers.

9.3 Authorized Category 8 Inspector

When requested by the Airbus Canada organization to have a Category 8 Inspector within a supplier's manufacturing environment or a supplier dedicated distribution environment, the supplier must follow the applicable document below:

- ASQR4.6-9 *Authorized Category 8 Inspector, Supplier Personnel Approval & Responsibilities.*

10. IMPROVEMENT

Improvement requirements from the AS/ENJISQ/KSQ9100, AS/EN/SJAC9120 or ISO 9001 standards, as applicable to the activities being performed, as well as those provided herein, apply to all approved suppliers. Airbus Canada reserves the right to utilize Airbus personnel and processes to work, support and perform activities as, but not limited to:

- Manage on time and on quality deliveries;
- Manage industrial audit;
- Analyze supplier performance picture;
- Support procurement strategy by performing strategic suppliers' development;
- Implement/support Procurement strategy defined by Multi-Functional Team (MFT) (incl. supplier development);
- Contribution to feedback on Sub-Commodity strategy recommendation;
- Monitor, report and ensure supplier performances improvement (deliveries/quality);
- Manage supply chain risks by performing supplier capacity or capability assessments;
- Raise risks, actions follow-up, reporting and escalation in case of deviation to industrial target;
- Secure deliveries by performing supplier recoveries when needed.

APPENDIX A – SOURCES OF SUPPLY

1st column contains the type of Article or Service to be procured from the sub-tier.

2nd column contains acceptable sources of supply.

3rd column contains the supplier class to whom the requirements are applicable

| Article / Processes | Approved Sources Of Supply | Applicability |
|--|--|----------------|
| <p>A220 Controlled Process Specifications</p> <p>https://supplier.aero.bombardier.com/A220_isupply/</p> | <p>A220 controlled processes must be performed only by suppliers listed in the A220 Program Approved Suppliers Listing (A220 ASL) on the Internet at www.Airbus.com > Suppliers > Procurement data quality > A220 Program Approved Suppliers List</p> | <p>A, F</p> |
| <p>Other A220 Process Specifications</p> | <p>Non-controlled processes do not require specific approval. Supplier Sourcing may select any sub-tier supplier. The selected supplier must comply with all the applicable requirements from the non-controlled A220 process specification.</p> | <p>A, F</p> |
| <p>Hardware and Catalog Items</p> | <p>Hardware and catalog items must be purchased only from manufacturers listed on the A220 ASL.</p> <p>Supplier's distributors, if any, do not require approval, provided the distributor purchased from an approved manufacturer.</p> <p>When QPL qualification is required, hardware and catalogue items must only be purchased from a QPL manufacturer.</p> <p>When specified by the QPL, an authorized distributor must be used.</p> | <p>A, D, F</p> |

| Article / Processes | Approved Sources Of Supply | Applicability |
|---|--|---------------|
| Raw Materials | <p>Raw materials must be purchased only from manufacturers listed on the A220 ASL and on the A2EMM-001.</p> <p>Process materials controlled by A2EMM-001 other than manufacturer code 1198 or 2000 must be purchased only from manufacturers listed on both the A2EMM-001 and the A220 ASL.</p> <p>It is the material user's responsibility to ensure that the following A2EMM-001 material requirements are met:</p> <ul style="list-style-type: none"> • Purchased from approved manufacturer with applicable purchase conditions; • Monitoring tests at reception are performed at the defined frequency by a laboratory approved to the relevant field(s) of A2ERD GEN-018; However, trained and certified Quality personnel may perform visual, dimensional and functional tests (e.g. visual inspection, condition in container, dry time, appearance, color, viscosity, thickness, distortion test, etc.); • Shelf Life usage and storage conditions. <p>Manufacturers of A2PS Miscellaneous Materials not controlled by A2EMM-001 do not need to appear on the A220 ASL.</p> <p>Supplier's distributors, if any, do not require approval, provided the distributor purchased from an approved manufacturer.</p> | A, D, F |
| Source Control Drawing or 'B' Standards | Procurement & Source Control Drawing as well as 'B-Standard' parts must be purchased only from suppliers listed in the Engineering data (AM, DSC or B standard) and on the A220 ASL. | A, D, F |
| Specification Control Drawing | Specification Control Drawing parts must be purchased only from equipment suppliers listed on the A220 ASL. | A, F |

APPENDIX B – FORMS

List of forms referred to in this document are available at <http://supplier.aero.bombardier.com/A220-SQA>

| | |
|-----------|--|
| F4.6-20 | Authorization to Ship Request (ATS) (NOTE 1) |
| F4.6-21 | Request for Supplier Action |
| F4.6-22 | Drop Shipment Advice and Receipt Acknowledgement (NOTE 2) |
| F4.6-24 | Source Inspection and Surveillance Status Document Invoke/Revoke |
| F4.6-31CS | Airbus Canada Quality Escape Declaration |
| F8960 | Non-Conformance Report (NCR) Form |
| BT0338 | Supplier As-Built Conformity List and Serialization Data |

NOTE 1: A supplier who ships products to Airbus Canada with a waived FAI, an Open NCR or Outstanding Work will no longer use this form if the supplier has access to the electronic NCR system and/or Net-Inspect system.

NOTE 2: The F 4.6-22 form is substituted by the electronic Drop Shipment document where the ASN tool is deployed.

APPENDIX C – GLOSSARY AND ACRONYMS

Table 1 – Glossary of Terms

| GLOSSARY OF TERMS ASQR 4.6 - A220 Suppliers Quality Requirements | |
|--|---|
| TERM | DEFINITION |
| AERONAUTICAL PRODUCT | An aircraft, aircraft engine or propeller, or a subassembly, appliance, material, part, or component to be installed thereon. Reference: TCCA |
| AIRCRAFT PRODUCTS & SERVICES | Products and services destined to be an inherent or integral part of an aircraft's configuration, or component thereof, at the time of delivery or completion. An experimental installation that forms part of the aircraft's configuration and, if and when delivered, requires approval. |
| ASSESSMENT | An evaluation of the supplier's documentation and history data. |
| AUDIT | An evaluation to determine the supplier's compliance to a standard or a specification. |
| CATALOGUE ITEM | Items are defined as hardware purchased according to the manufacturer's part number. |
| CONDITION OF SUPPLY (COS) OR ETAT DE LIVRAISON (EDL) | The condition of supply is a manufacturing-generated addendum to the Engineering drawing. The EDL describes the difference between the "as designed" product and the "as built" product. |
| CONTRACT | A Contract represents a written agreement between Airbus Canada and a supplier in the form of either a Contract and/or a Purchase Order. |
| CONTROLLED PROCESS SPECIFICATIONS | In addition to special processes and critical processes, controlled process specifications include all processes identified by Airbus Canada as requiring certification, qualification and/or approval. |
| CORRECTIVE ACTION | Action taken to eliminate the causes of an existing non-conformance, defect or other situation in order to prevent recurrence. |
| DIRECT DELIVERY AUTHORIZATION | The Direct Delivery Authorization is an authorization, utilized in the In-Service environment, from Airbus Canada to allow the European suppliers, including SOCD/PCD and OEM providers, for all products produced for the aircraft type, to ship products directly to the Airbus Canada customers. |
| DIRECT SHIP AUTHORIZATION | The Direct Ship Authorization is an authorization, utilized in the In-Service environment, from Airbus Canada to allow the supplier that does not have PMA or TSO approval to ship specifically defined products directly to the customer named in the Airbus Canada Purchase Order issued to the supplier. |

GLOSSARY OF TERMS

ASQR 4.6 - A220 Suppliers Quality Requirements

| TERM | DEFINITION |
|----------------------------|---|
| DRAWINGS | Drawings are the means to an end, not an end in themselves. Their purpose is to concisely and unambiguously cover the Engineering design information required to produce designed products. Note: Drawings define the completed condition of a part or assembly. They do not specify how an item shall be manufactured. |
| DROP SHIPMENT | The Drop Shipment is an authorization, utilized in the Manufacturing environment, from Airbus Canada to allow the supplier to ship specifically described products when there is a deviation to the predetermined shipping destination shown on the Airbus Canada Purchase order. |
| HARDWARE | Products that are called up on the Airbus Canada drawings, specifications or standards, such as but not limited to; MS, NAS, AN, S and B, minor catalog items, that by design become an incorporated part of the Airbus Canada design structure. They are also known as standard parts and are controlled by specifications. These products do not require FAIR if not specifically required per applicable specification or drawing. |
| INACTIVATION / INACTIVATED | Refers to a supplier no longer approved by Airbus Canada. It is prohibited to procure from this supplier unless a complete re-approval is performed by Supplier Quality Assurance. Inactivation shall be communicated within Airbus Canada only. |
| LABORATORY | A supplier that performs testing of various materials, processes, finished parts and/or provides calibration services. |
| LIMITATION | Limiting condition imposed on a supplier to prevent the execution or distribution of an element or aspect of work, which could be considered as substandard and not satisfy stated requirements. |
| LIFE-LIMITED | A life-limited equipment is a product that shall not be older than X months on receipt, Y months at installation and Z months at delivery. It includes oxygen bottles, explosive cartridges, life vests, batteries, etc. |
| MAJOR NON-CONFORMANCE | A non-conformance that cannot be completely eliminated by rework or reduced to a Minor non-conformance by repair, and that adversely affects performance, strength, durability and damage tolerance, reliability, interchangeability, effective use, operational weight, appearance (where a factor), health or safety, and interface with other components. |
| MAJOR SUPPLIER | A Major Supplier shall apply to a company or its successors that have entered into a contractual agreement with Airbus Canada to design and/or manufacture components. |

GLOSSARY OF TERMS

ASQR 4.6 - A220 Suppliers Quality Requirements

| TERM | DEFINITION |
|-----------------------------------|--|
| MANUFACTURING LOCATION | A supplier's manufacturing facility located at a specific address as approved by Supplier Quality Assurance and listed on Airbus Canada's Approved Suppliers Listing (A220 ASL). |
| MATERIAL REVIEW BOARD (MRB) | A board consisting of representatives of the Engineering and Quality departments that meets to dispose of non-conforming products. |
| MINOR NON-CONFORMANCE | A non-conformance other than described for major non-conformance. |
| NOMENCLATURE NUMBER | Engineering product structure, which is supported by engineering drawing and identified on the contractual document. |
| NADCAP | A global cooperative accreditation program for aerospace engineering, defense and related industries. |
| NONCONFORMING PRODUCT | Product with at least one characteristic that differs from the applicable requirements including the Contract requirements, specifications and/or drawings. |
| NOTIFICATION OF CHANGE (NOC) | The Notification of Change procedure is a process where a supplier notifies Airbus Canada of changes that are being requested by the supplier or Sub-tier supplier. |
| OPEN NCR | An Open NCR is defined as an NCR with: a) No disposition or, b) Disposition instructions not carried out or, c) No Airbus Canada quality signature or, d) Disposition requiring a verification at next assembly. |
| OPERATOR | Generally known as a party that purchases an Airbus Canada product, ex. an airline company. |
| PARTS MANUFACTURER APPROVAL | (PMA) An approval issued by the FAA, allowing the supplier/original equipment manufacturer (OEM) to sell and ship new equipment directly to the aircraft operator. |
| PROCESS MATERIAL | Materials that are used in the processing of all products associated with a structure but that do not become an incorporated part of the structure (e.g. chemicals used for processing solutions make up and adjustment). Such materials are usually controlled by specifications. |
| PROCUREMENT CONTROL DRAWING (PCD) | A procurement control drawing, as defined in ASME Y14.24M, provides criteria for performance acceptance and identification of purchased items by disclosing the engineering design characteristics required for qualification, control of interfaces, and to ensure repeatability of performance. PCD include but are not limited to: AID, SOCD. |

GLOSSARY OF TERMS

ASQR 4.6 - A220 Suppliers Quality Requirements

| TERM | DEFINITION |
|-------------------------------|---|
| PRODUCT | General term used to define approved supplied goods and/or services to Airbus Canada. |
| QUALITY DOCUMENT (QD) | A series of Airbus Canada documents, relating to additional Quality requirements applicable to suppliers. |
| QUALITY STANDARD (QS) | A series of Airbus Canada documents, complementary to approved Engineering Standards, intended to harmonize interpretation during Quality Control activities. |
| RAW MATERIAL | Products that are called for directly on the Airbus Canada Engineering drawings or in associated material process specifications, and that by design become an incorporated part of the Airbus Canada design structure (e.g. aluminum sheet or plate, paint, sealant, castings, forgings, etc.). Such materials are controlled by specifications. |
| REGULATORY AUTHORITY | A National Airworthiness Authority (NAA). For example: in Canada - Transport Canada Civil Aviation (TCCA); U.S.A. - Federal Aviation Administration (FAA); Europe - Joint Airworthiness Authority (JAA) and European Aviation Safety Agency (EASA). |
| REPAIR AND MAINTENANCE | A supplier that performs maintenance or repair of equipment in accordance with manufacturer or customer data under specific regulatory certificate approval. This supplier may be an Original Equipment Manufacturer (OEM). |
| REPAIRED PRODUCT | A non-conforming product that has been subjected to a process designed to reduce but not completely eliminate the non-conformance. |
| REWORKED PRODUCT | A non-conforming product that has been subjected to a process designed to restore all non-conforming characteristics to the requirements of the Contract, specifications and/or drawings. All suppliers are authorized to rework non-conforming products. |
| SHELF LIFE | The amount of time a perishable material can be stored under specified environmental conditions and continue to meet all applicable specification requirements. |
| SHIP FROM | The facility from which a supplier's requested products are shipped. Depending with whom an order was placed, the facility in question may be a distributor or manufacturer, supplier or a sub-tier supplier. |
| SOURCE CONTROL DRAWING (SOCD) | SOCD drawings are used to define an existing commercial item or supplier-developed item that has been qualified as exclusively providing the performance, installation and interchangeability characteristics required for one or more specific critical applications stated on the SOCD. |

GLOSSARY OF TERMS

ASQR 4.6 - A220 Suppliers Quality Requirements

| TERM | DEFINITION |
|-------------------------|--|
| STANDARD PARTS | Products that are called up on the Airbus Canada Engineering drawings, specifications or standards, and that, by design, become an incorporated part of the Airbus Canada design structure (i.e. nut, screw, bolt, electrical connector, fitting, standard bushing, etc.). They are also known as Hardware and are controlled by specifications. |
| SPECIFICATION | A controlled/uncontrolled Airbus Canada process, laboratory standard, customer or military or industry process. |
| SUB-TIER SUPPLIER | A supplier dealing with Airbus Canada's Supplier. |
| SUPPLIER CLASSIFICATION | A means of categorizing suppliers according to specific approval and documentation requirements. |

Table 2 – Acronyms

| ACRONYMS ASQR 4.6 - A220 Suppliers Quality Requirements | |
|--|---|
| Acronym | Description |
| ABCL | As Built Configuration List |
| ADL | Airbus Canada Disclosure Letter |
| AM | Airbus Canada Manual |
| APU | Auxiliary Power Unit |
| ARC | Authorized Release Certificate |
| ASN | Advance Shipping Notice |
| ASQR | A220 Suppliers Quality Requirements |
| ASTM | American Society for Testing and Materials |
| ATS | Authorization to Ship |
| A2EMM or EMC | A220 Engineering Material Control Manual / Engineering Materials Control Manual |
| A2ERD | A220 Engineering Requirement Document |
| A2MS | A220 Material Specification |
| A2PS | A220 Process Specification |
| A220 ASL | A220 Approved Suppliers Listing |
| BFE | Buyer Furnished Equipment |
| CAA | Civil Aviation Authority |
| CAAC | Civil Aviation Authority of China |
| CAR | Corrective Action Request |
| CFR | Code of Federal Regulations |
| CMM | Coordinate Measuring Machine |
| CofC | Certificate of Conformance |
| COS | Condition Of Supply |
| COTS | Commercial Off The Shelf |

| ACRONYMS | |
|--|---|
| ASQR 4.6 - A220 Suppliers Quality Requirements | |
| Acronym | Description |
| CRB | Certification/Registration Body |
| CSN | Customer Support Notification |
| DID | Data Item Description |
| DDA | Direct Delivery Authorization |
| DOA | Dead On Arrival (Repairs or Rework) |
| DSA | Direct Ship Authorization |
| EASA | European Aviation Safety Agency |
| EMCM or A2EMM | Engineering Materials Control Manual / A220 Engineering Material Control Manual |
| ERP | Enterprise Resource Planning |
| FAA | Federal Aviation Administration |
| FAI | First Article Inspection |
| FAIR | First Article Inspection Report |
| FAR | Federal Aviation Regulations and/or Failure Analysis Report |
| FMEA | Failure Modes and Effects Analysis |
| GSE | Ground Support Equipment |
| IAQG | International Aerospace Quality Group |
| ISO | International Organization for Standardization |
| LRU | Line Replacement Unit |
| LSAP | Loadable Software Aircraft Part |
| MFT | Multi-Functional Team |
| MOD | Modification (status) |
| MRB | Material Review Board |
| MSDS or SDS | Material Safety Data Sheet |
| NCMS | Non-Conformance Management System |

| ACRONYMS | |
|--|--|
| ASQR 4.6 - A220 Suppliers Quality Requirements | |
| Acronym | Description |
| NCR | Non-Conformance Report |
| NFF | No Fault Found |
| NOC | Notice of change |
| OEM | Original Equipment Manufacturer |
| OASIS | Online Aerospace Supplier Information System (by IAQG) |
| PAH | Production Approval Holder |
| PCD | Procurement Control Drawing |
| PO | Purchase Order |
| PPAP | Production Part Approval Process |
| PRI | Performance Review Institute |
| OAD | Quality Assurance Directive |
| QD | Quality Document |
| QMS | Quality Management System |
| OPL | Qualified Products List |
| QPP | Quality Product Plan |
| QRD | Quality Requirement Document |
| QS | Quality Standard |
| RSA | Request for Supplier Action |
| SCR | Supplier Control Review |
| SDS or MSDS | Safety Data Sheet |
| SNC | Supplier Network Collaboration |
| SOA | Supplier Quality Assurance |
| TCCA | Transport Canada Civil Aviation |
| VNCR | Vendor Non-Conformance Report |