
	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018


## SUPPLIER QUALITY REQUIREMENTS MANUAL

<i>Document Approval Section</i>				
<i>Author</i>	Name Jim Gould	Title General Manager	Signature UniPoint	Date UniPoint
<i>Approval</i>	Name Eryk Ruskiewicz	Title Quality Director	Signature UniPoint	Date UniPoint
<i>Approval</i>	Name Kris Persaud	Title Purchasing Manager	Signature UniPoint	Date UniPoint

<b>CFN Precision Ltd</b> 1000 Creditstone Road Vaughan, ON, Canada, L4K 4P8	<i>Telephone</i>	<b>+1-905-669-8191</b>
	<i>Fax Number</i>	<b>+1-905-669-8684</b>
	<i>CAGE Code</i>	<b>L8774</b>
<i>The information and data provided herein are proprietary to CFN Precision Ltd. No right or license is granted to the recipient to use, disclose, copy, reproduce, publish, translate, exhibit or communicate by any means all or any part of this document and/or the proprietary information contained herein without prior written consent from CFN Precision Ltd.</i>		


 A Subsidiary of SPP Canada Aircraft, Inc.	Document Number	Rev	Date
	CFN-QA-SQR-0001	E	24-May-2018

RECORD OF CHANGES		
REV	DESCRIPTION	DATE
NC	Initial Issue	Mar 21, 2014
A	<ul style="list-style-type: none"> <li>i) Quality Director replaces Quality Manager throughout document</li> <li>ii) Added ARP 9132: Aerospace Operator Self-Verification Programs to reference material</li> <li>iii) Added requirement for supplier and their sub-tiers to notify CFN regarding changes to certification status, paragraph 4.1.3.</li> <li>iv) Added requirement for suppliers and their sub-tiers to maintain approval by OEM for special processes, paragraph 5.1.3.</li> <li>v) Added requirement for supplier and their sub-tiers to notify CFN regarding changes to OEM approval status, paragraph 5.1.4.</li> <li>vi) Added "sub-tiers" to right of access, paragraph 6.1.3.</li> <li>vii) FAI requirement for production gap of more than 24 months was 48, paragraph 7.1.</li> <li>viii) Added requirements that trigger need for delta FAI</li> <li>ix) Supplier to obtain approval for use of sampling plans, paragraph 8.11.</li> <li>x) Added note to "Changes" section regarding delta FAI, paragraph 8.14.1.</li> <li>xi) Added "Process/Service" to paragraphs 8.15, 8.15.3 and 8.16.</li> <li>xii) Clarified labeling requirements, paragraph 9.4.</li> <li>xiii) Requirements for C of C clarified, paragraph 9.5.2.</li> <li>xiv) Response time revised to "business days" from "hours", paragraph 11.4.</li> <li>xv) Clarified Quality Performance rating and actions, paragraph 12.2.</li> <li>xvi) Clarified Delivery performance rating and actions, paragraph 12.3.</li> <li>xvii) Added "Calibration Records" "Records of Non-Conforming Material", "Corrective and Preventative Action" to appendix A.</li> </ul>	Mar 24, 2015
B	<ul style="list-style-type: none"> <li>i) Added requirement that Material Testing laboratories shall be accredited by either Nadcap or b signatories to the International Laboratory Accreditation Cooperation (ILAC), para 4.1.1. (UTC ASQR-01 revision 9 requirement)</li> <li>ii) Clarified requirements for customer notification of changes, para 8.14.1 (UTC ASQR-01 revision 9 requirement)</li> </ul>	Apr 9, 2015
C	<ul style="list-style-type: none"> <li>i) Paragraph 5.1.4 added requiring Nadcap approval for listed special processes, original paragraph 5.1.4 re-numbered to 5.1.5.</li> <li>ii) Added paragraph 9.7 regarding part identification and ink stamp marking</li> <li>iii) Para 8.12 revised regarding shelf life requirements</li> <li>iv) Replaced Quality Director with Quality Manager</li> </ul>	May 11, 2016
D	<ul style="list-style-type: none"> <li>i) Paragraph 8.15.4 revised to require suppliers to notify CFN of escapes within 24 hours</li> <li>ii) Paragraph 12.3 revised to reflect current OTD metric requirements</li> </ul>	Sept 19, 2016
E	<ul style="list-style-type: none"> <li>i) Revised Corrective Action Report, Paragraph 11.1</li> <li>ii) Revised Root Cause, Paragraph 11.2</li> <li>iii) Added prevention of Counterfeit Products, paragraph 13.10.</li> <li>iv) Added Awareness, paragraph 13.11</li> </ul>	May 24, 2018


	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

## TABLE OF CONTENTS


PARA & TITLE	PAGE
1. INTRODUCTION .....	7
1.1 CFN Overview & Mission.....	7
1.2 CFN Supply Chain .....	7
1.3 Supplier Quality Requirements Manual purpose .....	7
1.4 Scope .....	7
1.5 Questions .....	7
2. REFERENCES .....	8
3. DEFINITIONS AND ACRONYMS .....	8
3.1 Definitions.....	8
3.2 Acronyms .....	8
4. QUALITY SYSTEM REQUIREMENTS.....	9
4.1 Certification.....	9
4.2 Quality Manual .....	9
4.3 Quality Audit .....	9
4.4 Quality Plan .....	10
5. SUPPLIER APPROVAL PROCESS.....	10
5.1 General requirement .....	10
5.2 Supplier Assessment.....	10
6. OVERALL REQUIREMENTS.....	11
6.1 Compliance to Contractual Requirements .....	11

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018


6.2	CFN Designated Sources.....	12
6.3	Right of Access to the Supplier's Premises and Records .....	12
6.4	Risk Management .....	12
6.5	Non-Disclosure of CFN Furnished Documents .....	12
6.6	E-Business Requirements .....	12
6.7	Electronic Documents .....	13
6.8	Business Continuity .....	13
7.	PRODUCT QUALIFICATION .....	13
7.1	FAI Requirement .....	13
7.2	FAI Records.....	14
8.	PROCESS CONTROL .....	14
8.1	Special Characteristics .....	14
8.2	Error-Proofing .....	14
8.3	Work Instructions.....	14
8.4	Monitoring and Measuring Devices.....	14
8.5	Tooling .....	15
8.6	Preventive Maintenance .....	15
8.7	Receiving, In-Process and Final Inspection .....	15
8.8	Operator Self-Verification .....	15
8.9	Statistical Process.....	15
8.10	Source Inspection.....	15
8.11	Sampling Inspection .....	16
8.12	Shelf-Life .....	16

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

8.13	Raw Material Lots .....	16
8.14	Changes.....	16
8.15	Non-Conforming Material .....	17
8.16	Reworked / Repaired Product/Process/Service.....	18
8.17	Continual Improvement.....	18
8.18	Sub-Tier Suppliers .....	18
9.	PACKAGING, LABELING & DELIVERY.....	19
9.1	General requirement .....	19
9.2	Preservation .....	19
9.3	Packaging .....	19
9.4	Labeling.....	19
9.5	Delivery.....	19
9.6	Direct Deliveries to Stock .....	20
9.7	Identification .....	20
10.	RECORD RETENTION .....	20
10.1	Record Period .....	20
10.2	Record Retrievability .....	20
11.	CORRECTIVE ACTIONS.....	21
11.1	Corrective Action Report.....	21
11.2	Root Cause .....	21
11.3	Unacceptable Corrective Action Criteria .....	21
11.4	Response Time.....	21

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

<b>12.</b>	<b>SUPPLIER PERFORMANCE .....</b>	<b>22</b>
<b>12.1</b>	<b>Overview .....</b>	<b>22</b>
<b>12.2</b>	<b>Quality Performance .....</b>	<b>22</b>
<b>12.3</b>	<b>Delivery Performance .....</b>	<b>23</b>
<b>12.4</b>	<b>Continual Improvement Performance .....</b>	<b>23</b>
<b>12.5</b>	<b>Corrective Actions .....</b>	<b>23</b>
<b>12.6</b>	<b>Supplier Development Program.....</b>	<b>23</b>
<b>13.</b>	<b>SUPPLIER CODE OF CONDUCT.....</b>	<b>23</b>
<b>13.1</b>	<b>Overview .....</b>	<b>23</b>
<b>13.2</b>	<b>Confidentiality .....</b>	<b>24</b>
<b>13.3</b>	<b>Compliance with Local Laws and Regulations.....</b>	<b>24</b>
<b>13.4</b>	<b>Compliance with Environmental, Health and Safety Laws .....</b>	<b>24</b>
<b>13.5</b>	<b>Product Safety .....</b>	<b>24</b>
<b>13.6</b>	<b>Non-Discrimination .....</b>	<b>24</b>
<b>13.7</b>	<b>Labour.....</b>	<b>24</b>
<b>13.8</b>	<b>Ethics .....</b>	<b>24</b>
<b>13.9</b>	<b>Enforcement of Code of Conduct .....</b>	<b>25</b>
<b>13.10</b>	<b>Prevention of Counterfeit Products.....</b>	<b>25</b>
<b>13.11</b>	<b>Awareness.....</b>	<b>25</b>
<b>APPENDIX A – TYPE OF RECORD .....</b>		<b>26</b>

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

## **1. INTRODUCTION**

### **1.1 CFN Overview & Mission**

1.1.1 CFN Precision Ltd. is a wholly owned subsidiary of SPP Canada Aircraft, Inc. (CFN) and specializes in the production of precision machined components and assemblies, primarily for the commercial aerospace industry sector.

1.1.2 CFN is committed to providing its customers with best-in-class customer service. This means meeting customer requirements for product quality, service and on time delivery. It also means anticipating CFN's customers' future needs and expectations for new products and services with innovative manufacturing systems. CFN aims to accomplish these objectives with strong leadership, a highly capable and empowered workforce and working with high-performing suppliers.

### **1.2 CFN Supply Chain**

CFN recognizes the very important role its suppliers have in the value offered to its customers. As an extension of CFN's operations, CFN relies on its suppliers to provide material, products and services which meet all of the requirements of CFN contracts and purchase orders, applicable specifications and the quality management requirements outlined herein.

### **1.3 Supplier Quality Requirements Manual purpose**


The purpose of this manual is to inform CFN's suppliers of the requirements that CFN has regarding the suppliers' quality management systems, design requirements and manufacturing process controls required for the purpose of doing business with CFN. This manual describes what CFN expects its suppliers to do to ensure that all CFN requirements and expectations are met.

### **1.4 Scope**

This manual applies to all suppliers including intra-company suppliers, and when applicable, to suppliers' sub-tier suppliers, providing CFN with materials, products, processing and related services directly related to the quality of the products.

### **1.5 Questions**

Any questions related to this manual should be addressed to a CFN buyer or to the Quality Manager.

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

## 2. REFERENCES

ANSI/NCSL Z540.1	Calibration Laboratories & Measuring & Test Equipment - General Requirements
AS/EN/JISQ 9100	Quality Management Systems - Requirements for Aviation, Space and Defense Organizations
AS/EN/SJAC 9102	Aerospace First Article Inspection Requirement
AS/EN/SJAC 9103	Variation Management of Key Characteristics
AS/EN/SJAC 9120	Quality Management Systems - Requirements for Aviation, Space and Defense Distributors
AS/EN/SJAC 9131	Non Conformance Documentation
ARP 9134	Supply Chain Risk Management Guideline
ARP 9162	Aerospace Operator Self-Verification Programs
ISO 9001	Quality Management Systems – Requirements
ISO 10012	Measurement management systems - Requirements for measurement processes and measuring equipment
ISO 17025	General requirements for the competence of testing and calibration laboratories
PRI/Nadcap AC7004	Nadcap Audit Criteria for Inspection and Test Quality System

## 3. DEFINITIONS AND ACRONYMS


### 3.1 Definitions

In this manual, the terms "shall" and "must" mean that the described action is mandatory. The term "should" means that the described action is necessary and expected with some flexibility allowed in the method of compliance and "may" means that the described action is permissible or discretionary.

### 3.2 Acronyms

ASL	Approved Supplier List
CAR	Corrective Action Report
CFN	CFN Precision Ltd.
CofC	Certificate of Conformance
FAI	First Article Inspection
FMEA	Failure Mode and Effects Analysis
MRB	Material Review Board
PO	Purchase Order
QMS	Quality Management System
SPC	Statistical Process Control



	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

#### **4. QUALITY SYSTEM REQUIREMENTS**

##### **4.1 Certification**

4.1.1 The Supplier and their sub-tier(s) shall maintain a QMS suitable to the products and services provided to CFN that is certified by an accredited third-party certification body to the latest version of one or more of the following:

- Special process Supplier: QMS compliant with AS/EN/JISQ9100, AS9003 or PRI/Nadcap AC7004;
- Distributor/Stockist: QMS compliant with AS9120/EN9120, AS/EN/JISQ9100 or ISO 9001;
- Calibration Supplier: measurement management system compliant with either ANSI/NCSL Z540.1 or ISO 10012 or ISO 17025;
- Commercial-Off-The-Shelf Supplier (COTS): QMS compliant with ISO 9001, or equivalent;
- Other Supplier: QMS compliant with AS/EN/JISQ9100 and a measurement management system which meets the requirements of either ANSI/NCSL Z540.1 or ISO 10012.
- Material Testing laboratories shall be accredited by either Nadcap or by signatories to the International Laboratory Accreditation Cooperation (ILAC)

4.1.2 In the absence of third-party certification, depending on the product, its application, value and criticality, the CFN Quality representative may authorize the acceptance of other evidence of compliance. This may include second-party (CFN) audits or first-party (self) assessments to the applicable criteria above, or to a set of alternative basic quality requirements.


4.1.3 It is the supplier's responsibility to notify CFN of any changes to their QMS or Nadcap certification status, (loss, reduction in scope of approval, additions of limitations), or their sub-tiers QMS or Nadcap certification status, (loss, reduction in scope of approval, additions of limitations), within 5 working days of status change.

##### **4.2 Quality Manual**

Upon request, the Supplier shall furnish CFN with a copy of the Supplier's Quality Management System manual, which is to be current and approved by the Supplier's management, including or making reference to related documents. The quality management system documentation shall include Supplier's statements of a quality policy and quality objectives. Top management shall define quality objectives and measurements which should address customer expectations and be achievable within a defined period of time. The Supplier shall promptly notify CFN of any substantive changes to the Supplier's QMS or personnel that could impact quality of product or service.

##### **4.3 Quality Audit**

The Supplier shall implement a procedure to review the effectiveness of its QMS on a defined periodic basis.

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

#### **4.4 Quality Plan**

If required in the contract and/or PO, the Supplier shall develop a quality plan that forms a cross-reference between the Supplier's procedures and this manual. If the Supplier does not have procedures to address a given topic of this manual, a statement describing its method of compliance or acceptance of the topic will be required.

### **5. SUPPLIER APPROVAL PROCESS**


#### **5.1 General requirement**

- 5.1.1 CFN requires all suppliers to be approved and listed on CFN's ASL prior to the issuance of PO's. All suppliers must be approved by CFN, regardless of approvals by customers or other entities.
- 5.1.2 In its ASL, CFN will identify suppliers as "approved", "conditionally approved" or "unapproved".
- 5.1.3 Suppliers and their sub-tiers are required to maintain OEM approval for any OEM specification special processes performed. Suppliers must consult the applicable OEM ASL to confirm their approval status prior to performance of the process.
- 5.1.4 Special Process suppliers (including supplier sub-tiers) must maintain accreditation by Nadcap for the following processes:
  - Brazing
  - Chemical Processing
  - Coatings
  - Composites
  - Heat Treating
  - Non-Conventional Machining
  - Non-Destructive Testing
  - Shot Peening
  - Welding
- 5.1.5 Suppliers are required to notify CFN of any changes to their approval status or their sub-tiers approval status for the processes being performed within 5 working days of the change.

#### **5.2 Supplier Assessment**

The Supplier approval process may include the following:

- 1) Supplier initial assessment: CFN may request the Supplier to provide a copy of its quality management system certificate and/or complete a self-assessment of its business and quality

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018


management system and capabilities (i.e. quality, delivery, technology, cost and continual improvement objectives).

- 2) Documentation audit: In those cases where the Supplier's quality management system has not been certified by an accredited certification body, CFN may request a copy of the Supplier's quality manual and supporting procedures (and perhaps internal audit reports) to determine if the Supplier's quality management system meets CFN requirements.
- 3) On-site assessment: Generally, when the Supplier is certified to a related standard by an accredited certification body, CFN will not conduct an on-site assessment of the Supplier's QMS against the same criteria. However, CFN and/or its customers, due to product/process complexity or criticality, may elect to conduct on-site assessments of the Supplier's product or process capabilities. As a result, findings may be issued. These on-site assessments could include:
  - QMS: if necessary, as a result of (or in conjunction with) product or process capability assessments, to determine whether the Supplier's QMS meets one or more of the applicable standards, and is functioning effectively;
  - Business and manufacturing operations: to determine whether the Supplier has the financial resources, production capacity and other business resources needed to fulfill CFN volume production needs and continuity of supply;
  - Continual improvement initiative: to determine if the Supplier's culture, methods and skills are present to actively pursue continual improvement;
  - Technology assessment: to determine whether the Supplier has the needed technical resources, including production and inspection equipment, facilities, engineering resources, CFN-specified computer-aided design language/format, electronic commerce capability, etc.;
  - Sub-tier supplier control: to evaluate the effectiveness of the Supplier's sub-tier management processes and ensure that products or services procured from sub-tier sources and delivered to CFN conform to all applicable CFN requirements; such evaluation may include on-site assessment of the Supplier's sub-tier suppliers.

## 6. OVERALL REQUIREMENTS

### 6.1 Compliance to Contractual Requirements

All contracts and/or POs received by the Supplier from CFN shall be reviewed by the Supplier's organization. Upon accepting a CFN contract and/or PO, the Supplier is responsible for compliance to all contract and/or PO requirements (e.g. engineering drawings, specifications, etc.). All documents, drawings and specifications, regardless of origin, are applicable to the Supplier when specified in the contract and/or PO or in documents referenced in the contract and/or PO, and are required to be used at all levels of the supply chain. Unless otherwise specified in the contract and/or PO, the document revision in effect on the date of issue of the contract and/or PO applies to the contract and/or PO.

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

Neither audit, surveillance, inspection or tests made by CFN, representatives of CFN or its customer(s) or any regulatory authority, at Supplier's facilities, at any sub-tier facilities, or upon receipt at CFN, relieves the Supplier of the responsibility to furnish acceptable products or services that conform to all contract and/or PO requirements, nor does it preclude subsequent rejection by CFN or its customers.

## **6.2 CFN Designated Sources**

Where specified by contract and/or PO, the Supplier shall purchase products, materials or services from CFN designated sources. However, the Supplier is responsible to ensure that items procured from such sources meet all applicable technical and quality requirements.

## **6.3 Right of Access to the Supplier's Premises and Records**

- 6.3.1 The Supplier shall allow access by CFN, its customers and/or regulatory authorities to the applicable areas of its facilities and sub-tier facilities in regard to the contract and/or PO. The Supplier shall provide personnel of CFN, CFN's customers and regulatory authorities with reasonable facilities and equipment to conduct their business within the Supplier's facilities.
- 6.3.2 In addition, CFN, its customers and/or regulatory authorities shall have access to all applicable records.


## **6.4 Risk Management**

The Supplier shall establish a risk management program in accordance with the guidelines established by SAE ARP9134 (or equivalent) to effectively assess those elements from all aspects of the business that could affect the quality of the products and/or services scheduled for delivery to CFN. A copy of the Supplier's risk management program shall be furnished to the CFN buyer upon request.

## **6.5 Non-Disclosure of CFN Furnished Documents**

- 6.5.1 Documents furnished by CFN to the Supplier are furnished solely for the purpose of doing business with CFN. Proprietary documents may be furnished to the Supplier in hard copy, electronic or other media. The Supplier is responsible for controlling and maintaining such documents to preclude improper use, loss, damage, alteration and/or deterioration.
- 6.5.2 Unless authorized by the CFN buyer in writing, the Supplier may not transmit or furnish any CFN furnished documents, or copies of such documents, to anyone outside the Supplier's business organization except to a sub-tier source used by the Supplier for performance of work on the CFN contract and/or PO. The Supplier shall return to CFN, or purge electronic copies of, all proprietary documents with the last delivery of products or services on the contract and/or PO. CFN may request the Supplier to furnish objective evidence or certification that proprietary documents have been purged. The Supplier shall flow down this requirement to all sub-tier sources, when such sources will be in receipt of CFN proprietary documents during performance of work for the Supplier.

## **6.6 E-Business Requirements**

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

To be established on a case-by-case basis.

## **6.7 Electronic Documents**

6.7.1 The accuracy and authenticity of electronic documents and forms submitted to CFN is of highest importance. The following rules apply and may be subject to review by CFN at Supplier's facilities:

- The issue of electronic documents and application of electronic signatures must be under the direct control of the individual whose name appears on the electronic document;
- The electronic signatures may only be applied at the place where the individual is located and the individual must have direct access and responsibility for the products or services described in the electronic document;
- The application of the electronic signature certifies that the signature (individual) represents an authorized company official.

6.7.2 The use of electronic forms and signatures must be described in and governed by the Supplier's documented procedures.

## **6.8 Business Continuity**

The Supplier should have a business continuity plan which would allow for the safeguarding, storage and recovery of engineering drawings, electronic media, and production tooling in the event of damage or loss. This plan should also contain contingency plans to satisfy CFN requirements in the event of significant utility interruptions, labour shortages, equipment failure and field returns.


## **7. PRODUCT QUALIFICATION**

### **7.1 FAI Requirement**

An FAI is required to initially qualify a part/process. Furthermore, a new FAI is required if there is a twenty four (24) month gap of time since last production, unless otherwise specified in the PO as a result of CFN's customer requirements. Excess stock from last production cannot be used to satisfy the FAI requirement.

7.1.1 When any of the following events occur, even if an FAI for such parts has been previously completed, fully or partially, a delta FAI with respect to the affected characteristics shall be performed. CFN to be notified as applicable to determine necessity for full or partial FAI.

- 1) Design change that affects the configuration or function of the parts (partial / full)
- 2) Change of a manufacturing source, processes, inspection method, location, tools or material that may affect the configuration or function of the parts (partial / full)
- 3) Change in numerical control program or translation to another media
- 4) Natural or man-made event, which may adversely affect a manufacturing process.
- 5) A lapse in production for two years

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

- 6) When requested by CFN or its customer
- 7) Characteristics which were deviating during initial FAI or delta FAI

## 7.2 FAI Records

The FAI requires that all features and characteristics on the design specification and control plan be inspected and verified prior to production. Actual measured values shall be recorded as opposed to general statements of conformance or other notations simply indicating acceptance. Unless otherwise required by contract and/or PO, all FAI's shall be documented in accordance with AS/EN/SJAC9102.

## 8. PROCESS CONTROL

### 8.1 Special Characteristics

The Supplier shall demonstrate conformity to special characteristics designated by CFN through means of documentation and appropriate control methods. In addition to any special characteristics identified by CFN, the Supplier shall also review, identify, document and control other product and process characteristics that are keys to achieving quality. The Supplier's variation management program shall be in compliance with requirements of the current revision of AS/EN/SJAC9103.

### 8.2 Error-Proofing

The Supplier should use error-proofing devices and techniques as a form of process control, especially for repetitive functions, difficult tasks prone to mistakes, or where the cost of error is high.


### 8.3 Work Instructions

The Supplier shall prepare documented work instructions, as necessary, for all employees having responsibilities for the operation of processes that impact product quality. These instructions shall be maintained, current and accessible for use at the work station.

### 8.4 Monitoring and Measuring Devices

8.4.1 The Supplier shall determine the monitoring and measurement to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of product to determined requirements. As a minimum, where necessary to ensure valid results, measuring equipment shall:

- 1) be calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; where no such standards exist, the basis used for calibration or verification shall be recorded; and
- 2) be identified to enable the calibration status to be determined.

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

- 8.4.2 Unless otherwise specified by contract and/or PO, the Supplier shall establish procedures to control measuring and test equipment that are in compliance with the requirements defined in paragraph 4.1 of this manual.

## 8.5 Tooling

If applicable, the Supplier shall have a system for the periodic inspection of tooling including CFN's furnished tooling and shall ensure proper application and accuracy at all times of all tooling used to meet the requirements of the contract and/or PO.

## 8.6 Preventive Maintenance

The Supplier should identify key process equipment and provide resources for machine/equipment maintenance activities and develop an effective planned total preventive maintenance system.

## 8.7 Receiving, In-Process and Final Inspection

- 8.7.1 The Supplier shall be responsible for the conformance of all raw material, components, assemblies, tests and processes purchased from sub-tier suppliers.
- 8.7.2 The Supplier shall also have a process to ensure that all products are inspected during production as appropriate and upon completion of the products/processes. Such processes shall also ensure that, prior to delivery, the Supplier identifies the products which have been inspected and accepted by stamping or other acceptable method of marking as defined in the technical data.

## 8.8 Operator Self-Verification


The Supplier may delegate inspection authority, product/process inspection and acceptance to production operators. In such cases, the Supplier's operator self-verification program shall comply with the requirements of SAE ARP9162, Aerospace Operator Self-Verification Programs. Prior to implementation of the program on products/processes scheduled for delivery to CFN, the Supplier shall request and obtain approval from CFN in writing.

## 8.9 Statistical Process

Where specified in its control plan, the Supplier is required to apply effective statistical process controls.

## 8.10 Source Inspection

Supplier's products or services may be subject to source inspection by CFN, representatives of CFN or applicable government or regulatory agencies. Source inspection requirements will be included on the contract and/or PO and may apply to any and all operations performed by the Supplier or the Supplier's sub-tier sources, including prior to delivery of products to CFN. The Supplier shall provide the necessary access, equipment and resources required to effectively accomplish the source inspection.

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

### 8.11 Sampling Inspection

The Supplier is responsible for 100% verified quality for all items delivered to CFN. When the Supplier elects to use statistical methods for the acceptance of products or processes, such methods shall be in compliance with the requirements established by SAE ARP9013, 9013/1, 9013/2, 9013/3 and 9013/4 as applicable, except that in all cases the sample sizes shall be AQL 4.0 or higher (i.e. AQL 1.0, .65, etc.) and the criteria for lot acceptance as zero (i.e. C=0). A copy of the Supplier's statistical process control plan shall be furnished to CFN for review and approval prior to use.

### 8.12 Shelf-Life

The Supplier shall ensure the following:

- 1) Materials: with each delivery of materials or products that have a limited or specified shelf life, the Supplier shall furnish data that shows (a) the cure or manufacture date, (b) expiration date or shelf life, (c) lot or batch number, and, when applicable, any special handling or storage requirements; unless otherwise specified by contract and/or PO, for all shelf life limited materials or products delivered to CFN, the remaining shelf life shall be a minimum of 75% of the total shelf life for the material.
- 2) Elastomers and seals: if the Supplier provides elastomers and/or seals, the Supplier must meet the requirements for data recording procedures, packaging, and storage of elastomers and/or seals which includes an elastomeric element per ARP5316.
- 3) The Supplier shall not remove from its original packaging and re-pack any shelf life items.


### 8.13 Raw Material Lots

In those cases where the Supplier elects to use more than one lot of raw material, the Supplier shall ensure, document and furnish positive traceability of each individual product to the raw material certification/test report that represents the raw material from which each of the products was manufactured. Traceability shall be provided by identifying the raw material heat, lot, batch or melt number from the certification/test report on the product and/or on packaging (when used), or the products segregated and identified.

### 8.14 Changes

- 8.14.1 The Supplier is responsible for controlling changes and notifying CFN of all changes to ownership, company name, management, the approved part design, manufacturing & inspection process or manufacturing site. Reference FAI requirements for additional requirements regarding delta FAI.
- 8.14.2 The Supplier shall have a process to ensure that relevant versions of applicable documents furnished by CFN (as well as those specified of external origin) are available at points of use. The Supplier is



	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

responsible for the timely review, distribution and implementation of all CFN technical standards/specifications and changes in accordance with the schedule required by CFN. Timely review should be as soon as possible, and shall not exceed two working weeks. The Supplier shall maintain a record of the date on which each change is implemented in production. Implementation shall include updated documents.

8.14.3 The Supplier shall not make changes to its processes, location, facilities, equipment or material (or any change which may affect product design or function) without written notification to CFN for:

- Correction of a discrepancy on a previously submitted part;
- Product modified by an engineering change to design records, specifications, or materials; or
- Any planned changes by the Supplier to the design, process, or manufacturing location

8.14.4 CFN may require the Supplier to submit an FMEA and control plan to validate permanent changes. CFN may also require other portions, or all, of the related qualification process to be repeated. In some cases, CFN may elect to review the Supplier's proposed permanent changes at the Supplier's facility.

## **8.15 Non-Conforming Material**

8.15.1 The Supplier shall not knowingly ship product/process/service that deviates from the drawing, specification limits, or design intent without prior written authorization from CFN. If such a condition exists, the Supplier may petition CFN, in writing, to allow shipment of the product under a written non-conformance deviation.


8.15.2 If requested by CFN, the Supplier must send samples of such non-conforming items to CFN for evaluation.

8.15.3 CFN's approval of a deviation is specific to the products/processes/services for which it has been submitted and must be approved by CFN's customer. In all cases, the Supplier shall fully contain all products suspected of being non-conforming. In addition, non-conforming products may be returned to the Supplier or the Supplier may be required to sort any suspect products already shipped to CFN.

Any parts shipped to CFN that have been approved for deviation shall be clearly identified as such externally on the box, container, or other packaging and on shipping documentation. Inside of each box shall contain a copy of the CFN-approved deviation document.

For product quality problems reported by CFN to the Supplier, until formal corrective action has been taken and approved, the Supplier shall provide documented evidence with subsequent shipments that such product has been inspected for the identified non-conformances and meets all applicable requirements.

8.15.4 For any items which were found to be discrepant after they were shipped to CFN, the Supplier shall document all non-conforming conditions in accordance with the requirements of AS/EN/SJAC9131 Disclosure form and submit them to CFN within 24 hours.

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

## 8.16 Reworked / Repaired Product/Process/Service

Rework is defined as additional operations that are not part of the basic production process flow, which will bring product in full compliance with applicable drawings and specifications. The Supplier shall notify CFN if rework is required. In certain instances, CFN customer approval is required prior to rework commencing. Instructions for rework, including re-inspection requirements, shall be accessible to and utilized by the Supplier's appropriate personnel. All rework shall be documented and accepted by the Supplier. Alternatively, Repair is defined as using alternative manufacturing techniques, methods, materials, or processes which may not bring product into full compliance with applicable drawings and specifications. Repairs are not allowed without prior written approval/instruction from CFN's customer.

## 8.17 Continual Improvement


8.17.1 The Supplier shall define a process for continual improvement. A copy of the Supplier's continual improvement program shall be furnished to CFN upon request.

8.17.2 The Supplier shall use a closed-loop corrective action process (problem solving process) whenever a problem is encountered internally or upon notification from CFN. For example, the corrective action process should:

- 1) Describe the problem: state what the problem "is," and "is not" with respect to what, where, when, who, how, and how many; use quantitative terms;
- 2) Use a team approach: consult and coordinate with relevant stakeholders;
- 3) Apply containment: immediately contain any suspect product to protect CFN and its customers;
- 4) Analyze root cause: identify potential causes, analyze causes for failure mode, validate root cause(s), and identify solutions;
- 5) Implement permanent corrective action: implement solution; update applicable FMEA, control plan and work instructions;
- 6) Verify effectiveness of corrective action: use check sheets, auditing, sampling, and/or control plans to monitor process performance for effectiveness and sustained improvement;
- 7) Implement preventive action, as required: implement changes to prevent the same type of error from occurring in similar products/processes; other suppliers; update applicable documents;
- 8) Support corrective and preventive action processes at management levels: review, approve and support; provide resources and team recognition.

## 8.18 Sub-Tier Suppliers

8.18.1 The Supplier, as the recipient of the contract and/or PO, is responsible for meeting all requirements, including work performed by the Supplier's sub-tier suppliers (also known as sub-suppliers or subcontract suppliers). When the Supplier uses sub-tier sources to perform work on products and/or services scheduled for delivery to CFN, the Supplier shall include, on contracts and orders to its sub-tier sources, all of the applicable technical and quality requirements contained in the CFN contract and/or

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

PO, including quality system requirements, regulatory requirements, the use of CFN designated sources, and the requirement to document and control 'key characteristics' and/or 'key processes' and to furnish certifications and test reports as required. CFN, its customers and regulatory authorities shall have the right of entry to sub-tier facilities and the Supplier shall ensure this is flowed down to the Supplier's sub-tier sources.

- 8.18.2 Unless otherwise specified by contract and/or PO, the Supplier shall only use special process sources that are approved by CFN and by its customers. This requirement applies to suppliers who perform special processing such as heat treating, plating, etc. as part of their internal operations. The Supplier shall flow-down this requirement to its sub-tier sources.
- 8.18.3 The Supplier shall maintain a list of its approved suppliers and such list shall be made available to CFN upon request. In addition, the Supplier shall evaluate its suppliers' performances in terms of quality and have a system to correct any unsatisfactory performance of its suppliers.

## **9. PACKAGING, LABELING & DELIVERY**

### **9.1 General requirement**

Preservation, packaging, labeling, and shipping methods must comply with common industry practices and any CFN requirements specified on the contract and/or PO.

### **9.2 Preservation**

In order to detect deterioration, the condition of product in stock should be assessed at appropriate planned intervals. The Supplier should use an inventory management system to optimize inventory turns over time and should assure stock rotation, such as "first-in-first-out" (FIFO).

### **9.3 Packaging**

The Supplier must adequately plan for packaging designed to prevent product contamination, deterioration or loss, to eliminate shipping damage and to reduce environmental impact (e.g. use of recycled products, reusable packaging).


### **9.4 Labeling**

All packages shall be with clear identification of CFN purchase order number, item number, part number, lot number and manufacturer name.

Additional labeling requirements may be established on a case-by-case basis

### **9.5 Delivery**

- 9.5.1 The Supplier shall systematically inform CFN of any delay in delivering product and provide a new dispatch date.

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

9.5.2 A Certificate of Conformance signed by the Supplier's head of quality or company officer (or their authorized delegate) attesting that all products and/or services delivered are in compliance with all contract and/or PO requirements shall be furnished with each shipment to CFN. All C of C's must be in the English language and may be in electronic format with electronic signatures. All signatures or signature blocks must clearly show title of the signatory. The C of C shall include:

- 1) Supplier Name;
- 2) Supplier address;
- 3) Unique identifying number;
- 4) Supplier job or lot number;
- 5) CFN contract and/or PO number;
- 6) Line/release number (when applicable);
- 7) Part number;
- 8) Drawing/specification revision;
- 9) Quantity delivered;
- 10) Serial number and or batch number (when applicable);
- 11) Source of raw material or sub-tier special process (when applicable);
- 12) Supplier MPS/Technical Plan/Technique sheet number and revision (when applicable);
- 13) Packing list/shipper number (when applicable).

9.5.3 When additional certifications/test reports are required for special processing, raw material, etc., the requirements will be specified on the contract and/or PO.

## 9.6 Direct Deliveries to Stock

To be established on a case-by-case basis


## 9.7 Identification

Part identification when applied by the supplier or subject to coatings shall be clear and legible and in compliance with drawing/parts list and/or specification requirements. Where a supplier has been requested to apply additional marking by ink stamping of "CFN2" and/or "Made in Canada" the marking shall be located adjacent to the permanent marking, shall not overlap the permanent marking or be any closer than ½ inches from any edge on the part.

## 10. RECORD RETENTION

### 10.1 Record Period

Unless otherwise specified by CFN, the Supplier shall maintain all records that provide objective evidence of compliance to CFN contract and/or PO requirements for a minimum of ten (10) years after the last delivery of products and/or services on the contract and/or PO. Prior to discarding, transferring to another organization, or destruction of such records, the Supplier shall notify CFN in writing and give

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

CFN the opportunity to gain possession of the records. These requirements are also applicable to records generated by Supplier's sub-tier sources.

## **10.2 Record Retrievability**

Upon request, the Supplier shall be capable of retrieving and delivering required records to CFN within forty-eight (48) hours from time of request by CFN.

## **11. CORRECTIVE ACTIONS**

### **11.1 Corrective Action Report**

CFN is required under AS9100D to issue a request for a CAR to the Supplier when non-conforming material, components or assemblies are found. This requirement may be omitted only if CFN Quality determines that the risk associated with the non-conformity is very low. When a formal reply is requested the Supplier is required to perform a root cause analysis, identify an adequate corrective action plan and provide a written reply to CFN.

### **11.2 Root Cause**

11.2.1 When documenting the root cause, the Supplier shall include the underlying reasons:

- 1) Why the specific non-conforming condition or incident occurred;
- 2) Why it was not detected by the Supplier's quality controls; and
- 3) Why the related process, from a systemic viewpoint, allowed the non-conformance (and potentially others like it) to occur.
- 4) [Human factors that may have influenced the non-conformity.](#)


11.2.2 The Supplier should apply the following criteria to determine whether the underlying root cause has been identified:

- 1) It initiates and causes the event the Supplier is seeking to explain.
- 2) It is directly controllable.
- 3) The elimination of that root cause will result in the elimination of the problem.

### **11.3 Unacceptable Corrective Action Criteria**

Statements from the Supplier indicating that the corrective action is to alert or retrain the operator and/or increase inspection, alone, are NOT acceptable corrective actions. These kinds of actions would be considered insufficient and would not address the real underlying root cause(s) of why the Supplier's policy, instructions, process, procedure and/or system allowed the problem to develop and occur and not be detected by quality controls.

### **11.4 Response Time**

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

Unless otherwise requested by CFN when notified, the Supplier shall respond to a request for corrective action as follows:

<b>Required Action</b>	<b>Timeline (from initial notification by CFN)</b>
The Supplier shall promptly acknowledge receipt of notification and communicate to CFN the immediate containment actions to be taken.	within 1 business day
The Supplier shall provide an update of the containment plan to protect CFN during the interim period. This update must include: <ul style="list-style-type: none"> <li>• Confirmation that the Supplier has identified all suspect products in process, in stock, in transit and potentially at CFN by lot number, CFN PO number and quantity.</li> <li>• Additional specific containment actions needed to be taken by the Supplier and/or CFN.</li> </ul>	within three business days
The Supplier must submit its CAR form or other convenient media of equivalent content to CFN Quality indicating the permanent actions taken or to be taken to prevent recurrence of the same problem, to prevent the occurrence of similar problems and the applicable effective dates.	within ten (10) business days

## **12. SUPPLIER PERFORMANCE**


### **12.1 Overview**

12.1.1 CFN's evaluation system uses a number of factors such as quality, delivery and process continual improvement to develop an overall Supplier performance evaluation. This evaluation serves as an objective measure to determine whether CFN expectations are being met.

12.1.2 At CFN's discretion, CFN may determine that to address the Suppliers performance deficiencies, a meeting with Supplier's management is necessary and a Supplier documented corrective action and improvement plan is required.

### **12.2 Quality Performance**

This metric defines the rejected parts (in percentage) shipped using the formula below. The definition of "rejected parts" is the total number of parts returned to the Supplier for any valid quality reason (including those caused by shipping and administrative errors). All Supplier NCR's will be forwarded to the Supplier for follow-up.

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

Quality Metric (%) = (Number of parts rejected/Number of parts received) x 100

Based on the resulting quality metric CFN may take action as described below.

- <1% Acceptable
- 1-3% Email and Telephone Review
- >3-15% Systemic Corrective Action
- >15% Unacceptable – Potential exists to remove Approved Status

### 12.3 Delivery Performance

This metric defines the delivery performance rating using the table below. "On time" is based on the PO date.

Delivery Metric (%) = Number of Line Items received on time/Number of line items received x 100

Based on the resulting delivery metric CFN may take action as described below.

- >95% Acceptable
- >90-95% Email and Telephone Review
- >85-90% Daily follow-up for status of parts over phone or email
- 80-85% Corrective Action
- <80% Unacceptable – Potential exists to remove Approved Status

### 12.4 Continual Improvement Performance

To be established on a case-by-case basis

### 12.5 Corrective Actions

When any of the metrics is deemed inadequate, a corrective action is required and may require the Supplier to meet with CFN management representatives.


### 12.6 Supplier Development Program

To be established on a case-by-case basis

## 13. SUPPLIER CODE OF CONDUCT

### 13.1 Overview

The Supplier shall ensure operations are being performed in a manner that is appropriate, as it applies to its ethical, legal, environmental and social responsibilities. Below is a listing of the basic requirements:

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

### **13.2 Confidentiality**

The Supplier shall ensure the confidentiality of CFN-contracted products and projects under development and related product information, as well as intellectual property shared as a result of the working relationship.

### **13.3 Compliance with Local Laws and Regulations**

The Supplier must adhere to the laws and regulations in the locality in which it resides and/or conducts its activities. This includes all applicable local, provincial, state and federal laws/regulations.

### **13.4 Compliance with Environmental, Health and Safety Laws**

The Supplier must maintain and operate its manufacturing/production facilities and processes in accordance with applicable local, provincial, state and federal laws/regulations in the country of origin or where it conducts its activities. At no time shall any CFN person be exposed to hazardous materials or unsafe conditions as a result of Supplier shipments to CFN, or while visiting a Supplier's location. For items with inherent hazards, safety notices must be clearly visible. As applicable, documented safety handling and protection information must be provided to CFN by the Supplier.

### **13.5 Product Safety**

In all instances where a product is manufactured to a new design, for a new system or for a new application, it is important that Supplier and CFN allocate responsibility for assuring that all performance, endurance, maintenance, safety and warning requirements are met. It is preferred that this allocation of responsibility be in writing.


### **13.6 Non-Discrimination**

The Supplier shall not discriminate against race, color, sex, religion, age, physical disability, political affiliation or other defining characteristics as prohibited by applicable local, provincial, state and federal laws/regulations.

### **13.7 Labour**

The Supplier shall employ workers of minimum legal age in accordance with applicable local, provincial, state and federal laws/regulations in the country of origin. Child labour laws must be followed. The Supplier shall (i) not practice the use of forced or indentured labour, (ii) not exceed the daily and weekly working hours as permitted by local, provincial, state and federal laws/regulations in the country of origin and (iii) shall compensate workers in accordance with local, provincial, state and



	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

federal laws/regulations in the country of origin and this includes minimum legal wage, overtime wages, and benefits (required by law).

### **13.8 Ethics**

Evidence of corruption, bribes, improper advantage or any other form of illegal practice by the Supplier or associated operations will terminate all relations with CFN.

### **13.9 Enforcement of Code of Conduct**

It is the responsibility of the Supplier to verify and monitor compliance of this code of conduct at its operation(s) and sub-tier source operations.

### **13.10 Prevention of Counterfeit Products**


The supplier shall plan, implement, and control the processes needed to assure the prevention of counterfeit or suspect counterfeit part use and their inclusion in product(s) delivered to the customer.

Supplier's counterfeit parts prevention process must include:

- Training appropriate persons in the awareness and prevention of counterfeit parts;
- Application of the parts obsolescence monitoring program;
- Controls for acquiring externally provided product from original or authorized manufacturers, authorized distributors, or other approved sources;
- Requirements for assuring traceability of parts and components to their original or authorized manufacturers;
- Verification and test methodologies to detect counterfeit parts;
- Monitoring of counterfeit parts reporting from external sources;
- Quarantine and reporting of suspect or detected counterfeit parts.


### **13.11 Awareness**

Suppliers is required to ensure persons are aware of their contribution to product or service conformity and product safety and the importance of ethical behaviour.

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

## APPENDIX A – TYPE OF RECORD

AS9100 Clause	AS9100 Requirement	Type of Record
7.2.2	Review of Requirements Related to the Product	<ul style="list-style-type: none"> <li>• Contract Review, Contract, Purchase Orders and Amendments</li> </ul>
7.4	Purchasing	<ul style="list-style-type: none"> <li>• Purchase Orders</li> <li>• Purchase Contracts</li> <li>• Sub-tier Qualifications and product/material certification</li> </ul>
7.5.1	Control of production and service provision	<ul style="list-style-type: none"> <li>• Manufacturing and Inspection File</li> <li>• Completed Traveler/Routing Card</li> <li>• Completed Assembly Build and Test Records</li> <li>• Acceptance Test Procedures</li> <li>• Manufacturing Change Documentation</li> <li>• NC Programs / Tooling drawings</li> <li>• Process Techniques / Critical Operation Sheets</li> <li>• Process Qualification Record</li> <li>• Process Control Records, e.g. Temperature Charts, Tank additions, etc.</li> <li>• Material Validation Test Records</li> <li>• First Article Inspection Reports</li> </ul>
7.5.3	Identification & traceability	<ul style="list-style-type: none"> <li>• Traceability record concerning the product, Serial Numbers, Batch Control Numbers, etc.</li> </ul>
7.5.5	Handling, Storage, Packaging, Preservation and Delivery	<ul style="list-style-type: none"> <li>• Release Documentation</li> </ul>
7.6	Control of monitoring and measuring equipment	<ul style="list-style-type: none"> <li>• Calibration records</li> </ul>
8.2.4	Inspection and Testing	<ul style="list-style-type: none"> <li>• Product Acceptance Records</li> <li>• Certificate of Conformance</li> <li>• Inspection and Test Records</li> </ul>

	<i>Document Number</i>	<i>Rev</i>	<i>Date</i>
	CFN-QA-SQR-0001	E	24-May-2018

8.3	Control of Non-Conforming Material	<ul style="list-style-type: none"> <li>• Non-Conforming Material documentation</li> <li>• Records of rework/repairs</li> <li>• Customer disposition</li> </ul>
8.5.2/8.5.3	Corrective/Preventative Action	<ul style="list-style-type: none"> <li>• Corrective and Preventative actions taken</li> </ul>