

Supplier Quality Requirements

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DOCUMENT HISTORY

Issue No	Date	Brief Description
1	25/11/2013	<i>Original document, initial release</i>
2	19/12/2013	<i>Addition of clause 1.7</i>
3	13/02/2017	<i>Addition of clause 11, Change of originator job role & update of contents page</i>
4	06/12/2018	<i>Change of originator job role</i>
5	10/01/2022	RCCN 344. Format changes in line with current Rockford documents. Change of creation, approval and sign off personnel. Updated logos. Updates to the following sections: 1, 2, 3, 4, 7, 8, 10, 11. Addition of sections 12, 13, 14.
6	29/11/2022	Changes to the document to capture the requirements of AS9100D clause 8.4.3

1. Introduction

- 1.1. This requirements document describes general quality rules that the supplier and Rockford Components LTD (Rockford) have to apply for a successful partnership in order to achieve the goal of zero defects. Rockford is required by AS9100D to apply appropriate controls to their direct and sub-tier external suppliers to ensure that requirements are met.
- 1.2. Quality agreements are used for common understanding between customers and suppliers regarding co-operation in the areas of Technology, Quality and Responsiveness. Therefore this framework document contains only topics relevant to the areas detailed in 1.2.
- 1.3. A contractual Quality Agreement may be made with individual key suppliers to Rockford that detail specific Quality and Delivery requirements. Therefore, specific quality agreements and targets (specifications, data sheets) are not part of this requirement document. The order of precedence of related documents needs to be defined in advance.
- 1.4. Components supplied for automotive, motorsports, Nuclear, Marine, Defence and Aviation products must be suitable for these applications in the worldwide market and meet all relevant criteria. To support the zero-defect approach Rockford will inform the supplier about the applications and intended use along with any pertinent market/customer requirements.
- 1.5. Subcontracting of Rockford Purchase Orders may only occur on agreement by Rockford. Suppliers are to flow down to their Supply Chain all applicable requirements including Customer Requirements and those stated within this document.

2. Non-Conformances, Costs & Liabilities

- 2.1. No non-conforming products may be shipped to Rockford without prior written agreement. If the supplier wishes to apply for a concession to repair or accept "as is" any non-conforming product this must be requested from the purchasing department and the product may not be dispatched until authorisation is granted, in writing. Where requested, the concession number must be quoted on the delivery note.
- 2.2. Any potential safety or reliability hazards, discovered, either in the design or production must be immediately reported to Rockford.
- 2.3. As alluded to in 1.3 a separate contractual Quality Agreement shall be agreed with individual suppliers and this will detail contractual requirements for claiming costs in the event that Rockford experiences losses as a result of a supplier issuing non-conforming materials components or products. Therefore Non-Conformance Costs & Liabilities are not part of this document and the negotiation of any cost claim requires a separate contractual treatment outside of the Quality Agreement.

3. Material Data Consent

3.1. Where requested, the supplier must provide material data sheets, technical data sheets and safety data sheets in the agreed-upon format and medium. The material content must comply with relevant legal requirements.

4. Audits

Systems Audits:

4.1. The quality system of the supplier has to be a minimum of BS EN ISO 9001:2015. However, depending on the contractual requirements some suppliers will be required to hold AS9100D for aviation products. The relevant version has to be agreed mutually. Usually, Rockford will accept quality system audits conducted by an approved certification body, although audits may still be required for key suppliers.

Process Audits:

4.2. General customer audits should be mutually agreed after the following announcement times:

- Minimum 2 weeks in advance
- On short notice for problem Audits
- On short notice for continually exceeding agreed PPM levels (ref: section 8.7)
- On short notice for inadequate/no response to non-conformance issues (ref: section 8)
- Relocation of production sites without approval from the Company
- Improper quality performance as a result of insecure internal or external process. Process Audits:
- Accompanying preventive action if necessary.

4.3. Audit type, participants and their functions will be announced in time before the audit.

4.4. The number of Auditors in sensitive manufacturing areas like a clean room will be carefully chosen; a minimum of 2 Auditors should be accepted. Operation instructions will be respected.

4.5. The information exchanged during an audit is confidential. An Audit report shall not be shared or passed to third parties without mutual agreement from all parties involved.

4.6. Audits at subcontractors need to be enabled by the supplier upon request (Para.4.1. to 4.4 apply). However, Rockford expects suppliers to manage their supply chain and will normally leave problem investigation and audits to the supplier unless in exceptional circumstances.

After the Audit:

4.7. An Audit report has to be provided at the end of an Audit during the common wrap-up discussion with the involved participants.

Confidentiality:

4.8. All audit reports and results are treated as strictly confidential. However, if the audit is in response to a problem or a new supplier, Rockford may be asked by a customer to share audit results. In these situations,

this shall be discussed with the supplier in advance of the audit in order to agree any limits and exclusions to processes and products that are not directly pertinent to a specific problem or process/product range.

5. Process Control and Product Monitoring / Process Capabilities

- 5.1. To control and monitor production part quality levels, appropriate process control techniques will be expected to be used by the supplier. Statistical Process Control (SPC) is a typical example of such process controls expected to be used during manufacturing at a component manufacturer.
- 5.2. The supplier must ensure that the process capabilities will satisfy quality requirements to meet the Zero-Defect target.

6. Failure Rates

- 6.1. Defects can be measured in absolute or relative numbers (pieces or PPM).
- 6.2. It is the goal of Rockford is to reach Zero Defect failure rate, and to achieve this, Rockford expects its suppliers to support the same goal.
- 6.3. PPM-rates are to be considered as maximum upper limits previously agreed with the supplier as part of the individual Quality Agreement contract. However, PPM-rates are considered intermediate milestones to reach the Zero Defect target. Therefore, PPM rates will be re-valuated and new targets negotiated annually with the supplier if required.
- 6.4. PPM failure rates will be evaluated from all non-conforming products and components received at Rockford from the supplier and this shall include 'concessed' parts. All unused non-conforming parts may be returned to the supplier.
- 6.5. Returned defects not caused by the supplier will be taken out of the supplier statistics.
- 6.6. Suppliers continually exceeding agreed PPM rates may be subject to process audits by the Rockford QA team.
- 6.7. Continued failure to meet agreed PPM rates will affect supplier rating scores and may lead to loss of current or future contracts.

7. Traceability and Counterfeit Avoidance

7.1. Traceability:

- The aim of traceability is to minimize the impact and consequences of quality concerns. The suppliers and Rockford will maintain an appropriate traceability system, including traceability to Original Equipment Manufacturer (OEM).
- All components, sub-assemblies, assemblies and finished products for us shall be 100% traceable to raw material at sub-contractors.
- If production/shipping requires splitting lots for processing/packing, those new sub-lots will be traced as separate lots and shall not be mixed.

- Traceability information must be clearly visible on the label of the packaging and on the associated paperwork.
- Backward traceability requires, as minimum information, the part number and additional information like trace code, lot number or date code.
- The maximum time period to provide the traceability information should be 2 working days.

7.2. Counterfeit Avoidance:

- Rockford recognises that the counterfeiting of components is a serious problem that has a negative impact on the worldwide economy and jeopardises the safety of individuals. Rockford rely on suppliers’ stringent controls to ensure Counterfeit risks are mitigated.
- The supplier shall not deliver counterfeit or suspected counterfeit parts. The supplier shall inform Rockford of any suspected counterfeit parts immediately on discovery within the supplier's supply chain.
- The supplier shall have a defined and documented policy for the avoidance of counterfeit material.

<u>Category/Type</u>	<u>Traceability Requirements</u>
Raw Material	Lot traceable to manufacturer’s part no, lot no, date code with Certified Mill Test Report or Material Test Report.
Manufactured Parts	Traceability shall be maintained for all product throughout production from raw material to finished product (including product quantities, split orders, nonconforming product etc.). Raw material used shall be Lot traceable to manufacturers part no, lot no, date code with Certified Mill Test Report or Material Test Report. Requirements specified for COTS; MOTS & Mechanical/Electrical parts also apply where applicable.
Commercial of the Shelf (COTS)	Traceability through supply chain to Original Equipment Manufacturer (OEM).
Modified of the Shelf (MOTS)	Traceability shall be maintained for all product modifications throughout production from material to finished product (including product quantities, split orders, nonconforming product etc.). The originating COTS item(s) shall have Traceability through supply chain to Original Equipment Manufacturer (OEM). Requirements specified for Raw Material & Mechanical/Electrical parts also apply where applicable for item modifications.
Mechanical / Electrical Parts	Lot traceable to Original Equipment Manufacturers part no, lot no, date code.

8. CAR (Corrective Action Request)

- 8.1. Rockford will notify the supplier immediately after a non-conformance has been identified at its premises or by its own customer.
- 8.2. Rockford will ensure the supplier is immediately informed of suspected quantity/percentage of non-conforming parts, replacement requirement dates and full circumstance of failure.
- 8.3. The non-conforming material (or sample) will be returned as soon as possible to allow the supplier to investigate the problem in its original condition.
- 8.4. Rockford may wish to investigate the problem cause and analyse the component/material, however, to ensure root cause analysis is identified correctly by the supplier it is imperative that un-modified examples are returned to the supplier for investigation.
- 8.5. On receipt of a notification of non-conformance, the supplier must immediately ascertain turnaround times for replacement of suspected non-conforming parts. The supplier shall co-operate in ensuring that the shipment of returned non-conforming material is minimised.
- 8.6. The supplier shall adopt the 8 Discipline approach for containment and long-term preventive action for non-conformances reported by Rockford, when requested. It is imperative that all reported non-conformances are investigated immediately and appropriate actions are taken to ensure contain the problem. Once containment is successfully achieved it is expected that the appropriate problem-solving techniques are used to identify root cause (i.e., Pareto, 5 Whys, Ishikawa/fish bone analysis etc.) Root causes must then be verified and acted upon in good time. While this process is underway, containment action will be expected to continue until evidence is provided to Rockford that the preventative action has been successful. Containment action may include 100% test/inspection.
- 8.7. Containment action, preventive action and verification processes will be expected to be time-based with action due dates agreed with Rockford. In cases where additional analysis needs to be carried out the supplier will inform immediately and provide regular updates and estimated completion date.
- 8.8. In the absence of any pre-agreement with the supplier, the required failure analysis and response times are as follows:

Event Occurs	
Problem notification and submission of component to supplier by Company	Starting Point
Formal acknowledgement by supplier that reported problem has been received	1 Day*
Receipt of samples at supplier factory	2 Days
Initial supplier problem verification complete and communicated	3 Days
Interim containment plan communicated to Company	5 Days
Supplier failure or problem analysis completed and results communicated	9 Days

Supplier corrective action plan communicated	10 Days
Supplier corrective and preventive action implemented and verified	As per plan

**" Days" indicate cumulative working days after problem submission by Company.*

9. Notification of Engineering and Process Changes

- 9.1. The supplier shall provide Rockford with parts produced using the manufacturing processes, equipment and location as released for series production by Rockford.
- 9.2. If a change to part design, process, component/raw material or site occurs then an Engineering Change Note (ECN) must be issued to and authorised by Rockford before the change takes place. The supplier must ensure they are in receipt of an ECN Number and written approval prior to delivery of parts affected by the change. This is a mandatory requirement.
- 9.3. An ECN request must be submitted well in advance of the intended date of implementation in order to account for the re-qualification effort by Rockford, allow all consequences and alternative solutions to be considered, and subsequent OEM approval.
- 9.4. Customers having purchased parts affected by the ECN or still carrying any open orders will be informed as defined above.
- 9.5. Change management during the design and development process has to be defined separately between customer and supplier. This is valid also for devices not qualified and/or not having a series release status at customer side.
- 9.6. Rockford will ensure an initial response is issued to the supplier within two weeks of the initial ECN request by the supplier. Final confirmation will be no longer than six weeks. Nevertheless, a supplier should not assume the change has been approved if feedback has not been received. Approval MUST be in writing. The supplier is responsible for following up/progressing change approvals with Rockford.

10. Right of Access

- 10.1. Suppliers and their sub-suppliers shall provide to Rockford Components Ltd, their customer, regulatory authorities and the Government Quality Assurance Representative (GQAR):
 - The right of access to facilities where parts of the contracted activities are being performed, including sub-suppliers' premises
 - Information pertaining to the fulfilment of requirements in the Contract
 - Unrestricted opportunity to evaluate supplier compliance with this document
 - Unrestricted opportunity to conduct verification of product conformity to Contract requirements
 - Assistance for evaluation, verification, validation, testing, inspection or release of the product to verify that Contract requirements have been accomplished at the supplier's or sub supplier's premises
 - The necessary equipment available for reasonable use for performing verification

- Supplier and/or sub-supplier's personnel for operation of verification equipment as required
- The necessary supplier documentation, to confirm product conformance to specification
- Copies of necessary documents, including those on electronic media
- Confirmation of capacity constraints

11. Archiving Periods for Quality Relevant Documents and Records

11.1. The Supplier shall ensure that documents for products are retained for a minimum of 13 years unless otherwise stated on the Purchase order.

12. Notification of Approval Status

12.1. Suppliers must notify Rockford Components of any significant changes in approval status, capability, location, key processes, systems or personnel which may affect the integrity of the product or service being supplied. Also, if Rockford Components identifies a process, system or individual as being key during the approval process then Rockford Component's approval is required before any change can be made.

12.2. It is the Suppliers responsibility to ensure that:

- Rockford shall be provided with up-to-date copies of Quality Management Certification, including scope of certification.
- Rockford shall be informed when approval bodies are changed, certificates are re-issued or revoked.

13. Shelf Life

13.1. Goods and products containing items with finite shelf life shall have the expiry date identified on the product and the delivery documentation. The **remaining shelf life must be a minimum of 80%** of the total shelf life for the material at time of delivery unless otherwise specified.

14. First Article Inspection

14.1. Rockford may request First Article Inspection Reports (FAIR) for goods from a Supplier. This requirement will be communicated via the Purchase Order and/or other contractual documents. The Supplier shall, unless otherwise stated, provide FAIR's to AS9102.

14.2. Completed FAIR's shall be submitted prior to shipment of goods. Electronic formatting is preferred; however, paper copies are acceptable.

15. Ethical Behaviour

15.1. Rockford understands the importance of ethical behaviours within the business practices and promote ethical business practices from our supply chain.

15.2. Rockford requires suppliers to conduct business in a way that delivers the highest levels of ethical and sustainable operations. This spans three key elements – economic, environment and social responsibility – and particularly focuses on:

- Eliminating child and slave labour

- Safe and hygienic working conditions
- Fair pay and working hours
- Anti-bribery and corruption
- Ethical sourcing and procurement
- Environmental awareness and sustainability

16. Additional Requirements

16.1. Rockford requires Suppliers to be able to adhere to the requirements specified with AS9100 Rev D clause 8.4.3 Information for External Providers. To this end Rockford requires suppliers to conform & where required demonstrate compliance with the additional requirements listed below.

- Suppliers are able show competence of employees, including any required qualification of persons;
- Suppliers can show the use of statistical techniques for product acceptance and related instructions for acceptance by the organization.
- Suppliers shall provide test specimens for design approval, inspection/verification, investigation, or auditing as deemed required during the contract
- Suppliers into Rockford are to ensure that employees are aware of their contribution to product or service conformity & their contribution to product safety.

17. Definitions

<u>Word / Phrase</u>	<u>Definition</u>
Backward Trace	Required information to identify suspect source material and origin at sub-contractor.
Company	Rockford Components Limited (Rockford).
Contract	Legal agreement between Rockford and the Supplier for the provision of goods and/or services.
FAIR	First Article Inspection Report
Forward Trace	Required information to identify already delivered suspect material in order to minimize the quantity, which needs to be caught as early as possible.
May	The described action is not mandatory.
Shall / Must	The described action in mandatory.
Should	The described action is expected, with some flexibility allowed in the method of compliance.
Supplier	Vendor, supplier of goods and services, sub-contractor or distributor.