

# SUPPLY CHAIN 2018

SUPPLIER QUALITY ASSURANCE  
REQUIREMENTS



**PUTTING QUALITY INTO LEGACY AIRCRAFT MANUFACTURE**

**Supplier Quality Assurance Requirements**

Rev. M

31<sup>st</sup> Mar 2018

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31<sup>st</sup> Mar 2018**FOREWORD**

The Aerospace industry is both competitive and demanding, with ever increasing levels of customer expectations for both product performance and reliability.

Ontic UK has established an enviable operating capability, serving a number of prestigious customers.

Our over-riding objective is to develop a World-Class reputation in the sphere of this scope, and without doubt the single most important strategy for achieving this aim is through continuous improvements and **Quality**:

- **Quality of** - **Process Development**
- **Quality of** - **Manufacture**
- **Quality of** - **Service**

Our purchased material supplies are a vital ingredient for success, and this document has been compiled to define the basic systems and processes we expect our Suppliers to adapt in order to ensure that the Ontic UK quality responsibilities are fully met.

The supplier shall maintain a Quality Programme in compliance with ISO9001/AS9100/EASA requirements. The supplier shall maintain compliance the Ontic UK Supplier Quality Assurance Requirements (SQAR) unless agreed with Ontic UK Supplier Quality. There may be specific or special requirements applicable to the supply of certain products or services based on Engineering, Quality and Customer requirements. The supplier will be made aware of these by either the Supplier Quality, Supply Chain or by Purchase Order.

It is our intention to develop long term partnerships with those Suppliers who can consistently achieve these standards so that together we can provide the level of quality excellence necessary to satisfy all our customer needs.

As an Aerospace Company we have based the Supplier Quality Assurance Requirements (SQAR), on the High Level Structure (HLS) as per Annex SL. The clauses within this document are aligned and identified as per AS9100 rev D, which encompasses all the clauses of ISO9001:2015

**Note:** For guidelines on implementing supply chain best practices.

Reference IAQG [Supply Chain Management Handbook \(SCMH\)](#).

We look forward to your commitment and support in achieving this aim.



Lee Price  
Supplier Quality Manager

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31<sup>st</sup> Mar 2018**INTRODUCTION****0.1 General**

The purpose of this document is to define the quality requirements for suppliers of Ontic UK.

The requirements are applicable in their entirety to services and or products allocated to an Ontic UK supplier as well as to those attributed to the suppliers and sub-tiers suppliers.

Acceptance of services or products is contingent upon compliance with these requirements, except Rail. Any exceptions to the requirements must be coordinated with Ontic UK Supplier Quality [supplier.quality@ontic.com](mailto:supplier.quality@ontic.com). Ontic UK supplier oversight ensures purchased products conform to the specified requirements which include:

- Evaluation and authorisation of the supplier
- Specification of the requirements applied to the supplier, introduced in contracts and/or contractually in the purchase order
- Product/process qualification, in particular, First Article Inspection monitoring
- Monitoring of the supplier (measurement of the level of quality, e.g. rejection rate, periodic follow up, quality audit, etc.)
- Verification of Purchased material

Definitions used in this document, with their intent are listed below:

“SHALL” denotes a mandatory requirement. Any departure is not permissible without formal agreement.

“SHOULD” denotes a recommendation. It is expected to be followed unless good reason are stated for not doing so.

“MUST” is used for legislative or regulatory requirements (e.g. Health & Safety) and shall be complied with.

“WILL” denotes provision, service or an intention in connection with a requirement of this document.

“MAY” denotes a permissible practice or action. It does not express a requirement of this document.

“NOTE” is a guidance to aid understanding.

**0.2 Quality Management Principles**

The Quality Management Principles are based on the principles described in ISO9001 and are equally applicable to this document:

- Customer focus
- Leadership
- Engagement of people
- Process approach
- Improvement
- Evidence based decision making
- Relationship management

**0.3 Process Approach**

The supplier shall use a step by step approach to activities and process applicable to the Ontic UK scope of supply for products and/or services to ensure Ontic UK expectations are met or exceeded. An example of this step by step approach is the Plan Do Check Act (PDCA) cycle as described in ISO9001:2015

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Risk-based thinking is essential for the supplier to achieve and/or exceed Ontic UK's expectations. A supplier should plan and implement actions to address risks and opportunities to establish a basis for increasing the effectiveness of the delivery of Ontic UK requirement to enable improved results, and preventing negative effects and/or potential issues that may have a detrimental effect on the supply of the Ontic UK requirement.

**0.4 Relationship with Other Management Systems**

Although this document is written around the requirements of AS9100 rev D it includes the requirement of ISO9001:2015. Requirements will be identified using the following:

- **AS9100 requirements will be highlighted in Bold Italics.**
  - a. The supplier shall maintain approval to at least ISO9001 or agreed quality plan
  - b. Where applicable the supplier shall be certified to AS9100
  - c. All clauses of this document are to be adhered to by the supplier within their scope of supply, unless agreed in writing from Ontic UK or there is an exemption within this document (as denoted by a *NOTE:*)
  - d. Certain clauses within this document may require additional work, processes/procedures or a statement of compliance by the supplier, above those in ISO or AS.
  - e. Where referenced within this document the supplier shall comply with the relevant clauses of ISO 14001.

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31<sup>st</sup> Mar 2018**1. SCOPE**

- This document is based on AS9100 and includes the requirements of ISO 9001:2015 and specific requirements of Ontic UK
- The requirements of this document shall be adhered to unless Ontic UK Supplier Quality has waived compliance requirements. Such waiver shall only be valid if confirmed in writing or Quality Plan by Ontic UK Supplier Quality and may only be for a Purchase Order or specific part as directed by the confirmation
- ***If there is a conflict between the requirements of this document and an applicable statutory or regulatory requirements, the latter shall take precedence.***
- This document specifies the requirements of the supplier to demonstrate their ability to consistently provide products and services that meet Ontic UK, applicable statutory and regulatory requirements.
- The aim of this document is to assist the supplier in meeting or exceeding the requirements of Ontic UK.
- Although ISO 14001 is not a requirement of this document the supplier shall review their processes with respect to the scope of supply to Ontic UK to ensure there is no detrimental effect to the environment the supplier works in, to the product or service being supplied to Ontic UK. If such a process is found the supplier is to inform Ontic UK immediately.

**2. NORMATIVE REFERENCES**

Regulations, Standards and Ontic UK documents referenced in this SQAR should be used as an aid, to assist and improve/enhance the service being provided to Ontic UK.

**3. TERMS AND DEFINITIONS**

In addition to the terms and definitions given in ISO9001 the following clauses also apply:

**3.1 Counterfeit Part**

*Definition as per AS9100 rev D. (See clause 8.1.9)*

**3.2 Critical Items**

*Definition as per AS9100 rev D. (See clause 8.6.7)*

**3.3 Key Characteristics**

*Definition as per AS9100 rev D*

**3.4 Product Safety**

*Definition as per AS9100 rev D*

**3.5 Special Requirements**

*Definition as per AS9100 rev D*

**3.6 Supplier Non-conformance Approval Request (SNAR)**

The process by which the supplier requests approval to deliver a product or service that does not meet the requirements. (See clause 8.7.2)

**3.7 Supplier Quality Assurance Requirements (SQAR)**

The Ontic general supplier quality requirements.

*Note: Additional specific product or service quality requirements may be necessary which will be conveyed to the supplier via email or Purchase Order.*

**3.8 Material Review Report (MRR)**

The documented report that is sent with a rejected part to the supplier. (See clause 10.3)

**3.9 Supplier Corrective Action Report (SCAR)**

The document that requests the supplier to carry out an investigation and produce a report to Ontic due a failure of the supplier's product, service, process or procedure.

Note: A SCAR might accompany a reject product or service or it may be the result of a quality audit.

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31<sup>st</sup> Mar 2018**4. CONTEXT OF THE ORGANISATION**

Please refer to the requirements of ISO9001:2015 or AS9100 rev D for further clarity and detail.

**4.4 Quality Management System and its Processes**

4.4.1 The supplier shall ensure processes and procedures are in place to meet Ontic UK requirements and regulatory quality management system. These will be reviewed and improved regularly to confirm validity to Ontic UK requirements.

The supplier, where applicable to their scope of supply, include documentary evidence to confirm that the following requirements are adhered to:

**4.4.2 Customs Trade Partnership against Terrorism (C-TPAT)**

- In support of Boeing's C-TPAT implementation programme, these security requirements and guidelines are provided to international shippers to institute effective security practices designed to ensure supply chain security to mitigate the risk of loss, theft and/or contraband smuggling that could be potentially introduce terrorists and implements of terrorism into the global supply chain.
- Relevant Boeing product shippers must complete an Ontic UK Security Questionnaire to enable the above implementation programme within the global supply chain.

**4.4.3 Restriction, Evaluation and Authorisation of Chemicals (REACH) status regulations and substances of very high concern.**

Products purchased from the supplier and Products sold by Ontic UK are "Articles" as defined in the REACH (Article 3 Definitions). Moreover and under normal and reasonably foreseeable circumstances of application, the article(s) supplied shall not release any Substances of Very High Concern (SVHC).

- The supplier's obligation to Ontic UK is to declare the presence of an SVHC in the Article (Part) they supply.
- All future orders will have the following statement:-
- REACH Status regulations and Substances of Very High Concern (SVHC's)
- All delivered articles (Parts) must have a clearly defined statement informing Ontic UK of the known REACH status of the article (Part) included on the C of C or on the delivery paperwork.

Note: This article (part) does/does not contain SVHC's

- (If the article does contain SVHC's then state the type and % weight SVHC/per article. i.e.: > or < 0.1% w/w of SVHC's present)
- Ontic UK are obligated to declare to their customers any substance that is on the Substance of Very High Concern (SVHC) list, Ontic UK will follow information obligation as per Article 33 of REACH regulation (EC No: 1907/2006)

Note: See [www.echa.eu](http://www.echa.eu) for guidance

**4.4.4 Modern Slavery / Ethics**

Ontic expect each of our suppliers, contractors and consultants (collectively, "Suppliers") to conduct business fairly, impartially and in an ethical and proper manner. In addition, Ontic expect each of our Suppliers to adhere to the principles of our Ethical Conduct Policies concerning compliance with all applicable laws, conducting business fairly and ethically, respecting human rights, conserving the environment, and providing high quality, safe products and services. Suppliers are expected to cascade

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these principles to their own suppliers. This may involve the establishment of supply chain management processes that integrate the requirements of this Code of Ethical Conduct.

Ontic will assess its Suppliers' compliance with the foregoing commitment to our Ethical Conduct Policies and violations of this Code of Ethical Conduct may jeopardize a Supplier's relationship up to and including termination of the business relationship.

**4.4.5 Dodd Franks – Conflict Minerals**

The supplier shall have a Policy or Procedure in place to ensure any changes to the Dodd Frank's regulatory requirements are reviewed and abided by and is flowed down to their supply chain.

Note: See <https://www.gov.uk/guidance/conflict-minerals> for guidance

4.4.5.1 Within the scope of supply to Ontic UK the supplier shall maintain documented information and evidence to confirm they have achieved, or exceeded, Ontic UK requirements.

**5. LEADERSHIP**

Please refer to the requirements of ISO9001:2015 or AS9100 rev D for further clarity and detail.

**5.1 Leadership and Commitment**

*Product and/or service delivered to Ontic UK is measured for Quality and On Time in Fully (OTIF) against the schedule/Purchase Order and appropriate action is taken and recorded for any non-conformance.*

**5.1.1 Right of Facility Access**

The supplier shall grant **Ontic UK, Civil and/or Military regulatory authorities and/or Customer representatives** access to their facilities and documentation and provide them with necessary means, in accordance with the confidentiality rules, for performing the supervisory actions, including checking for conformity to a contract and/or to a product, and surveys on the functioning of the Quality Management System. In cooperation with the supplier, this right of access is extended to the sub-tier suppliers.

**5.2 Policy**

Top management shall ensure the Quality Policy encompasses the requirements of Ontic UK and is communicated, available and understood throughout the business

**5.3 Organisational Roles, Responsibilities, and Authorities**

Top management shall ensure that the responsibilities and authorities for relevant employees to ensure that the Ontic UK product and/or services are delivered to the satisfaction of Ontic UK, including reporting on the performance of the Quality and OTD at Ontic UK and on opportunities for improvement (see 10.1) to top management in particular to top management are assigned, communicated, and understood by all relevant personnel.

**6. PLANNING**

Please refer to the requirements of ISO9001:2015 or AS9100 rev D for further clarity and detail.

**6.1 Actions to Address Risks and Opportunities**

**6.1.1** The supplier shall determine the risk and opportunities of external and internal issues that could impact on Ontic UK requirements and interested parties and their requirements if they have the potential to impact on the supplier's ability to meet or exceed Ontic UK requirements

**6.1.2** The supplier shall plan how to integrate, implement and evaluate the effectiveness of the action to address these risks and opportunities.

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31<sup>st</sup> Mar 2018**6.2 Quality Objectives and Planning to Achieve Them**

**6.2.1** The supplier should establish quality objectives at relevant points in the production of Ontic UK requirements needed achieve or exceed Ontic UK requirements. These objectives will be Specific, Meaningful, Achievable, Relevant, Time-Bound, Evaluate, Re-Adjust, (SMARTER)

**6.2.2** When planning the objectives, the supplier should determine who, what where when and how.

**6.3 Planning of Changes (SNAR see 8.7.2, FAIR see 8.5.11)**

If the supplier determines the need for changes to a process or procedure that will effect or change the way that Ontic UK requirements are manufactured, produced, procured or delivered, the changes shall be carried out in a planned manner (see 4.4). The supplier shall seek written approval prior from Ontic UK before the change.

**7. SUPPORT**

Please refer to the requirements of ISO9001:2015 or AS9100 rev D for further clarity and detail.

**7.1 Resources****7.1.1 General**

The supplier shall determine and provide all the resources necessary to meet Ontic UK requirements for product and/or service Quality and OTD.

This will include, but not limited to, the approvals and controls required if using external providers.

**7.1.2 People**

The supplier shall determine, provide and maintain the qualified and quantity of personnel required for successful completion of the Ontic UK requirement including Quality and OTIF.

**7.1.3 Infrastructure**

The supplier shall determine, provide and maintain full turnkey infrastructure to ensure Ontic UK requirements.

**7.1.4 Environment for the Operation of Processes**

The supplier shall determine, provide, and maintain the environment necessary to ensure Ontic UK requirements, this will include, but not limited to, human and physical factors

**7.1.5 Monitoring and Measuring Resources****7.1.5.1 General**

Supplier shall maintain a calibration system in accordance to AS9100/ISO9001/EASA as a minimum requirement.

The supplier shall determine and provide the necessary resources to ensure conformity to requirements of Ontic UK products and/or services.

The supplier shall ensure the resources are correct for the requirement, and maintained.

Documentation that verifies the accuracy of the monitoring and measurement shall be retained

**7.1.5.2 Measurement Traceability calibration, Ontic UK owned tooling**

The supplier shall determine and provide the necessary resources to ensure valid and accurate results when monitoring or measuring is used to verify the conformity of products and/or services to Ontic UK requirements.

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The supplier shall ensure that the resources provided are correct for the measurements required and are maintained to ensure continued fitness for purpose. Documentary evidence is required and is to be retained.

Equipment used for the measurement of Ontic UK products shall be calibrated, verified, or both, at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards.

When no such standards exist, the basis and records used for calibration or verification shall be documented retained. The equipment will be identified to indicate its calibration status. The measuring equipment shall be protected to ensure adjustments, damage or deterioration that could affect the accuracy of the calibration cannot take place.

***The supplier shall maintain a process and register of monitoring and measuring equipment to enable the call in of equipment requiring calibration or verification.***

***The register shall include equipment type, asset code (unique identification code), location and the calibration or verification method, frequency, and acceptance criteria.***

***Monitoring and measuring equipment can include, but are not limited to: test hardware, test software, automated test equipment (ATE), and plotters used to produce verification data.***

***Calibration or verification of monitoring and measuring equipment shall be carried out under suitable environmental conditions (see 7.1.4).***

The supplier shall determine the skill levels necessary to meet Ontic UK requirements, applicable statutory and regulatory requirements and maintain these levels for the duration of the contract/ Purchase Order.

#### **7.1.6 Supplier Knowledge**

The supplier shall ensure they have the correct knowledge and skill set to ensure that the Ontic UK requirements and expectations are either met and/or exceeded.

#### **7.2 Competence**

The supplier shall determine and ensure personnel have the competence necessary to fulfil the Ontic UK requirements. ***The competencies shall be regularly reviewed and documented to confirm continuing validity.***

#### **7.3 Awareness**

The supplier shall ensure that persons carrying out work under their control are aware of the Ontic UK requirements, ***their contribution to product safety, conformity and the importance of ethical behaviour***, the implications of not conforming to the Ontic UK requirements and relevant quality documentation.

#### **7.4 Communication**

The supplier shall determine and maintain the necessary communications, both internal and Ontic UK to enable them to meet Ontic UK requirements and expectations. This should include, but not limited to,:

- Who will communicate
- How will it be communicated
- When it is communicated
- To whom the communication is directed.

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The minimum communication required is anything that will affect quality, delivery program, and any changes to production processes.

**7.5 Documented Information****7.5.1 General**

The supplier's quality system shall include documented information required by this document and for the compliance to Ontic UK requirements.

**7.5.2 Creating and Updating**

When creating and updating documentation for Ontic UK requirements, the supplier shall ensure appropriate identification and description, format (including software) and media is used that is suitability and adequate.

**7.5.3 Control of Documented Information**

The control of documented information, shall be in accordance with ISO9001:2015 or AS9100 rev D.

**7.6 Record retention**

The Supplier shall maintain all records of First Articles, In-Process, Final Inspections, Tests, and any other part data history as imposed by Purchase order. Inspection records shall indicate the nature and number of observations made the number and type of deficiencies found, the quantities approved and rejected, and the nature of corrective action taken, as appropriate. The First Article Inspection Reports (FAIR) shall be in accordance 8.5.11 this document.

This information and all supporting documentation such as raw material certifications, special processing records and certifications, manufacturing records, i.e., route sheets and/or work orders travellers, shall be retained by the Supplier in accordance with the terms of the purchase order. When the Purchase Order is complete, such records shall be maintained and available to the buyer on request for a period of NOT LESS THAN TWELVE (12) YEARS from the closing of the purchase order unless stated otherwise on the purchase order. CSI or SC or Grade A or Class 1 parts for a period NOT LESS THAN TWENTY-FIVE (25) YEARS.

NOTE: Records shall remain legible, readily identifiable, and retrievable.

**7.7 Drawings specifications and quality requirements**

The Suppliers Quality System shall assure that the latest applicable drawings, specifications, and quality requirements are compatible with current purchase order agreements and are available and in use by the Supplier's manufacturing and inspection areas. Military Standards and Specifications utilised shall be to the latest revision in effect on the date of the purchase order, unless otherwise specified.

**8. OPERATION**

Please refer to the requirements of ISO9001:2015 or AS9100 rev D for further clarity and detail.

**8.1 Operational Planning and Control**

The supplier shall determine, plan, implement, and control the processes (see 4.4) needed to meet the requirements of Ontic UK. The following should be considered

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31<sup>st</sup> Mar 2018**8.1.1 Personal and product safety**

The use of mercury containing materials is prohibited during the fabrication assembly, testing or any phase of manufacture of any material furnished to Ontic UK - Not required for Rail products.

A Material Safety Data Sheet (MSDS) shall accompany each shipment Hazardous material supplied to Ontic UK.

- ***Production and inspection***
- ***Reliability, availability, and maintainability***
- ***Parts and materials used in the product***, including traceability where required
- ***Selection and development of embedded software;***
- ***prevention, detection, and removal of foreign objects;***

The supplier shall maintain a FOD (Foreign Object Damage/Debris) control programme assuring work is accomplished in a manner preventing foreign objects or material from entering and remaining in deliverable items. This shall be in accordance with PU101-3A, "Foreign Object Debris/Foreign Object Damage (FOD) Prevention Requirements for Ontic UK Suppliers."

Maintenance of the work area and control of tools, parts, and material shall preclude the risk of FOD incidents. The supplier shall document and investigate all FOD incidents assuring elimination through root cause analysis. Ontic UK shall have the right to perform inspection and/or audits as a method of verification that the supplier's FOD control programme is functional, documented, and effective. The supplier shall identify a FOD control person responsible for implementing FOD prevention awareness and training.

Prior to closing inaccessible or obscured areas or compartments during assembly the supplier shall inspect for foreign objects/materials. Tooling, jigs, fixtures, test equipment, and handling devices shall be maintained in a state of cleanliness and repair to prevent FOD. Supplier shall provide a statement of certification that deliverable products are free of any foreign materials that could cause damage to the product or to the components/systems of which the product is a part or to which the product is attached.

Seller shall implement processes and procedures for "Foreign Object Debris/Foreign Object Damage (FOD) Prevention Requirements for Boeing Suppliers".

Note: FOD prevention programme other than the above must be approved in writing by Ontic UK for usage.

**8.1.2 Handling, packaging, and preservation;**

The Supplier shall assure that all articles are packaged in a manner and with materials necessary to prevent deterioration, corrosion, or damage. Requirements for packaging shall consider conditions affecting the article while at the supplier's plant, transportation to destination and the expected or specified conditions at the destination. During fabrication and processing, special carts, boxes, containers and transportation vehicles shall be used as necessary to prevent damage due to handling. When packaging small parts, the use of staples is prohibited due to the potential for FOD.

Marking shall be applied as specified by the engineering drawing or specification; if the engineering drawing or specification does not define marking method, marking shall be applied as instructed by specific Purchase Order notation.

Unless otherwise specified on the Purchase Order, all shelf-life materials shall be delivered to Ontic UK with a minimum of 90% shelf life remaining. The date of manufacture and expiration dates are required to be on the certification and the packaging.



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When this SQAR is imposed by Purchase Order, any process utilised in the production of the product that Ontic UK identifies as having critical processes must be adhered to. This includes all specified equipment, tooling, process steps and sequencing involved in the production of the completed article including any outside processing. The First Article Inspection Report on the first production run will be submitted with the critical process description and any associated method sheets, this will be the mandated process for continued production of the products.

Any changes to any aspect of the manufacturing processes designated as critical must be submitted to Ontic UK, and approved prior to implementation of those changes in the frozen critical process. Failure to adhere to this requirement will subject the product to material rejection. Ontic UK will work expeditiously to support the supplier's request for change in processes identified as critical and will provide such approval in writing noting the nature of the changes and affectivity date or Serial Number.

**8.1.4 Establishing criteria for the processes and the acceptance of products and services****Sampling Plan**

The Supplier may use sampling procedures (unless stipulated in the Purchase Order and/or this document) when tests are destructive or when quality history, inherent characteristics, statistically controlled processes or operation repeatability due to numerically controlled machines justify less than 100% inspection.

Sampling plans shall be in accordance with BS6001/ISO 18414, with the exception that lot acceptance will always be:

- "accept on zero, reject on one"
- Suppliers shall submit their sampling plan as part of the First Article Inspection package for the product delivered. Sampling plans for use on Ontic UK products other than the above must be approved in writing by Ontic UK Supplier Quality. Ontic UK will not approve any sampling plan which permits lot acceptance with defectives in the population sample.

**Visual Inspection - Lighting**

- **Standard and EASA Part 145 visual inspection** requires the area to be to a minimum lux 800 Lux and clean with all the necessary equipment required, Lux readings must be recorded.
- **CSI, SC, Grade A, Class 1 parts and Source Inspection** require the area to be to a minimum lux 1500 Lux and clean with all the necessary equipment required, Lux readings must be recorded.

NOTE: Not required for Rail product.

- Determining the resources needed to meet Ontic UK requirements for quality and OTD
- Maintaining, and retaining documented information to ensure product/service conformity and traceability
- Determine and maintain controls to prevent the delivery of nonconforming products and services to Ontic UK.
- The supplier shall ensure that outsourced processes are controlled (see 8.4).

**8.1.5 Supplier change notification**

The supplier shall notify Ontic UK of all supplier and Manufacturing operational changes that could have an impact on the product or service being provided to Ontic UK.

These changes may include, but not limited to the following:

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- Change in Manufacturing Location
- Change in supplier Leadership
- Change in Sub-Tier Supplier (to include special Processes)
- Change in AS9100/ISO9001/EASA or Nadcap certification status (including renewal of certification from certifying body)
- Change in Manufacturing Capability
- Change in Ontic UK Owned tooling status (Serviceability)

**8.1.6 Operational Risk Management**

The supplier determine and implement a process for managing operational risks to the fulfilment of Ontic UK requirements, the process will include roles and responsibilities, identification, assessment and communication of the risks. Management to mitigate the risks that exceed acceptance criteria, review and monitoring of risks remaining after mitigation actions

**8.1.7 Configuration Management**

The supplier shall determine and implement a process for configuration management as appropriate to the scope of supply of product/service to Ontic UK.

**8.1.8 Product Safety**

The supplier shall determine and implement a process to assure product safety during the entire product life cycle as appropriate to the scope of supply of product/service to Ontic UK.

**8.1.9 Prevention of Counterfeit Parts**

All suppliers delivering products containing Electronic, Electric, Electromechanical (EEE) components shall develop and implement a Counterfeit Parts Control plan (CPCP) that's conforms to the current revision of SAE AS 5553.

**8.2 Requirements for Products and Services****8.2.1 Ontic UK Communication**

Communication with Ontic UK shall include, but not limited to, providing information relating to products and/or services being provided by the supplier to Ontic UK.

**8.2.2 Determining the Requirements for Products and Services**

When reviewing the requirements of Ontic UK, the supplier shall ensure that they clearly understand what is required, relevant information is available, applicable statutory and regulatory requirements are known, the requirements can be met, ***risks have been identified and any special requirements have been determined.***

**8.2.3 Review of the Requirements for Products and Services**

The supplier shall conduct a review (Contract Review) on the Purchase Order or Contract from Ontic UK prior to acceptance. This review shall include, but not limited to:

- the ability to meet the requirement for product and/or services to Ontic UK
- requirements specified by Ontic UK including delivery and any post-delivery activities
- statutory and regulatory requirements applicable to the products and services
- Ontic UK specifications and standards applicable to the Purchase Order or Contract
- requirements not stated by Ontic UK, but necessary for the specified or intended use, when known
- resources and infrastructure required to meet the Ontic UK requirement

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The review should include all necessary functions within the supplier's organisation relevant to Purchase Order/Contract, size of the business and considered necessary by the supplier to ensure that on acceptance or the order the requirements of Ontic UK will be fulfilled. The supplier shall retain documented evidence the review has been successfully completed.

**8.2.4 Changes to Requirements for Products and Services**

If a change to the requirements is received from Ontic UK the supplier shall carry a Contract Review as per 8.2.3 above on the change. On acceptance the supplier will ensure that updated documentation as applicable it cascaded through their organisation and sub tier as required.

**8.3 Design and Development of Products and Services**

Please refer to the requirements of ISO9001:2015 or AS9100 rev D for further clarity and detail.

**8.3.1 General**

If required by the Purchase Order or Contract the supplier shall establish, implement, and maintain a design and development process that is appropriate to the product and/or service requested by Ontic UK, per ISO/AS

**8.4 Control of Externally Provided Processes, Products, and Services****8.4.1 General**

The supplier shall be responsible for flow down of all the requirements and provisions of the Ontic UK purchase order applicable to the supplier's sub-contractors, including the applicable requirements of this SQAR.

The supplier shall ensure that externally provided processes, products, and services meet the requirements of Ontic UK and any special process requirements including relevant clauses of this SQAR.

***The supplier shall be fully responsible for the conformity of any sub-contract/sub-tier product, service and/or process provided in the course of fulfilling Ontic UK requirements. This applies equally to sub-contract/sub-tier, designated by Ontic UK.***

***The supplier shall identify and manage the risks associated with these suppliers and insert controls as necessary.***

The supplier shall determine evaluation criteria for the selection, monitoring of performance, and re-evaluation of external providers, based on product and/or services to be provided for Ontic UK products and/or services. The supplier shall retain documented information of these activities and any necessary actions arising from the evaluations.

Control of the external suppliers shall come under the supplier's quality management system and be on their Approved Suppliers List.

**8.4.2 Type and Extent of Control****8.4.2.1 Process approvals**

Special process sub-tiers, such as welding, heat treating, plating, coating, non-destructive testing, etc. must be performed by either Ontic UK, Ontic UK Customer, or NADCAP approved suppliers. The current approval status of processing sub-tiers must be confirmed with Ontic UK prior to performing the process. The supplier shall contact their Ontic UK buyer to determine current approval status.

Sub-contract processing of product, that the suppliers were contracted to perform is prohibited by Ontic UK. Suppliers shall perform all processes, with the exception of those mentioned above. All deviations to this requirement require the written approval of Ontic UK Supplier Quality Department.

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The supplier shall ensure that externally provided processes, products, and services do not have a detrimental effect on the supplier ability to meet Ontic UK requirements.

The supplier shall define the controls required to maintain Quality and OTD for product, process and/or service to be provided, including acceptance and verification. These controls will be in line with the risks involved with the sub-contractor/sub-tier, their scope of supply, the risk to the supplier and the risk to Ontic UK.

**8.4.3 Information for External Providers**

**See AS9100 rev D for a more detailed list of requirements.**

Prior to communication with the external provider the supplier shall confirm all the requirements needed by the external provider to complete the task to their, and Ontic UK, requirements. This includes drawings, data, competencies, verification, standards, product safety and ethical behaviour.

**8.5 Production and Service Provision****8.5.1 Control of Production and Service Provision**

***This list is not exhaustive and more information can be found in AS9100 Rev D.***

The supplier shall implement production and service provision under controlled conditions, which includes, as applicable, documentation that defines the product definition, parts lists, drawings material, processes etc. of the products to be produced, the services to be provided, or the activities to be performed and the results to be achieved. This can be in the form of a root card, job traveller etc.

- The method of product, service and/or process verification, including but not limited to, suitable and available measuring and monitoring equipment, acceptance and rejection criteria and variation stages.
- The environment and infrastructure (including molds, jigs, fixtures, and software) is suitable for the operation to be carried out.
- Competent and qualified persons.
- Special processes documented.
- Accountability and control of parts, processes and product.
- Workmanship standards to be used.
- Actions to prevent human errors.
- Control and isolation of non-conforming parts or product.

**8.5.2 Supplier Surveillance**

Ontic UK Quality Representative shall perform evaluation/ acceptance of product at the supplier's facility. This will include surveillance of the products and supplier's systems, procedures, and facilities. The supplier shall furnish, at no cost, the necessary facilities and equipment, supply data, and perform tests/inspections as required by applicable drawings, specifications, or Ontic UK directed Inspection Instructions under surveillance of Ontic UK Supplier Quality Representative. The supplier is to notify Ontic UK Buyer, requesting source surveillance at a minimum of 48 hours in advance of desired inspection date.

**8.5.3 Source inspection**

Source Inspection at a supplier's site will be imposed by a letter issued from the Supplier Quality Manager to the supplier; as well as being noted on the applicable Purchase Order. Only the Supplier Quality Manager or delegate can remove or waive source inspection as per Ontic UK's Procedure PU-105.

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Source inspection may be imposed by, but not limited to:

- Product Audit / Inspection
- Process Audit / Inspection
- Corrective action review / follow up

Supplier's responsibility:

- Notify Ontic UK Supplier Quality at least forty-eight (48) hours in advance of the time the product is to be inspected. Fourteen (14) days in advance, when possible, of the time when such inspection will be required when "Government Source Inspection or Customer Source Inspection" is required.
  - Provide all the required facilities for the source inspector to perform source inspection
  - Applicable specifications
  - Purchase order
  - Inspection check sheet
  - All other documentation as required
  - An inspector must be always available to assist
- Evidence of a completed source inspection must be indicated on the inspection or ATP record and the shipping paperwork.

**8.5.4 Control of Equipment, Tools, and Software Programs**

The use of software programs, tools and equipment used in the production process to control, monitor or automate shall be validated for their use prior to production.

**8.5.5 Validation and Control of Special Processes**

Where special process cannot be verified by monitoring or measurement the supplier shall determine a method by which the process can be verified, including facilities, equipment, competent persons. This method, with the results shall be documented and retained.

**8.5.6 Electrical/electronic assembly & soldering requirements**

All electronic assembly and soldering shall conform to the criteria of IPC-A-610 Class 3, current revision, unless specified differently on the Ontic UK Purchase Order.

Technicians performing work on, and inspectors engaged, in final acceptance of electrical/ electronic products for purchase by Ontic UK shall be Certified Application Specialists per IPC-A-610 or J-STD-001, current revisions.

All suppliers delivering Products containing EEE components shall develop and implement a Lead-free Control Plan (LFCP) that's conforms to the current revision of SAE GEIA-STD-0005-1. No deviation from specified solder is permitted.

All soldering must be done in accordance with the engineering drawing

**8.5.7 COTS Assemblies**

All suppliers delivering Products containing EEE COTS Assemblies shall develop and implement a COTS Assembly Management Plan (CAMP) that conforms to the current revision of SAE EIA-933.

**8.5.8 Welding/brazing requirements**

All welding/brazing shall conform to the criteria established in the specification or workmanship standard noted on the applicable engineering drawing or Ontic UK Purchase Order. Certification to the imposed specification shall be provided with each order supplied.

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The supplier shall furnish two test bars representative of each heat treat lot, poured from the same melt as the castings supplied. Test bars shall be permanently identified with the supplier's name or trademark, melt, heat treat lot number, and alloy type. The supplier shall retain the test bars for a period of not less than what's stated in section 7.6, and must be made available to Ontic UK upon request. Test bars stored at the supplier's facility shall not be destroyed without prior written approval from Ontic UK purchasing.

**8.5.10 Forging test bars**

The supplier shall furnish with each shipment of forging: two test bars produced from the same heat of material as the forging supplied. Test bars must have the same percentage of reduction as parts supplied, and shall be permanently identified with the supplier's name or trademark, material heat number, heat treat lot number and alloy identification.

The supplier shall comply with the paragraph above except that the test bars shall be retained by the forging facility for a minimum of 12 years and be made available to Ontic UK upon request.

Test bars stored at the supplier's facility shall not be destroyed during the storage period without prior written approval from Ontic UK purchasing.

**8.5.11 Production Process Verification**

The supplier shall confirm by verification the production processes consistently meet the desired output and Ontic UK requirements. This could include Production Part Approval Process (PPAP), Control Plans (CP), risk assessments and Capacity and Capability Study (C&CS).

The supplier shall use a representative item from the first production run to verify that processes, documentation, tooling and skill levels are able to produce parts and assemblies that are compliance to requirements.

This is demonstrated by submitting a First Article Inspection Report (FAIR) with the first lot shipment of product and with the first lot shipment of each subsequent revision.

First Article Inspection Reports (FAIR) must include serial numbers (when applicable), all dimensions, general notes, tolerance ranges, actual measurements and ballooned drawings, sampling plan and where physical testing is required the results of the tests. First article parts must be identified as "First Article" by tagging, special packaging, or other suitable means of identification.

Ontic UK requires suppliers to use AS9102 latest revision format for First Article reporting. Blank FAIR forms can be supplied by Ontic UK on request.

Additional first article inspection shall be performed when:

- Either new manufacturing processes or new methods are used that could affect compliance to drawing requirements.
- New, reworked or transferred tooling is used
- A drawing revision effects the operation(s) performed by the supplier. A drawing used in the manufacture or procurement of the product or part has been up issued
- A lapse in production exceeding 24 months.
- Introduction of new supplier, sub-supplier or location of the supplier has changed.

Catalogue and commercial parts are excluded; a certificate of conformance to all purchase order requirements is required.

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The supplier shall retain the FAIR as proof of the production process.

**Novated Supplier FAIR Requirement**

The supplier will work to the following FAIR requirements for Novated Purchase Orders transferred from the OEM over to Ontic.

- Supplier(s) which have produced full FAIRs for previous companies (less than 24 months) can submit that full FAIR to Ontic with an additional AS9102 latest revision Form1
- Continuous Production (more than 24 months) supplier will need to submit the latest full FAIR and the Delta FAIR (if applicable) with written confirmation on letter head to verify continuous production, Delta FAIR's on their will not be acceptable
- FAIRs will be checked by Ontic Receiving Inspection and if deemed not acceptable, the Supplier will be notified by Ontic Supply Chain and the supplier will need to create a new FAIR on the next new order placed by Ontic Supply Chain.
- FAIR unavailable will require a new FAIR with the delivery
- Delta FAIRs on their own will not be acceptable

**8.5.12 Metallurgical First Article**

The supplier shall furnish evidence that all material qualification tests and inspections have been performed and results meet the applicable material specifications and drawings. Samples of physical properties test such as grain flow, case depth, EDM recast layer, inter granular attack, case depth; etc. shall be included in the shipment when applicable.

**8.5.13 Identification and Traceability**

The supplier shall review the scope of supply to determine outputs necessary to ensure conformance to requirements.

The supplier shall record and maintain the identification of the configuration of the products and/or services including the status of outputs with respect to monitoring and measurement requirements throughout production and service provision. Acceptance authority at salient stages throughout the process can be by, but not limited to, stamps, electronic signatures and passwords whichever method is chosen the supplier shall establish controls for the media and methods to trace the unique identity of the media to an individual to confirm competence and approval for sign off at the salient stage. Traceability shall include the ability:

- ***to trace all products manufactured from the same batch of raw material, or from the same manufacturing batch***, to the finished or delivered part to Ontic UK,
- ***for an assembly, the ability to trace its components to the assembly and then to the next higher assembly;***
- ***for a product, a sequential record of its production (manufacture, assembly, inspection/ verification) to be retrievable.***

Records shall be maintained for the product life.

**8.5.14 Certification Traceability, General**

All certifications shall be traceable to the material submitted and shall contain the signature and title of the authorised representative of the seller. Serial numbers shall be listed if the components are serialized. Computer generated facsimile signatures will be accepted.

NOTE: Not required for Rail products.

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Each shipment shall be accompanied with legible copies of the material certification as furnished by the raw material supplier or an independent test laboratory. Material certifications must agree in all respects with the raw material requirements of their applicable specifications. Unless otherwise specified, all certifications shall state the latest revision of the Specification that the material is being certified to as a minimum. The certifications shall contain a statement "We certify the listed material was used to fulfil the requirements of Ontic UK Purchase Order.....", and shall be signed by the supplier's Quality Representative.

**8.5.16 Mill heat control/mill certification**

Assigned serial numbers must be consecutive within a mill heat.

- All items covered by this Purchase Order must be from the same mill heat
- Actual mills certification required

**8.5.17 Synthetic rubber components hardness readings**

When required by drawing notes and/or Purchase Order requirements, certifications with the noted readings for Durometer or other applicable hardness reading pertaining to rubber/synthetic rubber products shall be provided for each lot of parts submitted to Ontic UK. Each lot shall be identified and packaged separately.

**8.5.18 Property Belonging to Ontic UK or their customer**

The supplier shall identify, verify, protect, and safeguard Ontic UK or their customer's property provided for use or incorporation into the products and services whilst it is under their care.

When the property of Ontic UK or their customer is lost, damaged, or otherwise found to be unsuitable for use, the supplier shall report this to Ontic UK and retain documented information on what has occurred. (This will include normal wear and tear on jigs and fixtures)

The supplier shall inform Ontic UK of the potential risks and implications with continued use where applicable, especially on the quality and delivery of the product or service being provided by the supplier.

**8.5.19 Tooling requirements**

Tooling purchased by Ontic, furnished by Ontic UK or Ontic UK's Customer does not relieve the supplier of responsibility of proving the adequacy of all tooling. Any anomalies found in such tooling must be immediately reported to Ontic UK Purchasing. If Ontic UK furnishes tooling to supplier requiring a Tool prove, Ontic UK acceptance will be based on verification of the supplier's FAIR part/or assembly documentation. The supplier is responsible for periodic calibration of all Ontic UK tooling.

The supplier must maintain a Planned Preventative Maintenance (PPM) for their equipment and tooling owned by Ontic UK which is used on the supplier's site, the supplier must supply a list yearly of the condition of Ontic UK's equipment to Ontic Supplier Quality.

*NOTE: An Ontic UK or their customer's property can include, but not limited to, materials, components, jigs, special/specific tools, monitoring and measuring equipment, intellectual property, software, and personal data.*



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The supplier shall preserve the outputs during production and service provision, to the extent necessary to ensure conformity to requirements, this can include product identification, packaging, protection, transport and handling.

*It will also apply to cleaning, contamination, control, FOD, special handling and storage for sensitive items, shelf life control*

**8.5.21 Electrostatic discharge (ESD) sensitive products**

ESD sensitive delivered products, including replacements assemblies, shall be physically identified by label or permanent marking. The delivered items shall be packaged for ESD protection and appropriately marked. Individual packages and shipping containers shall be identified as containing ESD sensitive material.

**8.5.22 Corrosion Protection**

Material subject to corrosion shall be packaged and/or coated with an acceptable (to Ontic UK) to prevent corrosion while in transit and storage (contact your purchasing representative or Manufacturing Engineering at Ontic UK for appropriate preservatives).

**8.5.23 Rubber components/raw material & assembly cure date**

Rubber products used in assemblies shall meet the age requirements of BS 3F 69 and BS 4F 68. In addition, all assemblies shall be marked with the cure date of the oldest rubber part in the assembly, as well as the date of assembly. Marking may be accomplished by decal, rubber stamp, or bag and tag.

Each package of rubber components shall be marked with date of cure part number, Purchase Order number, quantity, compound number, and manufacturer's identification (if different than part number). Date of cure on "O" rings shipped to Ontic UK shall be defined on the Ontic UK Purchase Order, normally within 8 quarters and shall not exceed 10% of the shelf life from date of manufacture to ship date and acceptance at Ontic UK.

**8.5.24 Post-Delivery Activities**

The supplier shall meet requirements for post-delivery activities associated with the products and services provided to Ontic UK. The supplier shall consider:

- statutory and regulatory requirements;
- the potential undesired consequences associated with its products and services;
- the nature, use, and intended lifetime of its products and services;
- Ontic UK requirements and feedback;
- **failure analysis**
- **control, updating, and provision of technical documentation relating to product use, maintenance, repair, and overhaul;**
- **Ontic UK/product support (e.g., queries, training, warranties, maintenance, replacement parts, resources, obsolescence), the supplier shall inform Ontic UK and take appropriate action including investigation and reporting**
- **When problems are detected after delivery, what action is required** (See 8.7.1)

**8.5.25 Control of Changes**

Changes shall be approved by Ontic UK prior to adoption. If agreed the supplier shall carry out changes in accordance with ISO9001:2015, document and retain the change information whilst maintaining configuration control where applicable.

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When invoicing the supplier shall work to the following guidelines, failure to do so could hold up the payment or be declined by Supply Chain when approval is required.

- Supplier shall not issue any invoice prior to the scheduled or actual delivery date (whichever is the later).
- All invoices shall specify the Purchase Order number and full details of the consignment including description, quantity and unit price of goods delivered
- One (1) Purchase Order number per invoice

**8.6 Release of Products and Services**

The supplier shall plan and implement product and/or service verification steps to ensure product and/or service conformance.

Only after satisfactory final verification shall the delivery to Ontic UK take place unless otherwise agreed in writing with Ontic UK.

The supplier shall document conformance to Ontic UK requirements and the traceability of the person authorising release and retain the records.

***The supplier shall ensure that all required documentation accompanies the product and/or service delivery to Ontic UK.***

**8.6.1 Certificate of Conformance**

A legible and reproducible copy of a Certificate of Conformance must accompany each shipment. The certificate shall include the following:

- Supplier Name and Address
- Ontic UK Purchase Order Number, Quantity Shipped, Purchase Order Line number.
- Supplier must state Country of Origin
  - Country of Origin (COO), is the **country of manufacture**, production, or growth where an article or product comes from.
- Ontic UK Part Number
- Drawing Revision
- Serial Number (when applicable)
- Manufacturing Plan Revision (when applicable)
- Operation Number (when applicable)
- Signature and title of authorised representative
- Processes performed, required by engineering drawing, specification or purchase order, to include:
  - Process
  - Specification
  - Process Certification Number and Ontic UK Approved Supplier(s) used for processing (when applicable)
  - Sub-Assembly Part Number(s) with latest revision (when applicable)
  - Sub-Assembly Process, Specification, Certification Number and Ontic UK Approved Supplier used (when applicable)
  - Lot number, if not serialized
  - Indication that products were manufactured from materials on which the seller has records of material conformance

The Certificate of Conformance must contain a statement that all inspection and tests have been performed as required by drawing, specification and/or Purchase Order.

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The certificate must list each special process that appears on the drawing such as: heat treat, non-destructive examination, and plating or coating, etc.

Perishable products controlled by batch number or cure date and products controlled by heat number will have applicable controlling number on the individual certificate.

Blanket statements of conformance are unacceptable, as are statements of belief rather than fact.

**Ozone Depleting Chemical**

Definition. "Ozone-depleting substance," as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as –

- Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or
- Class II, including, but not limited to hydrochlorofluorocarbons.

Seller shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as applicable:

**Warning**

Contains \* \_\_\_\_\_, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

**Warning**

Manufactured with \* \_\_\_\_\_, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

\* Seller shall insert the name of the substance(s).

*NOTE: For products delivered from Germany covering the Rail product additional acceptance criteria is acceptable.*

- Certificate of Compliance EN 10204-2.2
- Inspection Certificate EN 10204-3.1

**8.6.2 Physical and chemical test reports**

Each shipment must be accompanied by a physical/chemical test report as required by the applicable material specification. The report must contain the signature and title of the authorised representative of the facility performing the tests and shall assure specification conformance. Unless otherwise specified, material shall be procured from a domestic source.

**8.6.3 Functional test certifications**

Each shipment must be accompanied by a legible and reproducible copy of the Suppliers Certification Identifiable with submitted material for which test reports are on file and available for examination. This

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certificate must contain the signature of the authorised representative and assure conformance to specified requirements.

- Actual tests results required
- Test Certificate of Conformance required

**8.6.4 Heat treat report**

Each shipment shall be accompanied by a legible and reproducible copy of the detailed heat treatment cycle used. Details to include: drawing requirement, specification, date, time, and temperature and quench method as applicable.

Inspection reports must accompany the heat treat report. The report must contain the signature and title of the authorised representative of the agency performing the tests and inspections.

**8.6.5 Process certification**

Each shipment must be accompanied by legible and reproducible copy of a certificate containing the signature, or stamp of an authorised representative for all processes used, such as heat treating, welding, surface preparation and treatment, etc. The certificate shall include the process used, the specification to which it conforms, results of any testing and the name of the sub-tier that performed them if other than the supplier. When parts are serialized, serial number must appear on the certification.

**8.6.6 Non-destructive test reports**

A Non-Destructive Test is to be performed if specified on the Purchase Order/drawing. A legible and reproducible copy of actual non-destructive test results identifiable with acceptance requirements and material submitted shall accompany each shipment. These reports must contain the signature and title of the authorised representative of the agency performing the inspection and must assure conformance to specified requirements.

Fluorescent Penetrant Inspection (FPI) - Magnetic Particle, Radiographic and other non-destructive evaluation processes as referenced on drawings and/or specifications shall be performed by an approved Ontic UK source in accordance with applicable standards.

Parts that have been accepted using FPI or Magnetic Particle Inspection shall be marked per the applicable non-destructive test specification. Otherwise specified, radiographic inspection of castings shall be performed after all heat-treat operations. Radiographic techniques shall be submitted to Ontic UK for prior approval if required by Purchase Order.

**8.6.7 Critical Safety Item (CSI), Safety Critical (SC) and Grade A/Class 1 Part****AEROSPACE**

A CSI or SC or Grade A or Class 1 part sometimes referred as a Flight Safety Part, is any part, assembly, or installation containing a critical characteristic whose failure, malfunction, or absence could cause loss of, or serious damage to, the aircraft, and/or serious injury, or death, to the occupants. The engineering drawing and associated technical data will clearly identify that the item is CSI or SC or Grade A or Class 1 part and will identify the critical characteristics, critical processes, and inspections and other quality assurance requirements.

**Critical Safety Item and Safety Critical**

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The supplier and its sub-tier(s) that perform work on a CSI/SC shall provide, with each shipment, Inspection Records which include the Supplier's Name, Ontic UK Purchase Order Number, Part Number, Part Revision, Lot Number, Serial Numbers (if applicable), Lot Size, and Inspection Sample Size for the part or assembly. The inspection records shall list all Critical Characteristics/ Dimensions included on each drawing or as identified on the Purchase Order.

- Critical Characteristics shall be inspected 100% and documented for the full unit population. Acceptance on inspection records shall be denoted by inspection stamps.
- If any Non-Destructive Testing is conducted on the part or assembly of parts that includes 'Critical Parts' a result summary for the evaluation shall be supplied and the approval certificate of the person conducting the evaluation shall be provided to Ontic UK.
- Any deviation from design data shall be clearly accounted for on the release paperwork, this shall include an Ontic UK SNAR number (See SNAR Process, 8.7.2) and Design Authority reference number). Any product delivered without both of these reference numbers shall be rejected.

Ontic UK and/or Regulatory Authority, Government or Customer representative may opt to perform on-site audits of the supplier and applicable sub-tier(s) prior to issuance of a PO, and periodically thereafter to verify their compliance with the drawings, manufacturing planning.

**Grade A/Class 1**

All parts identified as 'Grade A' or 'Class 1' shall receive 100% inspection followed by a duplicate inspection operation at the point(s) during or after the manufacture process. Materials used on the applications shall be purchased only from approved suppliers who can supply full traceability to the mill, of supply a chemistry/mechanical certificate with each batch.

Upon completion, parts shall be adequately and individually packed so to prevent handling, damage during transit and the packaging clearly identified as containing 'Grade A' parts. The certificate of conformity shall quote a and be accompanied by, where applicable, test and inspection results; each individual sheet of which shall be clearly annotated 'Grade A' part in red ink using a rubber stamp.

**RAIL**

The Standard GMRT/2450 is for any part, assembly, or installation containing a critical characteristic whose failure, malfunction, or absence could cause loss of or serious damage to a product in rail, and/or serious injury or death to the occupants. The engineering drawing and associated technical data will clearly identify that the item is CSI and will identify the critical characteristics, critical processes, and inspection and other quality assurance requirements.

The supplier and its sub-tier(s) that perform work to GMRT/2450 shall comply with manufacturing planning, audits, critical characteristics, records, certification of personnel, tolerance of measuring and test equipment and serialization. Ontic UK and/or Regulatory Authority, Government or Customer representative may opt to perform on-site audits of the supplier and applicable sub-tier(s) prior to issuance of a PO, and periodically thereafter to verify their compliance with the drawings, manufacturing planning.

**8.6.8 Reworked/Replacement Material**

When returning previously rejected material to Ontic UK, the supplier shall reference the Material Rejection Record (MRR) number on all shipping document(s), and shall state if the items have been replaced or reworked.

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31<sup>st</sup> Mar 2018**8.7 Control of Nonconforming Outputs**

The supplier shall ensure that any internal product or service, sub-contract, sub-tier, supplier non-conforming shall be identified, controlled, segregated and inhibited from use or delivery to Ontic UK. A non-conformance can also be identified by Ontic UK either through rejected part or service or via supplier audit/visit.

The supplier shall carry out a containment action root cause analysis and corrective action for all occurrences in accordance with their procedures, or, where Ontic UK has raised a SCAR or NCR, in accordance with the raised and issued non-conformance report.

Responses shall be comprehensive and robust to inhibit the same or similar issues occurring in the future.

**8.7.1 Notification of escaped defects**

When the supplier identifies or becomes aware of a suspect part/product or service that has escaped from the supplier's facility to Ontic UK (or designated drop point), the supplier shall notify Ontic UK within 72 hours. The Notification shall be in writing, addressed to Ontic UK, on the supplier's own letterhead, and shall be sent via e-mail to: [supplier.quality@ontic.com](mailto:supplier.quality@ontic.com)

NOTE: For escapes that affect "Safety of Flight" (i.e. controls) the suppliers shall submit all available information IMMEDIATELY. (Safety of Flight will be indicated on the drawing or Purchase Order)

- Should the supplier wish a concession for an Ontic UK product or service authorisation for acceptance shall be via the SNAR process

**8.7.2 Supplier Non-Conformance Approval Requests (SNAR's)**

Requests for any departures from drawings, specifications, or other purchase order requirements must be recorded and submitted on a "SUPPLIER NON-CONFORMANCE APPROVAL REQUEST (SNAR)" for consideration by Ontic UK. Material shipped on an approved SNAR must reference the SNAR number on all relevant paperwork supplied to Ontic UK.

Blank SNAR's can be requested from the Ontic UK Purchasing representative.

NOTE: All SNAR's must be submitted for approval PRIOR of shipment of parts.

Dispositions of use-as-is or repair for the acceptance of nonconforming products shall only be implemented if written approval has been received from Ontic UK.

*NOTE: **Repair** - Under NO circumstances shall a Supplier or a Supplier's Sub-tier perform any repair procedures/ operations without specific written authorisation and an approved repair procedure from Ontic UK.*

Product dispositioned as scrap shall be permanently marked, in a manner that makes it clear and obvious the part or product is scrap. The part or product shall be rendered unusable and shall be controlled until physically disposed of.

***Counterfeit, or suspect counterfeit, parts shall be identified, quarantined and controlled to prevent the use on Ontic UK products, or the delivery Ontic UK (see 8.1.9).***

When non-conforming product, processes or procedures have been corrected the results shall be verified to confirm they meet the Ontic UK requirements.

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Comprehensive records of corrective actions raised, containment, root cause and corrective actions taken shall be maintained.

**9 PERFORMANCE EVALUATION****9.1 Monitoring, Measurement, Analysis, and Evaluation****9.1.1 General**

In addition to the monitoring and measurements stipulated by Ontic UK, build documentation, standards and regulations the supplier shall determine the requirement for additional monitoring and measurement throughout the process of product/part build or service supply to ensure parts, product or service meet or exceed the expectations and requirements of Ontic UK.

**9.1.2 Statistical process control**

When imposed by the purchase order, the supplier will submit (1) copy of required Statistical Process Control charts to verify control improvement and analysis of processes (i.e.; X Bar R charts, histograms, etc.). Capability analysis may be imposed by Purchase Order to demonstrate supplier's process performance.

**9.1.3 Ontic UK Satisfaction**

The supplier shall monitor Ontic UK perception of their performance and shall include, but not limited to, quality, delivery, corrective actions.

**9.1.4 Analysis and Evaluation**

The supplier shall analyse, evaluate and maintain records of all monitoring and measurements carried out, the results and their effectiveness.

**9.2 Internal Audit**

Please refer to the requirements of ISO9001:2015 or AS9100 rev D, additionally refer to ISO 19011 for guidance.

**9.3 Management Review****9.3.1 General**

Please refer to the requirements of ISO9001:2015.

**10. IMPROVEMENT****10.1 General**

The supplier shall review, evaluate and incorporate improvements that are required to meet or exceed Ontic UK requirements and expectations.

Changes to agreed processes or procedures will still need Ontic UK approval and may require a Delta FAIR.

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31<sup>st</sup> Mar 2018**10.2 Non-conformity and Corrective Action**

Please refer to the requirements of ISO9001:2015.

In addition the supplier shall include, where applicable, human factors in the root cause analysis. Where a sub-contractor, sub-tier or supplier is found to be responsible for the non-conformance the corrective actions shall pass to them.

Where corrective actions have not been completed on time or effectively the supplier shall take appropriate action to ensure satisfactory completion.

**10.3 Non-conforming materials corrective action (rejection notices)**

Upon notification from the buyer that material furnished by the supplier is found discrepant upon receipt at Ontic UK, the supplier shall promptly notify the buyer, in writing, of adequate and acceptable corrective action taken to eliminate the cause of the discrepancy. The Suppliers response shall include:

- Root cause of defect
- Immediate containment
- Corrective action taken
- Action to prevent recurrence
- Effectivity point of such corrective action

If MoD Government Source Inspection is a requirement on the purchase order, the supplier shall notify the cognizant MoD Government Representative, so that they may participate in the investigation and corrective action if they desire.

**10.4 Continual Improvement**

The supplier shall continually investigate, implement and evaluate improvements to the production of Ontic UK requirements and review the effectiveness of the changes. (Confirming, prior to any change, if Ontic UK permission to change is required)



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31<sup>st</sup> Mar 2018**11. Part 145 Maintenance Organisation Exposition (MOE)****11.1 Scope**

This document requires the establishment of a quality documented system by the suppliers ensure compliance with requirements of Ontic UK.

It is based upon the requirements of EASA 145/ CAAC and will apply to those companies who repair equipment that do not have the required EASA 145/ CAAC approvals or are repairing items that are not listed on their EASA 145/ CAAC capability lists.

Before carrying out any work the supplier shall ensure to part to be worked on is on their Capability List, by part number and revision.

**11.2 Requirements****11.2.1 Storage**

The supplier shall provide a secure storage area for parts, equipment, tools and materials used for repair. Segregation is required for serviceable and unserviceable components, tools and materials. The storage of goods and materials shall be in accordance with the Original Equipment Manufacturer's recommendations with attention being paid to shelf life items.

**11.2.2 Drug & Alcohol Awareness**

Any US suppliers that carry out repairs for and on behalf of Ontic UK shall have an approved Anti-Drug and Alcohol Misuse Prevention Programme.

**11.2.3 Personnel**

The supplier shall have documented procedures and registers of authorised signatures and/or stamps. The supplier's employees that carry out the final inspection/testing shall be able to read, write and understand English. The supplier shall take into account Human Performance Limitations when planning and conducting repair activities.

**11.2.4 Components**

Parts held by the supplier should be segregated into serviceable and unserviceable condition. No part of any repair order shall be further subcontracted without prior written agreement with Ontic UK. This includes the inter-company movement of repair work to different facilities.

**11.2.5 Maintenance Data**

The supplier shall use up-to-date maintenance data in the performance of maintenance. This data should be available at the point of use for the operator to use. Job travellers (or equivalent) shall contain the relevant maintenance data (accurately transcribed) or make precise reference to the particular tasks within the maintenance data itself. Job travellers should include inspection stages, materials used, authorisation, etc.

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Release to Service certificates are to be issued by appropriately authorised certifying staff. EASA Form 1, CAAC Form 1 or FAA Form 8130-3 Authorised Release Certificate is required and shall be signed by an authorised person for each part supplied

**11.2.7 SFAR 88**

If the part to be repaired is subject to critical design configuration control limitations (CDCCL) as defined by the specific Aviation Regulations. (CDCCLs are a means of identifying design configuration items related to fuel tank ignition source prevention features).

11.2.7.1 Strict adherence to the configuration methods, techniques and practices prescribed in the Component Maintenance Manual (CMM) for the component being repaired is required to ensure the integrity of the CDCCL is maintained throughout the life of the component.

11.2.7.2 The supplier shall not carry out any maintenance, repair, rebuild, overhaul or remanufacture this unit or any of its components except in strict accordance with the methods, techniques and practices specified in the CMM.

11.2.7.3 The CMM for the component being repaired is FAA approved for U.S. registered Airplanes. Any use of parts, methods, techniques or practices not contained in the CMM must be approved by the FAA Aircraft Certification Office.

11.2.7.4 If the supplier is unable to complete the work required as stated in the CMM the supplier must cease the work and notify Ontic UK.

11.2.7.5 Upon completion of the work the supplier shall enter a declaration on the release documentation that all CDCCL tasks have been accomplished.

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NOTES:



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For over 40 years, Ontic has licensed or acquired 4,500 top assemblies from leading aviation OEMs. Our expertise in the manufacturing, procurement and support of these legacy products is second to none because it is the only thing we do at Ontic.”



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