

Table of Contents

Foreword..... 2

Scope 2

1. Contact Details 3

2. Quality Certifications 3

3. Business Contingency Plan 3

4. Right of Facility Access 3

5. Source Inspection 3

6. Design Data 4

7. Customer Notification of Management or Business Change 4

8. Contract Review (RFQ)/Purchase Order Review 4

9. Flow Down of Requirements 5

10. First Article Inspection (FAI) 5

11. Record Retention 5

12. Reportable Substances 6

13. Identification, Traceability & Acceptable Authority Media (AAM) 6

14. Handling, Packaging and Preservation 7

15. Supplier Inspection 7

16. Non-Conformance 8

17. Critical Safety Item (CSI), Safety Critical (SC), and Grade A/Class 1 Parts 8

18. QASOR/QCA 9

19. Foreign Object Damage (FOD)/Foreign Object Debris (FOD) Control 9

20. Welding/Brazing Requirements 9

21. EDM, CEDM & WEDM Parts/Processes 10

22. Component Solderability 10

23. COTs Assemblies 10

24. Shelf-Life Control 10

25. Test Reports and Certifications 11

26. Electrostatic Discharge (ESD) 12

27. Ontic Owned Property 13

28. Counterfeit Part Prevention 13

29. Supplier Development 13

30. Customs Trade Partnership against Terrorism (C-TPAT) 13

31. Modern Slavery/Ethics 14

32. Certificate of Conformance 14

33. SQAR Deviation 15

34. Compliance to Ontic SQAR 16

35. Appendix 1 17

Foreword

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

Ontic Engineering and Manufacturing (UK) Limited established an enviable operating capability, serving several 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 Ontic UK quality responsibilities are fully met.

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.

Scope

It is the mission of Ontic UK to provide customers with leading-edge products with uncompromising quality. A critical element to accomplish this mission is receiving parts/products from our Suppliers on time with the highest quality and reliability. Therefore, Suppliers are empowered to initiate action to ensure both quality and continuous improvement for every part/product delivered to Ontic UK using Procedures in this document.

1. Contact Details

Ontic UK Supplier Quality

Email: supplier.quality@ontic.com

Ontic Website

www.ontic.com

All written communications between the Supplier and Ontic must be written in the English language.

2. Quality Certifications

The Supplier shall maintain a Quality Program in compliance with relevant ISO9001/AS9100/AS9120/CAA Part 21 requirements. The Supplier shall maintain compliance to the 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 Supplier Quality, Supply Chain or by Purchase Order.

Suppliers or sub-tiers completing special processes, such as, but not limited to, welding, heat treating, plating, coating, non-destructive testing, must be performed by NADCAP approved Suppliers unless stated otherwise by Ontic UK in accordance with Section 33. The current approval status of processing sub-tiers must be confirmed in writing by Ontic UK Supplier Quality prior to performing the process.

Suppliers are responsible for ensuring the sub-tier Suppliers used hold the correct scope of approval to provide services/goods required via the Purchase Order and that their accreditation is valid and remains in date.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

3. Business Contingency Plan

Suppliers shall develop and maintain a business contingency plan that will guide the organisation to respond to a disruption (unplanned, negative deviation from the expected delivery of products and services i.e. pandemic, flood, fire, etc.) and resume, recover and restore the delivery of products and services to Ontic UK. The plan should mitigate the risk (Quality and Delivery) of supply breakdowns. Suppliers also need to ensure protection of Ontic UK property and provide access to them in the situation of a disaster. The plan is to be submitted if requested by Ontic UK Supplier Quality.

4. 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. Source Inspection

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

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 seventy-two (72) 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
- 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 release note
- 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

6. Design Data

It is the Supplier's responsibility to ensure the latest drawings and specification revisions are used as specified on the Ontic UK Purchase Order or Ontic UK drawings. Specifications which are not listed on the Ontic UK Purchase Order will be referenced on the drawings. These specifications can be found on the Ontic SharePoint portal and the Supplier must check they have the latest revisions. If the Supplier does not have access to Ontic's SharePoint portal or there is a query regarding missing specifications, it is the Supplier's responsibility to contact their Ontic Buyer to obtain the latest copy.

(On Ontic UK Purchase Orders, the correct revision/drawing issue of a part drawing is referred to as the 'Rev/Drawing Iss' regardless of the nomenclature on the drawing. If no revision/drawing issue is stated, contact your Ontic Buyer).

Advanced Product Quality Planning (APQP)

Where Advanced Product Quality Planning (APQP) is specified on a Purchase Order, the following requirements need to be adhered to:

- APQP is to be completed in line with the requirements of EN9145
- Only capable Suppliers are permitted to accept Purchase Orders for products requiring APQP
- Only the relevant clauses applicable to the work being carried out are required to be completed

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

7. Customer Notification of Management or Business Change

Suppliers are required to notify Ontic UK Supplier Quality of all management changes to personnel who have Responsibility and Authority for their Quality Management System.

All Suppliers are required to provide Quality Certifications and are required to inform Ontic UK Supplier Quality of any changes in these Quality Certifications. This includes, but is not limited to:

- Additional certificates awarded
- Suspension of certification
- Mergers and acquisitions

Suppliers (Including sub-contractors) must not make any changes to the following without prior written or SNAR approval from Ontic UK Buyer or Supplier Quality.

- In part design
- Materials
- Manufacturing processes
- Manufacturing location
- Sub-contractors

Note: Notification of changes to be emailed to the appropriate Ontic UK Buyer and Supplier Quality.

8. Contract Review (RFQ)/Purchase Order Review

The Supplier shall conduct a review (Contract/Order 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

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 of the order, the requirements of Ontic UK will be fulfilled. The Supplier shall retain documented evidence that the review has been successfully completed.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

9. Flow Down of Requirements

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.

Control of the external Suppliers shall be controlled under the Supplier's quality management system and Suppliers shall be on their Approved Suppliers List.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

10. First Article Inspection (FAI)

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 compliant to requirements.

This is demonstrated by submitting a First Article Inspection Report (FAIR) with the first lot shipment of product and any further changes defined in AS9102.

The First Article Inspection Report (FAIR) for Ontic UK must include ballooned drawings and copies of all certificates.

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 Inspection reporting for **New** or **Delta** FAIRs.

Blank FAI forms can be supplied by Ontic UK Supplier Quality on request. The Supplier shall retain the FAIR as proof of the production verification process. If a Supplier requires assistance in the completion of a FAI to AS9102, they are to contact the Ontic UK Supplier Quality for advice and possible assistance in completing the FAI.

Note:

- **Suppliers who are AS9100 accredited will need to complete the FAIR as part of their verification process as per the standard, therefore Ontic UK Supply Chain will not pay for any FAIR cost.**
- **All deviations to this requirement require written approval from Ontic UK Supplier Quality.**

11. Record Retention

The Supplier shall maintain all records history, in a legible state, including, but not limited to:

- Purchase Order
- First Articles
- In-Process
- Final Inspections
- Tests
- Test samples
- Any other part data
- Quality records

Inspection records shall indicate the following:

- Nature and number of observations made
- Number and type of deficiencies found
- Quantities approved and rejected
- Corrective Action taken

Supplier Quality Assurance Requirements (SQAR)

When the Purchase Order is complete, such records shall be maintained (Hardcopy or Electronic) for a period of NOT LESS THAN TWELVE (12) YEARS from the closing date of the Purchase Order.

All records must be available to Ontic UK within a maximum of 5 working days, as requested by Ontic UK Supplier Quality or Buyer.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

12. Reportable Substances

REACH

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)

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.

- 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.

WEEE

The Supplier shall have a Policy or Procedure in place to ensure that Waste Electrical and Electronic Equipment are controlled appropriately and compliantly to the Waste Electrical and Electronic Equipment; Directive 2002/96/EC of the European Parliament and Council of 27th January 2003.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

13. Identification, Traceability & Acceptable Authority Media (AAM)

Identification

Supplier shall document, implement, and maintain a process for identifying product during all stages of receipt, any internal processing, storage, distribution, and shipment.

All components/products must be packaged and labelled in accordance with relevant industry standard packaging or to Ontic UK's specific requirements which will be detailed on the Purchase Order.

Traceability

All certifications shall be traceable to the material submitted and shall contain the signature and title of the authorised representative of the seller, Lot/Batch and/or Serial numbers shall be identified.

Computer generated facsimile signatures will be accepted.

High Risk, Scrap and Recycled Materials

The manufacture of parts/components from materials sourced from High-Risk markets, Scrap and/or recycled materials is strictly prohibited within the Supply of parts/components to Ontic.

Acceptance Authority Media (AAM)

Suppliers shall comply with the AS9100 requirements regarding the application of the Acceptance Authority Media (AAM) requirements.

- Supplier shall, within its organisation and its supply chain, ensure that the use of AAM is clearly defined within its Quality Management System (QMS).

Supplier Quality Assurance Requirements (SQAR)

- Supplier shall, upon Ontic's request, be able to demonstrate evidence of communication to its employees and to its supply chain; use of AAM must be considered as a personal warranty of compliance and conformity.
- Supplier shall maintain compliance to the AAM requirements by assessing its process and supply chain as part of its **internal audit** activities. The areas of focus of this assessment shall include but not limited to:
 - Authority Media Application Errors (i.e., Omission, Typos, Legibility, etc.)
 - Authority Media Application Untimely Use (i.e., Documentation is not completed as planned, "Stamp/Sign as you go", etc.)
 - Authority Media Application Misrepresentation (i.e., uncertified personnel, Falsification of documentation, Work not performed as planned, etc.)
 - Authority Media Application Training Deficiencies (i.e., Ethics, Culture awareness, Proper Use of authority media, etc.)

If a stamp is withdrawn, it must not be re-issued.

14. Handling, Packaging and Preservation

The Supplier shall ensure that all articles are packaged in a manner and with relevant industry standard 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 parts or paperwork, the use of staples is prohibited due to the potential for FOD/FoD.](#)

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

Corrosion Protection

Material subject to corrosion shall be packaged and/or coated with an acceptable preservative to prevent corrosion while in transit and storage.

[Contact your purchasing representative or Ontic UK Supplier Quality for details of the correct preservatives.](#)

15. Supplier Inspection

Sampling Plan

The Supplier may use sampling Procedures (unless stipulated in 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 AS9138 or BS6001 with the exception that lot acceptance will always be "accept on zero, reject on one".

Note:

- [Where a drawing states a key characteristic or SPC requirement, the Supplier shall sequentially measure the full batch and record all individual results.](#)
- [On request the Supplier shall provide statistical data to demonstrate control and capability.](#)
- [Any Suppliers who cannot fully meet the requirement of AS9138 \(Boeing parts\) or BS6001 due to the size or nature of their business will need to submit their sampling plan Procedure into Ontic UK Supplier Quality for review/assessment and request approval to deviate from the SQAR requirement.](#)

Visual Inspection - Lighting

Standard visual inspection requires the area to be to a minimum 800 Lux and clean, with all the necessary equipment required, Lux readings must be recorded at least once per year.

Hydraulic testing

Suppliers shall ensure and maintain records of the cleanliness of hydraulic test rigs. Complete a build and test record for each assembly. In addition to showing traceability to the unit drawing, test schedule, manufacturing batch and unit serial number this record must include Sub-Units traceability numbers, SNAR numbers and recordable test requirements/results.

16. Non-Conformance

Supplier Non-Conformance Approval Request (SNAR)

Requests for any deviations from drawings, specifications, or other Purchase Order requirements must be recorded and submitted on a "SNAR, QCF-108/4 form" to the Supplier's Ontic UK Buyer. Material shipped on an approved SNAR must reference the SNAR number on all relevant paperwork supplied to Ontic UK.

- Blank SNAR forms can be requested from Ontic UK buyer or downloaded from ontic.com
- **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.

Note: All SNAR's must be submitted and approved by Ontic UK PRIOR to shipment of parts.

Supplier Control of Non-Conforming Product

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 (MRR) or service or via Supplier audit/visit.

The Supplier shall carry out an immediate containment action, followed up by a root cause analysis and corrective action for all occurrences in accordance with their Procedures or where Ontic UK has raised a SCA, in accordance with the raised and issued non-conformance report.

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

Note: SCA's raised against product and not addressed within a timely manner, will be escalated within Ontic UK and may result in the Suppliers account being put on hold by Ontic UK Supplier Quality or Finance until the SCA has been addressed, they may also be reported to a regulatory authority, OASIS and/or Ontic UK end Customer.

Reworked or 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.

Scrap Material

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 where practical and shall be controlled until physically disposed of.

Notice 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 Supplier Quality within 72 hours. The Notification shall be in writing, addressed to Ontic UK Supplier Quality, on the Supplier's own letterhead.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

17. Critical Safety Item (CSI), Safety Critical (SC), and Grade A/Class 1 Parts

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 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. If required, the Supplier must comply every section of [Appendix 1](#) that is applicable to the part classification they are supplying.

RAIL

The standard RIS-2750-RST 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 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 RIS-2750-RST 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.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

18. QASOR/QCA

Where the Purchase Order stipulates a part to be in support of a Marine/Submarine project, by referring to QASOR or a QCA suffixed Part Number, separate requirements apply. In addition, when applicable, an Ontic Quality Plan will be invoked and referenced on the Purchase Order.

Drawings will invoke QASOR or QCA and if applicable, process and or NDT specifications unique to marine/submarine projects.

Additional requirements for QASOR or QCA parts shall apply as follows:-

- A QASOR check sheet / form will sent with the Purchase Order to the supplier for completion and return with the product. The check sheet / form will indicate additional requirements and certificates that shall be supplied with the product to Ontic.
- Raw material shall be procured from Ontic approved sources and must be accompanied by the Original Mill Certificate that includes the material mechanical and chemical properties.
- Following verification that the raw material is as specified on the Ontic Design Data (Drawing) and prior to machining, the material must be subjected to Ultrasonic NDT by a nominated Ontic approved source. Please note there are specific Suppliers approved to complete QASOR activities.
- On completion of NDT inspections, the NDT operator shall raise and approve an NDT certificate that must form part of the QASOR document pack to be supplied with the product.

19. Foreign Object Damage (FOD)/Foreign Object Debris (FOd) Control

The Supplier shall maintain a FOD/FOd (Foreign Object Damage/Debris) control program 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 AS9146, "Foreign Object Damage (FOD) Prevention Program – Requirements for Aviation, Space, Defense Organisations" for Ontic UK Suppliers."

Maintenance of the work area and control of tools, parts, and material shall preclude the risk of FOD/FOd incidents. Ontic UK shall have the right to perform inspection and/or audits as a method of verification that the Supplier's FOD/FOd control program is functional, documented, and effective.

Note: Any Suppliers who cannot fully meet the requirement of AS9146 due to the size or nature of their business will need to submit their FOD/FOd Policy/Procedure into Ontic UK Supplier Quality for Review/Assessment and request approval to deviate from the SQAR requirement.

20. Welding/Brazing Requirements

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

Supplier Quality Assurance Requirements (SQAR)

21. EDM, CEDM & WEDM Parts/Processes

- **Electrical Discharge Machining (EDM)** – A process in which material is removed from a conductive part by the erosive action of repeated electrical discharges on its surface
- **Conventional Electrical Discharge Machining (CEDM)** – A process which uses a shaped tool to define the shape of the cut to be made in the part
- **Wire Electrical Discharge Machining (WEDM)** – A process which uses a moving wire which is traversed through the workpiece in a controlled manner to affect the shape of the part to be cut

Unless specified by drawing requirements, EDM, CEDM or WEDM must not be completed without prior written approval by Ontic UK's Supplier Quality department.

The typical requirement is that a minimum of 0.01"/0.25mm in from all EDM-cut surfaces are removed by machining to ensure removal of the recast zone. Heat-affected zone, and any microcracks.

Test Methods

- Microcracks - inspection to be completed under 100x magnification
- Heat-affected zone – The depth shall be determined by examination of the changes in the Metallurgical structure and microhardness using a diamond hardness tester and appropriate loads. Specimens for these examinations shall be taken normal to the electrical discharge machined area

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

22. Component Solderability

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 drawing or specification.

23. COTs Assemblies

Ontic defines standard Components off the Shelf parts and materials to be those items Ontic UK has no design or production process control of special characteristics requirements. Normally these parts and materials are purchased using the supplier catalog number. Many COTs parts and materials are purchased through distribution Suppliers.

Distribution Suppliers are required to inform Ontic UK of any changes to source of COTS part or materials.

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.

24. Shelf-Life Control

Unless otherwise specified on the Purchase Order, all shelf-life materials shall be delivered to Ontic UK with a minimum of 80% shelf life remaining. The date of manufacture and expiration dates are required to be on the certification and the packaging. Any deviation from this requirement is to be submitted to Ontic UK Supplier Quality.

Rubber Components/Raw Materials and Assembly Cure Dates

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 Suppliers CofC, normally within 8 quarters and shall not exceed 10% of the shelf life from date of manufacture/cure to ship date and acceptance at Ontic UK.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

25. Test Reports and Certifications

Physical and Chemical

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.

Note: [All deviations to this requirement require written approval from Ontic UK Supplier Quality.](#)

Functional Test Certifications

Each shipment must be accompanied by a legible and reproducible copy of the supplier's certification, identifiable with submitted material for which test reports are on file and available for examination. This certificate must contain the signature of the authorised representative and assure conformance to specified requirements.

- Actual tests results required
- Test Certificate of Conformance required
- Confirmation of test piece results together with test certificate number must be recorded on the manufacturing documentation

Note:

- [On request, a completed Build and Test Record must be submitted with assemblies that have been the subject of a test.](#)
- [All deviations to this requirement require written approval from Ontic UK Supplier Quality.](#)

Heat-Treatment

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.

Note: [All deviations to this requirement require written approval from Ontic UK Supplier Quality.](#)

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

Note: [All deviations to this requirement require written approval from Ontic UK Supplier Quality.](#)

Non-Destructive

A non-destructive test is to be completed if NDT is required by 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 the agency performing the inspection and must assure conformance to specified requirements.

- Fluorescent Penetrant Inspection (FPI)
- Magnetic Particle Inspection (MPI)
- Radiographic

Other non-destructive evaluation processes as referenced on drawings and/or specifications must be performed by an approved Ontic UK source in accordance with applicable standards.

Parts that have been accepted using FPI or MPI shall be marked per the applicable non-destructive test specification if required. 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.

Note: [All deviations to this requirement require written approval from Ontic UK Supplier Quality.](#)

Supplier Quality Assurance Requirements (SQAR)

Cast Test Bars

The supplier shall furnish with each shipment:

- 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

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

Forging Test bars

The supplier shall furnish with each shipment:

- 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 retain the Forging and Cast test bars identified above for a period of not less than what's stated in the record retention requirement 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 Supplier Quality.

Forgings must be identified with cast/melt identity either on the part, on attached tags or on the container.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

Synthetic Rubber Component Hardness Reading

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.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

Raw Material Certification

Each shipment shall be accompanied with legible and reproducible copies of the material certification as furnished by the raw material supplier or an independent test laboratory.

Material certifications must conform 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.

Castings

All Castings must:

- Be identified with cast/melt identity either on the part, on attached tags or on the container
- Checked to ensure no detrimental core movement is evident and that cross jointing is acceptable

Castings must be released as accepted by X-ray to the relevant Ontic specification.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

Process Certification

Each shipment must be accompanied by legible and reproducible copies 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. For serialised parts, serial number must appear on the certificate, otherwise lot/batch details.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

26. Electrostatic Discharge (ESD)

ESD sensitive delivered products, including replacement assemblies, shall be physically identified by label or permanent marking. The delivered items shall be packaged for ESD protection and appropriately marked.

Supplier Quality Assurance Requirements (SQAR)

27. Ontic Owned Property

All manufacturing, test or inspection equipment belonging to Ontic UK must be permanently identified with a unique number. Additionally, a record for condition, calibration and tool life status including the quantity of parts produced from the tool where applicable, must be maintained and updated. Suppliers must provide this list into Ontic UK Supplier Quality annually or upon request. The Supplier shall notify Ontic when any Ontic supplied item is lost, damaged or is otherwise unsuitable for use.

Where materials, parts or tooling are supplied by Ontic, these shall only be used for Ontic orders.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

28. Counterfeit Part Prevention

For the purpose of this section, work consists of those parts delivered under contract that are the lowest level of separately identifiable items (e.g., articles, components, goods, and assemblies).

“Counterfeit Work” means work that is or contains items misrepresented as having been designed and/or produced under an approved system or other acceptable method. The term also includes approved work that has reached a design life limit or has been damaged beyond possible repair but is altered and misrepresented as acceptable.

- Suppliers must ensure that Counterfeit Work is not delivered to Ontic UK
- Suppliers shall only purchase products to be delivered or incorporated as work to Ontic UK directly from the Original Component Manufacturer (OCM)/Original Equipment Manufacturer (OEM), or through an OCM/OEM authorized distributor chain. Work shall not be acquired from independent distributors or brokers unless approved in advance in writing by Ontic UK Supplier Quality team
- Suppliers shall immediately notify Ontic UK Supplier Quality with the pertinent facts if they become aware or suspect that they have furnished Counterfeit Work. When requested by Ontic UK, the supplier shall provide OCM/OEM documentation that authenticates traceability of the affected items to the applicable OCM/OEM
- Upon discovery or suspicion, Suppliers must ensure that all required containment activities are undertaken to ensure counterfeit parts are not delivered to Ontic UK
- In the event that work delivered under contract constitutes or includes Counterfeit Work, the Supplier shall, at its expense, promptly replace such Counterfeit Work with genuine work conforming to the requirements of the contract
- The Supplier shall be liable for all costs relating to the removal and replacement of Counterfeit Work, including without limitation Ontic UK costs of removing Counterfeit Work, of reinserting replacement work and of any testing necessitated by the reinstallation of work after Counterfeit Work has been exchanged
- The Supplier shall include the requirements of this section or equivalent provisions in lower tier subcontracts for delivery of items that will be included in or furnished as work to Ontic UK

The Supplier shall establish and maintain a Counterfeit Parts Prevention program and process to prevent the delivery of counterfeit parts to Ontic UK. Please see reference industry standard AS-5553 as a guideline.

Note: All deviations to this requirement require written approval from Ontic UK Supplier Quality.

29. Supplier Development

Supplier Development is implemented at the discretion of the Ontic SQM. Supplier Development is the process of working with certain Suppliers on a one-to-one basis to improve performance (and capabilities) for the benefit of Ontic UK and Supplier also. It can take the form of one-off project or an on-going activity that may take some years to come to fruition.

30. Customs Trade Partnership against Terrorism (C-TPAT)

In support of Boeing’s C-TPAT implementation program, 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 program within the global supply chain.

31. Modern Slavery/Ethics

Ontic UK 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 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 UK 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.

32. 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 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.

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:

Supplier Quality Assurance Requirements (SQAR)

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

33. SQAR Deviation

Deviations from the SQAR are to be on a Company letterhead, along with the requested deviation information and submitted to Ontic UK Supplier Quality for review and approval.

Supplier Quality Assurance Requirements (SQAR)



34. Compliance to Ontic SQAR

The following checklist must be completed by the supplier, then signed & returned to Ontic Supplier Quality. If a supplier cannot meet these requirements, they must follow Section 33 of this document.

Note: Failure to complete and return Section 34, to Ontic UK's Supplier Quality department within 7 working days, shall be taken as a statement of full compliance to Ontic UK's Quality requirements.

Section	SQAR Clauses	Working Procedure Instructions	Compliant Yes/No	Notes
1	Contact Details	N/A	N/A	N/A
2	Quality Certifications			
3	Business Contingency Plan			
4	Right of Facility Access			
5	Source Inspection			
6	Design Data			
7	Customer Notification of Management or Business Change			
8	Contract Review (RFQ)/Purchase Order Review			
9	Flow down of Requirements			
10	First Articles Inspection (FAI)			
11	Record Retention			
12	Reportable Substances			
13	Identification, Traceability & Acceptable Authority Media (AAM)			
14	Handling, Packaging and Preservation			
15	Supplier Inspection			
16	Non-Conformance			
17	Critical Safety Item, Safety Critical and Grade A/Class 1 Parts/RIS-2750-RST			
18	QASOR/QCA			
19	Foreign Object Damage (FOD)/Foreign Object Debris (FOd) Control			
20	Welding/Brazing Requirements			
21	EDM, CEDM & WEDM Parts/Processes			
22	Component Solderability			
23	COTs Assemblies			
24	Shelf-Life Control			
25	Test Reports and Certifications			
26	Electrostatic Discharge (ESD)			
27	Ontic Owned Property			
28	Counterfeit Part Prevention			
29	Supplier Development			
30	Customs Trade Partnership against Terrorism (C-TPAT)			
31	Modern Slavery/Ethics			
32	Certificate of Conformance			
33	SQAR Deviation			
34	Compliance to Ontic SQAR	N/A	N/A	N/A
35	Appendix 1			

I confirm on behalf of _____ that all elements of the above checklist are correct.

Signature _____ Position: _____ Date: _____

35. Appendix 1

For every delivery the Supplier and its sub-tier(s) that perform work on a Grade A/Class 1/CSI or SC parts shall comply with every applicable section listed below:

Requirements	Grade A /Class 1	CSI/SC
Minimum 1500 Lux and clean, with all the necessary equipment required, Lux readings must be recorded.	X	X
Records shall be retained for a period NOT LESS THAN TWENTY-FIVE (25) YEARS.	X	X
For escapes that affect "Safety of Flight" the Suppliers shall submit all available information IMMEDIATELY.	X	X
Critical Characteristics shall be inspected 100% and documented for every part.	X	X
The supplier and its sub-tier(s) shall provide, with each shipment <ul style="list-style-type: none"> • 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 	X	X
Acceptance on inspection records shall be denoted by inspection stamps.	X	X
Non-Destructive Testing <ul style="list-style-type: none"> • Any non-destructive Testing conducted on the part(s) or assembly of parts shall be provided to Ontic UK • A summary of results for the evaluation shall be provided to Ontic UK • Approval certificate of the person conducting the evaluation shall be provided to Ontic UK 	X	X
Any deviation from design data shall be clearly accounted for on the release paperwork, this shall include an Ontic UK SNAR number (section 15), and Design Authority reference number). Any product delivered without both reference numbers shall be rejected.	X	X
100% inspection followed by a duplicate inspection operation at the point(s) during or after the manufacture process.	X	
Materials used on the applications shall be purchased only from approved Suppliers who can supply full traceability to the mill of origin, along with chemical/mechanical certificate with each batch.	X	X
Parts shall be adequately and individually packed to prevent handling, damage during transit and the packaging clearly identified as containing Grade A or Class 1 or CSI or SC	X	X
The certificate of conformity shall be accompanied by, where applicable: <ul style="list-style-type: none"> • Test and Inspection results; each individual sheet of which shall be clearly annotated 'Grade A' part in RED ink using a rubber stamp 	X	
All critical items shall be identified via serial number and part number as well as by the traveler which should be stamped "Grade A/Critical Component". This information shall be permanently and legibly transferred to the physical part.	X	X
If any life limits are associated with the part, it shall be indicated on the associated release paperwork.	X	X
Suppliers/Sub-Tier Purchase Orders for each Critical Part shall explicitly indicate, that the part is a Critical part and that the relevant sections of the SQAR shall be adhered to. Which includes: - <ul style="list-style-type: none"> • A detailed FAIR AS9102 • Correct materials with material certificates and special processing instructions are referenced • Serialisation of each part (if required by drawing) 	X	X

Supplier Quality Assurance Requirements (SQAR)



<ul style="list-style-type: none"> • Each batch of a component are to be manufactured in isolation using only material that is traceable to a single batch of raw material that has an accompanying mill certificate • NDT Testing is to be completed by a certified Level 3 Technician • NDT test certificates and a copy of any x rays etc. are to accompany each batch of components • Other than the NDT testing/Special processes, the manufacturing of a component shall not be further subcontracted • Each item is individually packaged as a single batch i.e. different manufacturing batches are not under any circumstances to be mixed • The Suppliers C of C should be annotated "Grade A/Critical Part" 		
<p>The Physical item shall be completely free from any form of mechanical damage (scratches/nicks/dings etc.). Any damage shall be cause for rejection.</p>	X	X
<p>Any non-conformance will result in the whole batch being immediately quarantined and notification sent to Ontic.</p>	X	X
<p>The Supplier shall ensure that critical parts are kept segregated from non-critical parts and that their batch integrity is always maintained.</p>	X	X
<p>When planning the manufacture of Critical Parts, the Supplier shall ensure that there can only one batch for each critical part in the production area at any one time. If the Critical Part is made up from several sub-assemblies, these shall be planned and kitted individually and only one sub-assembly batch scheduled for any one time.</p>	X	X
<p>All work shall be conducted in a segregated work area with defined areas for spare parts and equipment. The segregated work can be a temporary enclosure but away from passing personnel traffic i.e. not next to a high-volume corridor. Such areas need to meet any product environmental requirements and ensure they are well lit as well as being both clean and free from FOD.</p>	X	X
<p>Only operators and supervisors who are permitted to enter the segregated area can do so. There will be a list of authorised personnel posted on the entrance of the segregated area. The segregated area shall be cordoned off from the main workshop. Due to the sporadic nature of Critical Part build requirements, this cordon can be temporary in nature but must consist of a physical barrier.</p>	X	X
<p>Upon receiving the Critical Part Works Order, the operator shall: -</p> <ul style="list-style-type: none"> • Access the latest revision of the design data • Retrieve the Unit/Sub-Assembly from the segregated Critical Part storage location e.g. cage • Marry job to paperwork within designated Grade A area • Check Procedures, revisions and drawings • Ensure only one unit at a time on the bench being worked on • Unit to be boxed/protected when not being worked on • Stamp paperwork GRADE A/CRITICAL PART if not already done • Follow the Works Order traveler operations as specified with no deviations. A typical traveler will contain the following; <ul style="list-style-type: none"> Issue materials from bonded storage area (Stamped by stores personnel) Preliminary Inspection Detailed description of operations performed Sub-contract operations Independent Inspection Test paperwork will also include any stage/dual inspections required 	X	X
<p>The member of staff raising release documentation must undertake full inspection of outgoing Critical Parts and inspect on the whole batch. The records of both inspectors shall be analysed to ensure that the part meets the required critical parameters. The analysis will include if applicable (not a definitive list) test results, tightening torque values, locking methods, grease used, independent inspection results for any sub-assemblies used and any other independent inspection requirement covered by the approved maintenance data.</p>	X	X

Supplier Quality Assurance Requirements (SQAR)



The member of staff raising release documentation ensure that they only work on one Critical Part at a time and re-package the part individually once each inspection is completed. The independent inspection will be undertaken under well-lit conditions (1500 lux plus).	X	X
All inspection operations shall if required be counter approved by two independent inspection stamp holders who are equally approved for the task as the person who carried/is carrying out the task to be checked. The independent inspection shall check for defects in workmanship, damage to components caused during the manufacturing cycle and correct items were used (consumables/piece parts etc).	X	X
Whilst handling all critical parts, utmost care shall be taken to prevent Foreign Object Debris (including oils from human skin) from contaminating the items. If required sterile gloves shall always be used to handle the items and any agents used in the inspection of parts shall be checked for their corrosive effects on the items being inspected.	X	X
All shipping paperwork and packaging shall be stamped with "Grade A/Critical Part" Components shall be packaged individually in a single batch (note: it is not acceptable to mix batches) and as specified on the drawings/paperwork. No deviations can be accepted from a component's packing requirements. Packaging shall be to standard requirements, plus any protective chemicals applied to retard/prevent corrosion as per approved drawing.	X	X
All Critical parts shall be identified on the external face of the shipping container, and 'Handle with Care' signage shall also be used.	X	X
Any non-conformity that is identified in the supply chain must be communicated to Ontic & approved before delivery.	X	X
All parts identified as Critical shall operate under 'frozen' processes. Any change to these processes shall be approved by Ontic and the Design Authority prior to shipment of parts to their end destination. This includes material source, processing steps, machining ops (speeds/feeds/tools) and handling Procedures. Changes to these processes shall be communicated to Ontic prior to implementation and any records shall be maintained. All processes subject to change shall be subject to First Article inspection prior to release. ALL non-conformances shall be coordinated with Ontic.	X	X
All staff who handle Critical Parts shall be given training on their responsibilities and the relevant Procedures. Only when they have completed the required competency assessment can they be allowed to handle Grade A/Critical product.	X	X
The manufacturing, processing and assembly work instructions must be appropriately approved by the Supplier and submitted to Ontic for review and approval before any changes/amendments are made. Please provide copies of the routing and sealed routing form for approval to your Supply Chain Buyer.	X	X
Castings must be released as accepted by X-ray to the relevant Ontic specification.	X	X
Suppliers shall ensure and maintain records of the cleanliness of hydraulic test rigs. Complete a build and test record for each assembly. In addition to showing traceability to the unit drawing, test schedule, manufacturing batch and unit serial number this record must include sub-units' traceability numbers, SNAR numbers and recordable test requirements/results.	X	X