

## EXTERNAL PROVIDER QUALITY ASSURANCE REQUIREMENTS (EPQAR-001)

### GENERAL

**(QA-001) Right of Entry** – Centrix, its customer or regulatory agencies shall be afforded the right to review and verify that subcontracted product, processes and records conforms to specified requirements. Verification by Centrix, its customer or regulatory agency does not absolve the external provider of the responsibility to provide acceptable product, nor does it preclude subsequent rejection by Centrix or its customer.

**(QA-002) Inspection systems** – External providers shall provide and maintain an inspection system which will assure that all delivered products conform to Purchase Order requirements, whether manufactured or processed by the external provider or a sub-tier external provider. External provider shall maintain controls and perform all inspections and tests required to substantiate product conformance requirements. The supplier will verify Special requirements, critical items, or key characteristics as designated on the drawing. The

**(QA-003) AS9100 External providers** – The external provider will, as a minimum, maintain a documented quality system that meets the requirements of AS9100 and/or ISO:9001. The External Provider's Quality Assurance function shall be clearly designated within the External Provider's Organization. Personnel having the responsibility for the quality of product shall have sufficient authority to assure that quality is not compromised. The External Provider's Quality Assurance System shall be implemented by written procedures that adequately provide for compliance with the requirements of Centrix Purchase Order. The External Provider shall notify Centrix whenever there is a significant change to their Quality Assurance System, i.e. gaining or losing any Nadcap approvals, gaining or losing any FAA or governmental operating approvals, or gaining or losing any Quality System registration or certification (ISO/AS).

**(QA-004) Control of Quality Records by Centrix External Providers** – Centrix external providers used for processing and machining or any service procured that affects product conformity must maintain on file all quality records showing conformance to Centrix purchase order requirements for a minimum of 10 years plus one calendar year. Centrix will be notified prior to records being destroyed.

**(QA-005) External Provider Assistance** – If Purchase Order requirements are not completely clear, or where special assistance is needed, contact Centrix Quality Department. If inquiries pertain to quality aspects of products or services, Centrix Industries Quality Assurance Organization may be contacted directly.

**(QA-006) External Provider Audits** – Centrix may conduct periodic audits of the External Provider and/or their sub-tier External Provider's Quality system, to evaluate their ability to comply with Centrix requirements. As necessary, Centrix Customers may accompany the Centrix Quality representative in such audits. Additionally, the supplier will provide test specimens for design approval, inspection verification, investigation and auditing, when requested by Centrix purchase order. Centrix expects suppliers to maintain a Quality Rating of  $\geq 95\%$  and On Time of 85%.

**(QA-007) Nonconforming Product Produced by External Provider** – The external provider must notify Centrix of nonconforming product or processes prior to delivery. All parts dispositioned by an external provider as scrap will be sorted 100% for the defect that is discrepant. All parts dispositioned as scrap must be identified with a discrepant part tag or other means of identification. The external provider must obtain approval from Centrix Quality / Purchasing for nonconforming part disposition.

**(QA-008) Production or Process Changes** – The external provider must notify Centrix of any changes in the product or process used in the manufacture of product for Centrix. Centrix reserves the right for approval of the product, the parts used, the materials used and equipment used by the external provider in fulfilling Centrix Purchase Order requirements. This includes changes of external providers, manufacturing and / or processing facility locations or additional facilities. These changes may require Centrix approval depending upon the change.

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**(QA-009) Nonconformance Disposition of Supplied Discrepant Parts** – If nonconforming parts or processes are found during inspection at Centrix, the external provider will be contacted and will have 14 days to respond to the discrepancy by coming to Centrix to re-inspect, or Centrix may, at their discretion, return the parts to the external provider for inspection.

**(QA-010) Notice of Escapement / Disclosures** – Centrix external providers shall provide a written notification of nonconformities that may have affected parts or services delivered to Centrix within 48 hours of the realization of the escapement. Centrix Quality must be notified and the documentation must include a clear and concise description of the discrepancy, which includes as a minimum: part number, purchase order number, quantity and the date the parts were delivered to Centrix. Immediate corrective action / containment as well as the root cause and corrective action must accompany the discrepancy documentation submitted to Centrix.

**(QA-011) Quality System Documentation** – The external provider shall assure that the latest revisions status of applicable drawings, specifications, technical requirements, as specified on Centrix Purchase Order, are available at the External Provider's facility. Centrix and/ or Centrix's customer retains all design and development control.

**(QA-012) Subcontracting without Written Approval** – Subcontracting all or substantially all of the order without written consent of Centrix Quality or Purchasing is prohibited.

**(QA-013) Subcontractor Flow Down** – If any portion of the order is subcontracted, it is the responsibility of the external provider to flow down to the supply chain the applicable requirements, including customer requirements.

**(QA-014) Acceptance Authority Media** – Centrix external providers shall ensure that the use of Acceptance Authority Media (AAM) is clearly defined within its Quality Management System (QMS). Seller shall, upon Centrix 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.

**(QA-015) Counterfeit Goods** – External providers are required to have a counterfeit parts prevention program that includes avoiding, detecting, mitigating and dispositioning of suspected parts. In the event the external provider discovers it has supplied counterfeit goods, Centrix must be notified immediately from discovery and replace at external provider's expense.

**(QA-016) Supplier Sub-tier Control** – All Centrix external providers are required to flow down appropriate controls to their direct and sub-tiers to ensure parts produced or processed by Centrix supply chain conform to all Centrix requirements.

**(QA-017) Awareness** – Supplier will ensure their personnel are aware of their contribution to product service conformity, their contribution to product safety and the importance of ethical behavior. Additionally, the supplier will ensure employee competence, including any qualification of persons.

### **OUTSIDE EXTERNAL PROVIDER – MACHINING/FABRICATION**

**(QA-018) Certifications** – External providers must submit with each shipment a certificate of conformance stating that all manufacturing and inspections complies with the applicable engineering and purchase order requirements. Material and processing certifications must be supplied to Centrix if parts are purchased complete by Centrix.

**(QA-019) First Article** – AS9102 first article inspection is required. First article shall consist of 100% verification and documentation showing compliance to the Centrix drawing, including dimensional and functional data of each item manufactured and supplied to Centrix. Copies of AS9102 forms are available from Centrix upon request. This

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may include the Spirit FAI requirements as specified in MAA1-10042-2. Centrix quality will flow down this requirement to suppliers doing Spirit work on behalf of Centrix.

**(QA-020) Statistical Process Control** – Statistical process control may be required and shall be implemented as defined by the Centrix Purchase Order. The external provider shall contact the process improvement coordinator prior to manufacturing to arrange a meeting to define the required key or special characteristics affected.

**(QA-021) In-Process Inspection** – In process inspection may be required by Centrix. When this is required, the specific inspection point in the process will be specified on the purchase order. The external provider will contact Centrix and hold the material for in-process inspection by Centrix Quality.

**(QA-022) Protection of Parts against Contamination or Damage** – The parts must be boxed, banded, or shipped in a manner that will ensure that no damage will occur.

**(QA-023) Centrix Supplied Drawings** – All drawings or other Engineering media provided to an external provider must be returned with the order upon completion or destroyed.

**(QA-024) Centrix Furnished Material** – Heat lot traceability must be maintained by the external provider when the material is supplied by Centrix. No heat lot substitution or co-mingling of heat lots is allowed unless written permission is granted by Centrix.

**(QA-025) Centrix Customers Approved Manufacturers Flowdown Requirements** – External providers must be approved and use approved sources as defined in customer approved vendor listing documents. When external providers are machining and processing complete, the processors used must be Centrix customer approved. It is the responsibility of the external provider to verify Centrix customer approval.

### **OUTSIDE EXTERNAL PROVIDER – SPECIAL PROCESSING**

**(QA-026) Nadcap Approval** – External providers must be Nadcap approved for all chemical processing, heat treating, welding, non-destructive testing and all other processes required by Centrix customers.

**(QA-027) Centrix Customer's Approved Processors** – All Heat Treat, NDT, Welding and Coatings subcontracted by Centrix must be performed by a Centrix Customer Approved Processor. The external provider is responsible for verifying their approval status prior to any processing being performed.

**(QA-028) Certifications** – Processing certifications must reference all relevant process performed, specifications and revisions of the process completed.

**(QA-029) Specifications** – External providers must meet the requirements of specifications when they are referenced on drawings or on the purchase order. External providers will process to the latest revision of the specification stated unless otherwise stated on the Centrix Purchase Order. When required, the External provider may obtain copies of pertinent specifications through Centrix Purchasing Department. External providers must be and use approved sources as defined in customer approved external provider listing documents.

### **OUTSIDE EXTERNAL PROVIDER – RAW MATERIALS/SEALANTS/PAINTS**

**(QA-030) Certifications** – An External provider Certificate of Conformance is required with each shipment to Centrix including the applicable heat lots and chemical and physical analysis / test reports. The C of C must state the material type, the material temper, and that the material meets the applicable specifications and revisions of the material specification procured by Centrix.

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**(QA-031) Preference for Domestic Specialty Metals** – When a line item on a Centrix purchase order has the part number identified as XXX-DFARS, the external provider agrees to comply with Defense Federal Acquisition Regulation Supplement DFAR 252.225-7014 (Alt. I), Preference for Domestic Specialty metals when this clause is specified in the purchase order. Use of foreign specialty metals may only be made with the written authorization from Centrix. Note: Country of melt must be identified on certification.

**(QA-032) Centrix Customers Approved Manufacturers** – All external providers of materials, hardware, components, sealants / adhesives, etc., where applicable, must be on the current approval listings of Centrix Customers. The external provider is responsible for verifying their approval status prior to the manufacture of these goods.

**(QA-033) Shelf Life** – The date of manufacture must be noted on each individual container and / or certification. Sealants / adhesives and adhesive tapes must have at least 80% of shelf life available upon receipt at Centrix or it will be returned to the external provider.

**(QA-034) Calibration** – Calibration / Test external suppliers must furnish the calibration / test reports to the purchase order requirements, and be traceable to the specific equipment or item for which they are calibrating or testing. Traceability to NIST and / or other national or international standards must be supplied. ISO9000, ISO 17025, ANSI Z540, and / or Navlap accreditation will be the quality system requirements, actual data must be supplied. Nadcap or ISO 17025 accreditation required for testing.

### **OUTSIDE EXTERNAL PROVIDER – SOFTWARE**

**(QA-035) Software Initiation** - The external provider shall verify feasibility of the project, perform criticality assessment and identify all level of effort (resources and schedule).

**(QA-036) Software Design and Implementation** – Requirements must flow down from software requirements to design. Processes and standards agreed to are followed, product conforms to requirements, and configuration management is maintained.

**(QA-037) Maintenance and Retirement** – Software updates are performed according to an agreed upon schedule. Close-out plans are followed to retire software, including a successor/replacement system, if applicable. Centrix will verify the replacement system is capable of assuming the role of the retiring system.

Revision	Date	Description
I	3/3/21	Added history block for ease of review by supplier. Updated QA requirements, QA-002, QA-004, QA-006, QA-007, QA-011, QA-017, QA-034

**The following clauses apply to Calibration & Testing Providers:**

QA-001, QA-002, QA-004, QA-005, QA-006, QA-008, QA-010, QA-011, QA-012, QA-013, QA-014, QA-015, QA-016, QA-017, QA-034

**The following also applies to testing:**

QA-026, QA-027, QA-029

**The following clauses apply to Grinding & Welding Providers:**

QA-001, QA-002, QA-004, QA-005, QA-006, QA-007, QA-008, QA-009, QA-010, QA-011, QA-012, QA-013, QA-014, QA-016, QA-017, QA-018, QA-021, QA-022, QA-023, QA-024, QA-025

**The following clauses apply to Hardware & Standards Providers:**

QA-001, QA-002, QA-004, QA-005, QA-006, QA-007, QA-008, QA-009, QA-010, QA-011, QA-012, QA-013, QA-014, QA-016, QA-017, QA-018

**When the standards manufacture is required to provide certification the following also applies:**

QA-030 or other document stating the product meets the specification requirement.

**The following clauses apply to Heat Treat Providers:**

QA-001, QA-002, QA-003, QA-004, QA-005, QA-006, QA-007, QA-008, QA-009, QA-010, QA-011, QA-012, QA-013, QA-014, QA-016, QA-017, QA-018, QA-021, QA-022, QA-023, QA-024, QA-025, QA-26, QA-27, QA-28, QA-29

**The following causes apply to Outside Machining Providers:**

QA-001, QA-002, QA-004, QA-005, QA-006, QA-007, QA-008, QA-009, QA-010, QA-011, QA-012, QA-013, QA-014, QA-016, QA-017, QA-018, QA-019, QA-020, QA-021, QA-022, QA-023, QA-024, QA-025

**The following clauses apply to Plating(Metal Finishing and NDT) Providers:**

QA-001, QA-002, QA-003, QA-004, QA-005, QA-006, QA-007, QA-008, QA-009, QA-010, QA-011, QA-012, QA-013, QA-014, QA-016, QA-017, QA-018, QA-021, QA-022, QA-023, QA-024, QA-025, QA-26, QA-27, QA-28, QA-29

**The following clauses apply to Raw Materials, Sealants, Paint Providers:**

QA-001, QA-002, QA-004, QA-005, QA-006, QA-007, QA-008, QA-009, QA-010, QA-011, QA-012, QA-013, QA-014, QA-015, 016, QA-017, QA-030, QA-029, QA-030, QA-031, QA-032, QA-033

**When products if for quired by customer the following also applies:**

QA-003

**The following clauses apply to Shop Supplies, Tooling and all Other Providers:**

QA-001,QA-005, QA-006, QA-007, QA-008, QA-009, QA-010, QA-015, QA-016, QA-017

**When product is purchased to a specification the following applies:**

QA-030 or other document stating the product meets the specification requirement.

**The following clauses apply to Software providers, as applicable:**

QA-001,QA-005, QA-006, QA-007, QA-008, QA-009, QA-010, QA-015, QA-016, QA-017, QA-035, QA-036, QA-037