



TITLE: Quality Assurance Sub-Contract Quality Clauses	DATE: 03/30/2022
OWNER: Operations Manager	

This document outlines the Exotic Tool Welding (ETW) quality control terms and conditions levied to suppliers on our Approved Vendor List (AVL), who provide products or services that can affect final product or service quality. These requirements, when applicable, are supplementary to the ETW standard terms & conditions.

Initial approval of our suppliers or vendors by ETW is based on the scope of needs for a particular work statement, industrial application, and/or general support, and includes consideration of suppliers existing 3rd party approval schemes, special process approvals, customer approvals, and assessed risks. On-site audits are performed at sub-tier suppliers when unreasonable risks or concerns have been identified. ETW may assess suppliers/vendors with non-accredited quality systems using our Supplier Survey.

Suppliers on the ETW AVL will be approved and performance monitored quarterly thereafter for On Time Delivery, target 90% or better, and Quality Performance, target no more than two supplier caused nonconformities allowed.

Issues in meeting these metrics may result in corrective action requests. Buyer will periodically request suppliers to update their profile and quality management system information via a survey. Seller's performance information can be forwarded at that time or upon request.

ETW expects that all suppliers have competent and qualified employees that have been made aware of their contribution to product and service conformity, their contribution to product safety and the importance of their ethical behavior and how this awareness affects the supply chain.

Communication to ETW should be made to the Buyer of Record on the Purchase Order. If communication is handled in a non-written/electronic format, for example telcon, it should be provided in a written/electronic format as requested.

The seller warrants that in the performance of this PO, seller shall comply with all applicable statutes, rules, regulations, and orders of the Government and any of the state or political subdivision thereof, and agrees to indemnify ETW against any loss, damage, cost, or liability by seller's violation of this warranty.

ETW reserves the right of final approval of Product and services; methods, processes, and equipment; the release of final product and/or services. All special processes required by this Purchase Order must be performed by qualified personnel.

Key, critical, and special characteristics are to be identified and controlled as noted on the Purchase Order or specification.

The following Quality Assurance clauses apply to PO's placed by ETW as described within:

QA-1 Right of Access

The supplier shall grant ETW, its customers, and regulatory authorities access to the applicable areas of all facilities involved in the order and to all applicable records. This right of access is applicable to all sub-tier suppliers and should be flowed down to them formally and acknowledged. The supplier shall assist in the performance of any required surveillance, audits, assessments, or investigations. ETW will respect the confidentiality of proprietary information and comply with all safety and export rules during this surveillance.

QA-2 Quality Management System



TITLE: Quality Assurance Sub-Contract Quality Clauses

DATE: 03/30/2022

OWNER: Operations Manager

External Provider, including their sub-tier suppliers, shall maintain an effective quality management system that is appropriate to the service/product provided (AS9100, NADCAP, ISO9001, G.E., etc.)

ETW reserves the right to review and approve the Quality Management System.

Customer directed sources must operate in accordance with approved specifications and standards, as dictated and controlled by the customer in question.

The vendor shall maintain the proper identification and revision status of specifications, drawings, process requirements, inspection/verification instructions and all other relevant technical data.

Any specific certification requirements will be stated on ETW's purchase order.

The Quality System should address the following:

- | | |
|----------------------------------|---------------------------------|
| A. Contract Review | H. Non-conforming Control |
| B. Control of Vendors | I. Training |
| C. Product Verification | J. Record and Document Control |
| D. Traceability & Identification | K. Control of Customer Property |
| E. Process Control | L. Internal Audits |
| F. Inspection | M. Control of Equipment |
| G. Calibration | N. Qualification of Personnel |

QA-3 Record Retention Time

The supplier shall retain ETW records for a minimum of current year plus 10 years or as specified on the purchase order. ETW shall be notified prior to the destruction of records pertaining to ETW purchase orders.

QA-4 Certificate of Conformance (C of C)

The supplier shall furnish a certificate of conformance with each shipment.

- A. The C of C indicates that all materials, products, and/or services provided conform to the requirements specified by the purchase order.
- B. It must include the ETW purchase order number, part number/ID, quantity, lot, or batch number.
- C. Supplier is instructed to supply to, and reference the specifications, standards, engineering, or codes specified on the PO using the latest revision available, unless noted otherwise on the purchase order.
- D. The certificate of conformance must indicate release to ETW by an authorized member of the suppliers' quality team.

QA-5 Inspection & Verification

- A. Results of all required inspections or tests shall accompany each shipment. The results shall identify each heat or batch lot shipped and reference the specification, standard, or engineering applicable.
- B. Chemical and physical test data shall include actual numerical values for each property tested in accordance with the applicable specification. Specification and revision shall be shown on each report furnished.
- C. When specified, Statistical Process Control shall be implemented as defined by the purchase order.

QA-6 Material Test Reports (MTR)

A material test report for **raw and filler material(s)** is required, and shall contain the following:

- A. Identification, description, material specification, batch, heat lot, or other traceable designation
- B. A statement of conformance to the specification ordered.



TITLE: Quality Assurance Sub-Contract Quality Clauses	DATE: 03/30/2022
OWNER: Operations Manager	

- C. The supplier shall furnish a copy of the chemical and physical analysis of the actual laboratory tests, identifiable to the material/lot, traceable to the original manufacturer.
- D. Unless otherwise stated on the purchase order, all filler metal is to be DFARs compliant.
- E. The provided MTR's must list the country of origin and be clear and legible.

QA-7 Identification & Traceability

- A. ETW supplied lots must be kept identified throughout production/processing.
- B. Supplier shall maintain identity and traceability of items on purchase order by lot or batch, serial number and/or manufacturer information, as applicable.
- C. Unless otherwise specified on the PO, purchased items will be identified per engineering.
- D. Upon shipment, Suppliers must maintain unique identity and lot traceability along with reference to ETW purchase order number.
- E. **Filler and Braze Material Requirements:**
 - Material shall be flag tagged one end (alloy & specification at a minimum required)
 - Packaging and certificate of analysis must contain: ETW purchase order number, quantity, specification & revision level, alloy, size (diameter & length), heat and/or lot number, and shelf life (if applicable)
- F. **Flux Requirements:** Packaging to include product name, specification, ETW purchase order number, manufacturer's name, manufacturer's designation, heat and/or lot number, date of manufacture, shelf life (if applicable), directions for mixing and application, and weight of contents
- G. **Tungsten Requirements:** Individual packaging of tungsten requires: tungsten type, specification(s) and rev level(s), diameter, length, quantity, batch/heat/lot number, & ETW purchase order.

QA-8 Shelf Life

When product from the supplier includes materials with a limited shelf life, the supplier shall include the expiration date of the materials used and batch identification on the required certifications. The supplier shall provide material that contains at least 75% of its remaining shelf life.

QA-9 Safety Data Sheet (SDS)

The supplier shall ensure that all materials, which are harmful to human health and/or property, are properly contained, and marked in accordance with applicable regulations and statutory law. They are to be supplied in accordance with SDS per OSHA's hazard communication standard 29 CFR 1910-1200, and applicable sections of the Washington State Industrial Safety and Health Act RCW 49.17. Materials not received in compliance will be subject to immediate rejection and return at supplier's expense.

QA-10 FOREIGN OBJECT DEBRIS/DAMAGE (FOD) PREVENTION

Seller shall maintain a FOD prevention program appropriate to their operations, which includes the review of manufacturing process' to identify and eliminate FOD entrapment areas through which foreign objects can migrate and to prevent FOD in deliverable items. Seller shall ensure work is accomplished using sufficient handling methods that eliminates damage and maintains work areas and tooling in a manner adequate to preclude the risk of FOD incidents. Seller shall investigate each FOD incident and ensure elimination of its root cause. Seller shall ensure that these requirements are flowed down to Seller's subcontractors at every tier.

QA-11 First Article Inspection Report (AS9102 Requirement)

Doc. Number: QAD740-2	Revision: J	Page 3 of 7
-----------------------	-------------	-------------

COPIES ARE UNCONTROLLED



TITLE: Quality Assurance Sub-Contract Quality Clauses

DATE: 03/30/2022

OWNER: Operations Manager

- A. When required on PO, the supplier shall provide a first article inspection report to ETW on the first deliverable article produced, utilizing the same processes and equipment as those that produce the contracted quantity.
- B. The report shall provide evidence of conformance to applicable engineering and purchase order requirements.
- C. The FAIR item shall be identified upon delivery to ETW.

QA-12 Calibration

- A. When monitoring or measuring is used to verify the conformity of products and services to requirements, the supplier, including their sub-tier suppliers, shall utilize appropriate resources to ensure valid and reliable results and maintain an effective calibration system aligned with ISO 10012, ANSI/NCSS Z540-1, ANSI/NCSS Z540.3, and/or MIL-STD-45662.
- B. Suppliers of Calibration services must calibrate equipment using National Institute of Standards and Technology (NIST) standards and be accredited to ISO 17025.

QA-13 Supplier Notification / Report of Nonconformance to ETW

- A. Any departure from drawing specifications or other purchase order requirements must be documented by the Seller and submitted to the ETW buyer for consideration and disposition. A copy of this disposition document must accompany each affected shipment.
- B. The supplier shall notify ETW of latent defects of product or materials after delivery of suspected nonconforming product or materials to allow ETW the opportunity to accept said product and/or notify our customer(s) of the nonconformance issues with the delivered product(s).
- C. Supplier must obtain written approval from ETW for nonconforming product disposition.
- D. The supplier shall notify ETW of all issues and obtain contract approval concerning product or materials product definition, product configuration, material substitution or other issues that are outside the scope of the contractual engineering documents.

QA-14 Sub-Tier suppliers / Supplier Flow-Down

- A. Supplier shall notify ETW to obtain approval prior to subcontracting any work on our purchase order.
- B. After approval, supplier must flow-down all applicable requirements to any sub-tier suppliers involved with this order.
- C. A legible copy of all process certifications shall accompany each shipment of material, parts, or assemblies. Special processes shall only be performed by customer-approved sources.

QA-15 Boeing Approved Sources – Limited to Boeing Product

All special processes for details and assemblies built per Boeing drawings shall be processed utilizing D1-4426 approved vendors. All material and hardware used in details and assemblies built per Boeing drawings shall be obtained from Boeing approved sources.

QA-16 Boeing Commercial – FAA Production Certificate 700 – Limited to Boeing Product

The supplier will place the following statement with all Boeing Commercial shipments:
"Seller hereby acknowledges that the parts and/or materials being shipped under this order are intended for use under Boeing's Federal Aviation Administration (FAA) issued Production Certificate 700 and no articles (or constituent parts thereof) or the accompanying paperwork (e.g., packages, shippers, etc.) contain any Federal Aviation Administration- Parts Manufacturer Approval (FAA-PMA) markings."

QA-17 Control of Changes



TITLE: Quality Assurance Sub-Contract Quality Clauses	DATE: 03/30/2022
OWNER: Operations Manager	

The supplier agrees not to make any change in supplier manufacturing facility location, ownership, quality system, change in suppliers, or any changes in product or process without written notification and approval from ETW.

QA-18 Supplier Corrective Action

Supplier shall, on request, provide statements of corrective actions on failures of supplier's product or Quality System. Corrective action statements may require approval from ETW's Quality Assurance. External Provider is required to flow down corrective action requirements to sub-tier providers when it is determined the sub-tier provider is responsible for the non-conformity.

QA-19 Packaging

Unless otherwise specified by the item drawing, specification, or purchase order, the seller is responsible for assuring that all items are delivered without damage or deterioration and are efficiently and economically packed for the method of transportation and type of handling involved. Unit and intermediate packaging shall be employed as necessary to prevent damage or deterioration.

QA-20 ETW Source Inspection

- A. Exotic Tool Welding reserves the right to have source inspection performed at the supplier's or sub-tiers supplier's facility prior to shipment. The requirement for source inspection will be defined on the purchase order.
- B. The supplier shall furnish at no cost to ETW inspection/test data, equipment, and facilities necessary to accomplish product inspection to applicable drawings, specifications, and other requirements.
- C. Final acceptance of purchased product shall be at ETW facilities.

Note: ETW Quality Representatives reserves the right to re-inspect or re-test specified product, review processes and review/audit facilities.

QA-21 ITAR / EAR Restrictions

Seller is advised that its performance under this Purchase Order may involve the use of or access to articles, information or technical data that is subject to export controls under 22 CFR 120-130 (International Traffic in Arms Regulations [ITAR]) and 15 CFR 768-799 (Export Administration Regulations [EAR]) and their successor and supplemental laws and regulations (collectively hereinafter referred to as the "Export Laws and Regulations").

When ITAR control is required on the PO, the supplier shall flow down the substance of this clause to all subcontracts awarded:

Seller represents and warrants that it is either (i) a U.S. person as that term is defined in the Export Laws and Regulations, or (ii) that it has disclosed to Buyer in writing the country in which it is incorporated or otherwise organized to do business, or if a natural person, all citizenships, and U.S. immigration status. Seller shall comply with all Export Laws and Regulations, and any license(s) issued thereunder.

- Seller shall indemnify Buyer for all liabilities, penalties, losses, damages, costs, or expenses (including attorneys' fees) that may be imposed on or incurred by Buyer in connection with any violations by Seller of Export Laws and Regulations, and any license(s) issued thereunder.
- Buyer's obligations under this Purchase Order are subject to and shall be modified if and to the extent required to conform to applicable Export Laws and Regulations, and any license(s) issued thereunder.



TITLE: Quality Assurance Sub-Contract Quality Clauses	DATE: 03/30/2022
OWNER: Operations Manager	

QA-22 SkoFlo Industries Flow-Down Requirements (Ref SPEC-11008) – Customer specific

- A. Material Requirements (as applicable):
 - 1. Material Origination Requirement: SPEC-11138. Contact ETW buyer for latest revision.
 - 2. Material test report requirement: EN 10204 3.1
 - 3. Send MTR's via email to ETW for approval prior to use.
 - 4. Documents Required with Shipment:
 - a. Certification of Compliance/Conformance. ETW purchase order number, part number, part description, part revision level, heat/lot number, quantity, specification(s), drawing, and drawing revision must be stated on C of C.
 - b. Completed inspection reports (ref form SF 005)
 - c. Material certification (MTR) must be clear, legible and in English
 - d. **Filler material (if applicable) must be Niton analyzed to confirm material type BEFORE use.** Send sample to ETW to Niton Analyze. Filler rod must be ordered per SPEC-11138. Contact ETW buyer for latest revision
 - e. Welder qualification (if applicable)
- B. NDT Report Requirements (as applicable) per SFI-SPEC-11008. Contact buyer for latest copy / revision.

QA-23 Counterfeit Parts / Product

The supplier agrees to plan, implement, and control processes for the prevention of counterfeit or suspect counterfeit part use and their inclusion in product(s) delivered to ETW. The supplier must notify ETW of suspect or detected counterfeit parts/products. ETW suppliers must flow down counterfeit product prevention requirements to their vendors and suppliers.

QA-24 Application of Acceptance Authority Media

Supplier shall establish controls for AAM (Ref IAQG SCM 3.12). The means by which the organization identifies specific individuals (e.g., electronic signatures, stamps, passwords, etc.) authorized to document the status of outputs with respect to, but not limited to conformity, configuration, monitoring, and measurement requirements including release authorization.

QA-25 DPAS Rated Orders

When identified as a rated order certified for national defense use, you are required to follow all the provisions of the Defense Priorities and Allocations System regulations (15 CFR part 700) of order acceptance, flow-down, and in obtaining controlled materials and other products, services and materials needed to fill this order.

QA-26 Cyber Security

In the case of flowed down Cyber Security requirements the seller shall provide for ensuring compliance with NIST SP 800-171. In cases of non-compliance, specific po requirements may be issued to ensure the correct control of digital information.

Revision No.	Date	Prepared By	Approved By	Reason Revised
A	10/6/15	Kalee Moen	SL, KM, CE, JH, TH	Initial Release
B	3/9/16	Tim Hickok	SL, KM, CE, JH, TH	Changed QA-9 from MSDS to SDS
C	9/21/16	Kalee Carlstrom	SL, KC, CE, JH, TH	Added additional quality system requirements to QA-2, added requirements to QA-4 A., changed QA-5 title, added QA-5 C., added QA-6 E., added standards to QA-12 A., rewrote QA-17, rewrote QA-21 A.
D	8/3/17	Kalee Carlstrom	SL, KC, CE, JH, TH	Added QA-24, revised QA-2



TITLE: Quality Assurance Sub-Contract Quality Clauses	DATE: 03/30/2022
OWNER: Operations Manager	

E	12/4/17	Kalee Carlstrom	SL, KC, CE, JH, TH	Added QA-25, QA-26
F	2/20/18	Tim Hickok	SL, KC, CE, JH, TH	Revised QA-16, FAA-PMA requirements for Boeing
G	3/25/2019	Kalee Carlstrom	SL, KC, CE, JH, TH	Added note C. to QA-12, revised QA-12 B. for clarification.
H	6/2/21	Kalee Carlstrom	SL, KC, CE, JH, TH, RS	Added clarification to opening paragraph as to which QA codes apply based on work being performed / ordered.
J	3/30/2022	RS	RS	Revised opening section, QA-20 integrated into QA-7, revised QA-1 thru QA-13, QA-18, revise and renumber QA-20, QA-21, QA-24 thru QA-26, skipped Rev I.