



## **BREK MANUFACTURING**

### **PURCHASE ORDER - QUALITY TERMS AND CONDITIONS REV. K**

This document specifies the Quality Terms and Conditions which are to be performed by the suppliers that are issued purchase orders by Brek Manufacturing Company. They are separated as they apply to the supplier, by the following commodity groups:

- Category 'A': Clauses that apply to ALL suppliers, regardless of the special applications.
- Category 'B': are ADDITIONAL clauses that apply to suppliers that receive Digital Engineering Media, commonly known as 'DPD'.
- Category 'C': are ADDITIONAL clauses that apply to suppliers that perform SPECIAL PROCESSES, such as Heat Treating, Materials Testing, NDT, Surface Enhancement, Electro-plating, Chemical Finishing and Painting.

These categories can overlap at a single supplier, such as the chemical finishing supplier which also receives Digital Engineering Media. In this case, Category 'A', 'B' and 'C' are applicable. If there are any questions, please contact the assigned Brek Purchasing Representative for clarifications during the performance of your contract review process.

#### **CATEGORY A – Clauses that apply to all suppliers.**

##### **A-Q1**

The supplier shall implement a Quality Management System to control product and process requirements in accordance with SAE AS9100. The level of implementation shall be as required by the suppliers operations and shall include the establishment of company-wide processes that support good quality performance, on-time delivery, customer satisfaction and continual improvement.

##### **A-Q2**

When the supplier's operation is certified by a third-party organization, the supplier shall provide a copy of such certification(s) to Brek's Quality Assurance department, and shall keep Brek Quality Assurance up to date as the certification(s) are renewed.



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#### **A-Q3**

Brek Manufacturing occasionally makes a decision to utilize the services of small businesses that operate under sound practices, which do not have a formal Quality Management System in-place. This provision is made so that the unique talents of these suppliers can be contracted. These suppliers are issued additional Terms and Conditions that are designed to cover the requirements of a Quality Management System as they apply to the supplier's scope of work. Please refer to the BREK UMBRELLA PROGRAM. Otherwise, the Category 'A' Terms and Conditions apply.

#### **A-Q4**

The supplier is required to complete, sign and forward all documentation to Brek Manufacturing that is included in the new supplier package, as follows:

- Brek Terms and Conditions acknowledgement.
- ITAR Contractor Agreement.
- Brek Form QSF-7 (SCS) Supplier Candidate Survey.

Any missing or incomplete documents shall be forwarded to the supplier for completion. Incomplete document records at Brek can affect the issuance of future purchase orders.

#### **A-Q5A**

All of the products produced at Brek Manufacturing are customer critical, as they become part of passenger carrying aircraft or spacecraft. In some cases these aircraft deliver munitions to the war zone, where crew survival is critical. The health and safety of all personnel in the supply chain and of the end-item customer is of paramount importance. This clause shall be distributed to all employees within the supplier's facility.

#### **A-Q5B**

All materials, parts and age-controlled products must be handled with the safety of the product as part of the processes. The products shall be protected against damage and corrosion during manufacturing, through final delivery. Delivery of the product shall include the use of sound standard packaging practices. Special packaging instructions, when required, shall be stated on the purchase order. This clause shall be distributed to all employees within the supplier's facility.



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#### **A-Q6**

All suppliers and their employees are expected to perform within the standards of ethical conduct that our industry has established. This includes the fair and honest treatment of employees and customers, customer confidentiality as being maintained at all times, reporting of actual conditions (such as quality and delivery) as being accurate, and employee self-control in the face of both deadline pressure and conflicts within the workplace. This clause shall be distributed to all employees within the supplier's facility.

#### **A-Q7**

The supplier is responsible to provide the necessary resources to deliver products and services that meet all Brek Manufacturing and customer requirements in accordance with the purchase order. Brek Manufacturing's expectations are that the products provided by the supplier are 100% conforming, according to the definitions that are made on the purchase order and the engineering data that is provided.

#### **A-Q8**

In performance of the purchase order, Brek Manufacturing Company retains a right of entry to the supplier's facilities and records in order to verify product quality. Brek Manufacturing also reserves the right to audit the suppliers Quality System at any time. The right of entry is extended to Brek Manufacturing's customers (up to the OEM customer) and regulatory agencies. The right of entry is extended for an unlimited time period and a current purchase order is not required for the right of entry to be effective.

#### **A-Q9**

The supplier shall flow-down this right of entry provision to all of their suppliers as a part of their subcontracting actions. The right of entry shall include the issuing supplier, Brek Manufacturing, Brek's customers (up to the OEM customer) and all applicable regulatory agencies.

#### **A-Q10**

When the item addressed by the purchase order is associated with a national defense program, the items(s) on the purchase order are certified for National Defense under DPAS. A list of all such programs (by program name) and the priority rating is found on the supplement to these terms and conditions, titled QTC-001-1. The supplemental document is found on the Brek Website in conjunction with this document 'brek.aero/quality'.



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#### **A-Q11**

Items on the purchase order are for customer-specific aircraft use as indicated (i.e. A380 Spirit-UK, 737NG Spirit-Wichita, F-35 Northrop Grumman, F/A-18 Northrop Grumman) and must comply with all applicable engineering requirements and specifications for the particular item(s) at the time of manufacture or procurement. These requirements shall also be clearly stated in all of the supplier's subcontracts and purchase orders.

#### **A-Q12**

Purchase Orders for Standard Hardware, or assemblies that include Standard Hardware (i.e. BAC, AN, NAS, STM, MIL, etc.) shall be satisfied with material of the latest specification revision level in effect and must comply with all obsolescence / replacement criteria when applicable.

#### **A-Q13**

The supplier is responsible to provide trained and or certified personnel for the manufacture and inspection of products and services used to satisfy the requirements of the purchase order.

#### **A-Q14**

The supplier is responsible to implement a process by which all of the purchase order requirements, the engineering data requirements, and the requirements as stated herein, are reviewed prior to the supplier's acceptance of the purchase order.

#### **A-Q15**

The supplier shall implement a system for the control of document and product configuration, which includes the revision status of electronic engineering media, blueprints, mylars, printed specifications, or any other documentation that is used in the performance of the purchase order. Control shall include ready-identification of current revision status, such as a master list.

#### **A-Q16**

The supplier is responsible to destroy (by rendering them unread-able) any blueprints, parts lists, mylars, engineering models, specifications and other such proprietary documents that are obsolete. Obsolete documentation that is retained by the supplier for historic or traceability purposes shall be segregated, stored securely, and shall be clearly marked as "OBSOLETE".



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#### **A-Q17**

Quality documentation, such as records and certifications, must be maintained on file at the supplier's facility for a period of 10 years after the final payment of the purchase order. After this time period, the supplier shall not destroy such records without the written approval of Brek Manufacturing Company, as some of Brek's customers state that documentation shall be retained for the life span of the aircraft.

#### **A-Q18**

The supplier shall implement a system of self-audits to verify the effectiveness of the quality system and process performance. These audits shall be conducted a minimum of once per year.

#### **A-Q19**

The supplier agrees to notify Brek Manufacturing Company of any changes to the product, manufacturing process, facilities or sub-tier suppliers. A new First Article Inspection is also expected when changes such as these are undertaken.

#### **A-Q20**

The supplier shall exercise the necessary controls and practices in order to eliminate Foreign Object Debris (FOD) in accordance with SAE AS9146 and in AS9100 Rev D, para. 8.5.1.o.

#### **A-Q21A**

The supplier must purchase materials from OEM customer approved sources when applicable (see customer specific approval listing). Materials that are produced or procured outside of the USA always require the use of customer- approved sources. If there are any questions, they must be submitted to the Brek buyer for clarification.

#### **A-Q21B**

The supplier shall not engage in any substitution of engineering required materials or processes, unless the substitution has been approved in writing by Brek Manufacturing Engineering and Brek Quality Assurance.

#### **A-Q22**

Copies of all material, processing, testing, chemical and physical analysis certifications must accompany each shipment of parts as required by the blueprint or applicable specification.



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#### **A-Q23**

The supplier shall assure that all goods delivered under this purchase order are acquired from OEM approved sources only and has established a proactive Counterfeit Goods Prevention process, in accordance with SAE AS6174:

- “Counterfeit Work” is any item that is, or contains items that are, misrepresented as having been produced under an approved system or other acceptable method.
- The supplier agrees that counterfeit work is not delivered to Brek Manufacturing or their customers.
- The supplier agrees to only purchase products that are from the original component manufacturer through an authorized distributor chain.
- Acquisition of items from an independent distributor or broker must be Brek approved, in advance of the purchase. This approval must be in writing and it must accompany the delivery documentation.
- If at any time there is a question or suspicion that these terms are not in compliance, all suspected items shall be immediately quarantined and identified as NONCONFORMING, until further examination proves otherwise.
- The supplier shall immediately notify Brek Manufacturing in writing, stating the details of the suspicion. Upon request, the supplier shall provide all documented information that is available as to the source and traceability of the item(s) in question.

#### **A-Q24**

The supplier is responsible to maintain control of all Brek Manufacturing Company supplied material, gauges and tooling. Any such material that is lost, damaged or otherwise unsuitable for use shall be immediately reported to the buyer. Brek Manufacturing retains ownership of all supplied material and equipment, regardless of how it is used or incorporated in the supplier's operation.

#### **A-Q25**

The supplier agrees to ensure that materials utilized in performance of this order, whether furnished by Brek Manufacturing Company or by the supplier, shall be segregated and controlled in order to maintain traceability and to prevent them from being intermingled with any other materials.



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#### **A-Q26**

The inspection status of all products shall be clearly identified throughout the manufacturing process and upon delivery to Brek Manufacturing Company.

#### **A-Q27**

Prior to release from the supplier, all deliverable products shall be identified as-is required by the applicable purchase order, the engineering drawing, or engineering specifications.

#### **A-Q28**

When serialization and traceability is required, the assigned serial number shall be maintained on each part throughout all manufacturing processes and shall be identified on each part and all documentation upon release. A loss of serialized traceability results in the rejection of the entire production lot.

#### **A-Q29**

The Supplier shall maintain a system of gauge control in compliance with ANSI/NCCL-Z540-1-1994 and ISO- 10012-1. This includes all employee-owned measuring equipment that is used for manufacturing process adjustments and acceptance. Inspection equipment that is utilized must have the capability to attain a measurement of ten percent of the tolerance being inspected.

#### **A-Q30**

One hundred percent inspection of all characteristics is required. Use of sampling plans for inspection is prohibited without Brek Manufacturing Company's prior approval.

#### **A-Q31**

For all close tolerance characteristics (.0015" or less), GO and NO GO gauging techniques are not approved.



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#### **A-Q32**

If a key characteristic is required by engineering documents or Brek Manufacturing fabrication instructions, the following requirements apply:

- All key characteristics shall be placed under statistical process control.
- If the supplier does not have the ability to perform as stated above, contact the buyer immediately, prior to continuing with purchase order requirements.
- At any time, the supplier may request assistance from Brek Manufacturing when conducting SPC and AQS (Advanced Quality System) activities. Contact the buyer.
- Documentation requirements are per key characteristic:
- The supplier will provide copies of SPC documentation with all parts delivered to Brek Manufacturing Company.
- Documents required for each key characteristic shall be IX-MR or X bar R charts.
- If 21 or more parts are listed on the control charts, then upper and lower control limits along with a CPK reading shall be indicated on the control chart.
- All charts will be identified with date, part number, dash number, and the key characteristics.

The documentation requirements listed above are in addition to all other documentation required by the purchase order and engineering requirements.

#### **A-Q33**

Applicable on initial production by the supplier, a First Article Inspection (FAI) report is required for each dash number in accordance with SAE AS9102. The inspection report shall indicate the actual measurement obtained for each characteristic listed on the blueprint, parts list, notes lists and Brek Manufacturing Company manufacturing instructions (when specified on the purchase order). When repetitive dimensions are inspected (i.e. holes of the same size, web thickness of the same size, etc.) record actual measurement individually, and specify locations. A new FAI is required when a part has not been in production for a period of two years or longer. Delta FAI's are also required for all changes with regard to the current FAI configuration.

#### **A-Q34**

At Brek Manufacturing Company's discretion, a Brek source inspector will be present during FAI. When source inspection is specified, the supplier shall provide a 48 hour notice to prior to the date of performance of the FAI.





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#### **A-Q35**

Brek Manufacturing Company's acceptance of products or services does not preclude a subsequent rejection when a nonconforming condition is discovered at any time. This includes discovery by Brek Manufacturing Company's customer(s).

#### **A-Q36**

The supplier shall implement a system for the control of nonconforming product:

- The supplier shall immediately identify, segregate and contain all nonconforming product in order to prevent unintended use.
- The supplier shall immediately disclose to Brek Manufacturing Company any discrepancies that may affect product that has already been delivered, regardless of the date of discovery.
- The supplier must report all nonconforming conditions to the Brek buyer and Brek Quality Assurance.
- The supplier must receive Brek's written disposition of all previously submitted nonconforming items, prior to supplier release and delivery to Brek Manufacturing.

#### **A-Q37**

The supplier shall implement a system of corrective action for discrepancies that are identified by the supplier, Brek Manufacturing or Brek's customers. When Brek Manufacturing requests a written corrective action, the supplier shall document the containment actions taken, the root cause of the discrepancy, the immediate and permanent corrective actions taken and the effective date of the corrective actions. Brek Manufacturing reserves the right to audit the effectiveness of the stated corrective action at the supplier's facility.

#### **A-Q38**

The supplier shall submit a Certificate of Conformance summarizing all processes and tests performed, along with the name of each facility utilized. The supplier must also include the applicable revision status of each specification performed. Raw material and processing certifications that were received by the supplier in performance of the contract must be included with the final documentation package.



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#### **CATEGORY B – Additional clauses that apply to suppliers that receive Digital Engineering Media (DPD).**

##### **B-Q39**

When Digital Product Definition (Electronic Engineering Media) is specified, the supplier is directed to Brek QTC-002, Guidelines for the Usage of Digital Product Definition. The document is found on the Brek Website in conjunction with this document. All items are required unless CMM Inspection (or the use of similar automated measuring devices) is NOT performed.

##### **B-Q40**

The requirements of QTC-002 are effective for an unlimited time-period, as electronic data is visible on computer media after the files have been deleted. This clause is extended to the supplier's independent offsite storage locations, which are required for back-up purposes per QTC-002.

##### **B-Q41**

The supplier is required to provide a documented process that defines the actions that are taken to assure the integrity of product engineering, configuration management and the traceable identification of all derivative files that are created by the supplier. The process shall be in accordance with the guidelines of QTC-002.

##### **B-Q42**

If the supplier's DPD system is in accordance with a prime contractors DPD System Requirements (for example Boeing, Northrop Grumman or Spirit Aerosystems), the established documentation can be provided to Brek for approval. There is no need to duplicate, and there are no requirements within this document or QTC-002 that are in conflict with the supplier's previously-approved DPD control system.

##### **B-Q43**

Brek Manufacturing's approval of the supplier's DPD system is required. Any missing or incomplete documents shall be forwarded to the supplier for completion. Incomplete document records at Brek can affect the issuance of future purchase orders.



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#### **B-Q44**

In the case of a supplier that has a CMM or similar automated measuring device(s), the supplier must also be approved for the specific measuring device(s) that are used.

#### **B-Q45**

If such approval is not achieved, Brek Manufacturing will perform the FAI and receiving inspection upon receipt. This action does not relieve the supplier of performing an FAI per AS9012 in order for the supplier to approve the production process. This also includes in-process and final inspection, for the purpose of supplier acceptance of the products that are manufactured per the supplier's approved process.



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### **CATEGORY C – Additional clauses that apply to suppliers that perform SPECIAL PROCESSES.**

#### **C-Q46**

The special processes that Brek contracts for completion by the Special Process Suppliers are as follows:

- Heat Treatment of Aluminum Alloys or Steel Alloys
- Hardness Testing
- NDT - Conductivity Inspection
- NDT - Eddy Current Inspection/General
- NDT - Magnetic Particle Inspection
- NDT - Pre-penetrant Etch & Penetrant Inspection
- NDT - Ultrasonic Inspection
- Surface Enhancement – Shot Peening
- Chromic Acid Anodizing of Alum. - Type I
- Hard Anodizing – Aluminum
- Anodize Aluminum, Type Ic - Boric Sulfuric Anodize
- Chemical Conversion Coatings on Aluminum
- Cadmium Plating, Types I and II
- Painting

#### **C-Q47**

All special processes required by this Purchase Order must be performed by sources that are approved by the OEM customer, and when applicable, Brek's direct customer. These requirements are also stated on the purchase order.

#### **C-Q48**

The special processes shall be performed per the latest revision of the applicable process specification as stated on "Sub-tier Process Specification Listing", which is found on the Brek Website: 'brek.aero/quality'.

#### **C-Q49**

The supplier is responsible to provide certified and or trained personnel for the processing and inspection of products and services that are used to satisfy the requirements of the purchase order and the applicable special process specifications.



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#### **C-Q50**

The supplier is responsible to maintain control of all Brek Manufacturing Company supplied parts and materials. Any such material that is lost, damaged or otherwise nonconforming shall be immediately reported to the Brek buyer via the supplier's Nonconforming Materials System.

#### **C-Q51**

The special processor is required to maintain all customer approvals and applicable NADCAP accreditation with regard to SPECIAL PROCESSES. The supplier shall also inform Brek Quality Assurance as the process certifications and / or accreditations are changed or updated.

#### **C-Q52**

If there is a condition that raises any findings that are related to the validity of the Special Process that is or has been performed by the supplier, the supplier shall report to Brek Manufacturing in writing as to the exact condition, reporting of containment actions and immediate corrective measures. This report must be made regardless of the source of the query, the time period that the finding applies to, or any initial assumption of responsibility. This report shall be submitted within 24 hours of the discovery of the condition.



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#### BREK MANUFACTURING QT&C: REVISION HISTORY

Revision Number	Clause Number	Description of Change	Authorization	Date
NC	ALL	ORIGINAL	K. HARDCASTLE	3-2-04
A	Q05.10	Added clause	K.HARDCASTLE	10-2-11
A	Q09.01	Added "Supplier must receive nonconforming product disposition approval from Brek Manufacturing Company prior to delivery."	K.HARDCASTLE	10-2-11
B	ALL	Re-indexed all clauses to align with AS 9100. Added AS 9100 and AS 9102 requirements. Added third-party certification requirements. Enhanced the Right of Entry clause to include no time limit or no active PO req'd. Added DPD requirements. Added employee tools to the calibration requirement. Added reporting NCP to Brek QA in addition to the buyer.	S. WISWELL	6-6-2012
C	Q12.01	Added clause Q12.01, Counterfeit Parts Prevention	S. WISWELL	6-22-12
D	Q01.03	Added clause Q01.03 – Defense Priority and Allocation System. Added supplemental document QTC-001-1 for a list of certified programs at Brek Manufacturing	S. WISWELL	08-31-2015
E	Q02.03	Revised Flow-down of DPD Requirements – added direction to QTC-002. Added document QTC-002 for flow-down of DPD requirements per Boeing Audit, dated 9/21/2015	S. WISWELL	10-19-2015
F	Q01.03 Q07.06	Added direction to Brek Website 'brek.aero/quality'	S. WISWELL	2-21-2016
G	Q07.07	Added " <u>either as issued by the engineering responsible customer or as stated on "Subtier Process Specification Listing" and "as listed on the brek.aero website, under Quality."</u>	S. WISWELL	7-13-2017



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H	Q08.03	Added clause Q08.03, mandate of FOD controls	S. WISWELL	7/26/2018
J	As Noted	Re-indexed and re-numbered all clauses to support commodity application in groups. Added and revised clauses <u>A-Q3</u> : Supplier Umbrella. <u>A-Q4</u> : Docum't Compl'n. <u>A-Q5A &amp; B</u> : Prod Safety. <u>A-Q6</u> Ethical Standards. <u>A-Q7</u> : Added Prod Conformity. <u>A-Q17</u> : Added Brek Doc'mt retention for life of A/C. <u>A-Q20</u> : Added AS9146 for FOD. <u>A-Q23</u> : Added AS6174 for Counterfeit cnt'l. <u>B-Q40</u> : Added unlimited effectivity of QTC-002. <u>B-Q42</u> : Supplier's estab and approved DPD system is conforming to QTC-002. <u>B-Q43</u> : Doc'mt Compl't'n. <u>B-Q44</u> : CMM Appv. . <u>C-Q46</u> : Added list of SP's subcon'td by BMC. <u>C-Q51</u> : Added supplier inform of certification changes. <u>C-Q52</u> : Added inform of any question for performance of SP	S. Wiswell	1/21/2019
K	A-Q21A A-Q21B	Changed A-Q21 to A-Q21A only, no other changes. Added A-Q21B to restrict Material Substitutions.	S. Wiswell	3/7/2019

