

## Appendix A – Mulgrew Aircraft Quality Clauses

Clause	Title	Description	Latest Revision
Q01	<b>Packaging and Handling</b>	All parts must be protected prior to shipping from your facility, as applicable to commodity being shipped. Parts must be returned in the original containers they came in. Depending on the process your company is performing, additional protection may be required by your facility to prevent damage to services or processes you have performed, as applicable. Media such as butcher paper, plastic netting, bubble wrap, or other positive protection may be additionally required by your facility. Use of newspaper is not allowed due to the corrosive nature of the ink.	03-02-09
Q02	<b>Certificate of Compliance (C of C)</b>	A Certificate of Compliance shall accompany all shipments. Certificate of Compliance must be signed by an authorized representative and reflect all information necessary to identify the product, quantity, current revisions, and whatever services or processes you have performed.	03-02-09
Q03	<b>First Article Inspection (FAI)</b>	First article inspection (FAI) shall be performed on all <b>new, first production lots</b> of a specific part number prior to shipment (unless other arrangements are approved). The FA must be documented on form AS9102. The supplier may use its own form, provided it contains the same information as the AS form. FA information must include drawing notes, flag notes and title block notes. A new FAI must be provided if/when there is a lapse in production of more than 24 months (2 years). Delta first article inspections are required when <b>changes</b> occur in characteristics or dimensions which affect the original first article inspection or a change in the way the part is processed that may affect the outcome of the final product.	04-01-16
Q04	<b>Latest Revisions</b>	The product being manufactured and / or service being performed must be performed to the latest revisions at the time of manufacture or process. At no time will other revisions outside of what is indicated in drawings or Purchase Orders be used without the express, written permission of an authorized Mulgrew Aircraft Inc. representative. Supplier is required to notify Mulgrew if new changes affect product or process. Prime OEM specification revisions are available on Mulgrew's website <a href="http://www.mulgrewaircraft.com">www.mulgrewaircraft.com</a> under Quality Assurance section	04-01-16
Q05	<b>Test Reports</b>	The original mill or foundry chemical and mechanical test reports for material used in fulfilling this order must be maintained on file for a period of ten (10) years. <ul style="list-style-type: none"> <li>• The heat lot number of each test report must be traceable to the material.</li> <li>• Any reprocessed raw material must be traceable to the original mill test report and must include objective evidence (e.g., mechanical tests) of compliance to the material's reprocessed condition.</li> <li>• Copies of the above test reports must be submitted with each shipment.</li> </ul>	01-14-14
Q05A	<b>Heat Lot (Single)</b>	Each shipment must consist of items from a single heat lot unless otherwise negotiated and documented on MAC purchase order.	01-14-14
Q05B	<b>Heat Lot (2)</b>	Shipments may consist of no more than two (2) manufacturer's lots for each part number included in an order. No quantity of a single manufacturer's lot may represent less than 20 percent of the total quantity per shipment, unless otherwise specified on the purchase order.	04-01-16
Q06	<b>X-RAY</b>	When x-ray is a requirement by the drawing, x-ray film and x-ray inspection report shall be included with every shipment.	03-02-09
Q07	<b>Fracture Critical – Flight Safety</b>	The supplier shall comply with the requirements of all Flight Safety and Fracture Critical designated products. Changes in sequencing of manufacturing or any other substitutions are not allowed. The supplier must follow all instructions without deviations unless written permission by authorized Mulgrew Aircraft Inc. representative is given. The words "Flight Safety" and/or "Fracture Critical" must appear on all certifications, Shippers, and inspection documentation.	03-02-09
Q08	<b>Inspection Check Fixture (ICF)</b>	Mulgrew Aircraft Inc. has provided inspection check fixtures and must be used for product acceptance for those features only. Any other use must be authorized in advance by Mulgrew Aircraft Inc. in writing. The use of the acceptance check fixture does not absolve you from assuring <u>all</u> dimensions and requirements are produced to drawing and specification requirements.	03-02-09
Q09	<b>Approved Suppliers</b>	All materials used in the production or service performed by the supplier must be procured from suppliers with prime customer (OEM) approvals or Mulgrew Aircraft approved suppliers. Contact Mulgrew's purchasing Department for a list of approved suppliers when needed. Ref D1-4426, Exostar, QCS-001, EMAPS, DDS, etc.	04-01-16

Q10	<b>Traceability/Lot Shipment Requirements</b>	Lots may not be commingled. A production lot shall consist of parts which are all the same configuration fabricated from the same conditions and material, processed (including heat treat) together and produced as one continuous run. A casting, forging, machined part or extrusion lot consists of the same part number, of one alloy, produced using the same PROCESSING PARAMETERS (INCLUDING HEAT treat) and contains a homogeneous heat pour, or same basic material. A plating lot (cadmium, anodize, chemical milling, etc.) shall consist of treated articles on the same order treated under the same conditions from the same chemical composition from the same tank. A coating lot (paint, dry film lube, etc.) shall be processed as one batch on the same part on the same order. A batch is defined as the end product of all the raw materials mixed or blended in a single or continuous operation	04-01-16
Q11	<b>Shelf Life</b>	When services from the supplier include using materials with a limited shelf life, the supplier shall include the expiration date of the materials used and batch identification on the required certifications.	03-02-09
Q12	<b>Key Characteristics (KC's)</b>	Statistical Process Control is required on this order. The supplier is required to submit SPC charting information in accordance with supplied instructions (purchase order) on the identified Key Characteristic. The supplier shall identify the statistical techniques in establishing, controlling and verifying process capability and product characteristics. Documented procedures shall be established, approved by Mulgrew Aircraft Inc., and maintained to implement and control the application of these statistical techniques	03-02-09
Q13	<b>Digital Data</b>	Digital media / data has been provided with this order. The supplier is required to follow the requirements of Boeing D6-51991 (latest revision) <a href="http://www.boeing.com/supplier/D6-51991.pdf">http://www.boeing.com/supplier/D6-51991.pdf</a>	04-01-16
Q14	<b>External Provider Performance</b>	Mulgrew Aircraft Components (MAC) will control and monitor the external providers' performance and will contact/notify the external provider when the performance rating falls below 90% (combined Quality & Delivery). MAC will monitor the performance and may initiate a formal Corrective Action Plan to improve the performance	06-01-18
Q15	<b>Product Sampling</b>	All parts shipped to Mulgrew Aircraft Inc. shall be one hundred percent (100%) inspected, unless otherwise directed by Mulgrew Aircraft Inc. Quality Department. Sampling plans may be used only with the written permission of Mulgrew Aircraft Inc. and must be approved prior to their use. Contact the Mulgrew Aircraft Inc. Quality Department for sampling plan options.	03-02-09
Q16	<b>Source Inspection (ASI)</b>	Mulgrew Aircraft Inc. source inspection is required prior to shipment. The supplier shall contact the Mulgrew Aircraft Inc. purchasing department to coordinate scheduling of source inspection. Contact must be made at least 48 hours in advance of shipment.	03-02-09
Q17	<b>Government Source Inspection (GSI)</b>	Government source inspection (GSI) is required prior to shipment from your plant. On receipt of this order, promptly furnish a copy to the government representative who normally services your plant, or, if none, to the nearest army, navy, air force, or defense supply agency inspection office. In the event the representative or office cannot be located, our purchasing agent should be notified immediately. Evidence of government source inspection must be included with each shipment.	03-02-09
Q18	<b>Right of Entry</b>	Mulgrew Aircraft Components (MAC), our customers, Government or Regulatory/Statutory agencies shall have the "right of entry" into all relevant facilities involved in the purchase order and all applicable records to verify the quality of work, records and materials.	04-01-16
Q19	<b>Retention &amp; Disposition of Records</b>	Suppliers shall retain Mulgrew product related records to at least (10) years after completion, unless otherwise specified by Mulgrew. After the 10 years, and or if Seller ceases operations, Sale, Relocation or closure of Seller's facility or transfer of manufacturing operations, Seller shall notify Mulgrew Aircraft Components (MAC) in writing within ten (10) business days for directions, disposition or transfer of records to Mulgrew Aircraft Components (MAC) in accordance with MAC Buyer direction.	06-01-18
Q20	<b>Counterfeit parts</b>	Supplier shall be aware of and adhere to requirements of AS6174 for a documented counterfeit parts program. Supplier is responsible for ensuring that no counterfeit parts are used or supplied as part of the finished goods.	04-01-16

Q21	<b>Lockheed Martin Aeronautics Requirements</b>	<p>PO Rev. "A", DTD: 02/02/2016 Vendor to Include "Prime Customer" Vendor Code in to Their CofC. (Outside Manufacturers &amp; Material Suppliers are excluded)</p> <p>*** PREVENT F.O.D. ***</p> <p>PROTECT PARTS DURING TRANSPORTATION PER: PM5010</p> <p>TO PRECLUDE ANY FOREIGN OBJECT DAMAGE THROUGHOUT THE MFG. ENVIRONMENT, OPERATORS USE CARE IN HANDLING, USE APPROPRIATE STORAGE RACKS AND MAINTAIN A CLEAN SHOP.</p> <p>Processing directly related to a Lockheed Martin Aeronautics Company purchase order (P.O) must be accomplished in accordance with process specifications on this P.O and Lockheed Martin Aeronautics Company appendix QJ. Process source must file and maintain a copy of all purchase orders containing the above statement and make these available for review by buyer, upon request. The Process source must submit a Certificate of Conformance (CofC) with a unique certification number which contains the elements listed in Appendix QJ par F, and fracture durability classification or serialization, when required. The process source must suitably wrap, box, or rack parts to guard against shipping damage, and apply rust or corrosion protection.</p> <p>NOTE: DPAS RATING; DO-A1 THE FOLLOWING Q.C. CLAUSES ARE APPLICABLE TO THIS PURCHASE ORDER: Q01, Q02, Q04, Q09, Q10, Q11, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27</p> <p>FOR MULGREW AIRCRAFT QUALITY CLAUSES AND PURCHASE ORDER TERMS AND CONDITIONS VISIT: <a href="http://www.MULGREWAIRCRAFT.COM/QUALITY_ASSURANCE/QUALITY_CLAUSES">www.MULGREWAIRCRAFT.COM/QUALITY ASSURANCE/QUALITY CLAUSES</a></p> <p>A83 "ENGINEERING SPECIFICATION REQUIREMENTS" CAN BE FOUND AT <a href="http://www.lockheedmartin.com/us/aeronautics/materialmanagement/scengineering.html">http://www.lockheedmartin.com/us/aeronautics/materialmanagement/scengineering.html</a>.</p>	05-07-18
Q22	<b>Notification of Nonconformance</b>	<p>The Supplier is required to notify Mulgrew any nonconforming product and arrangements for approval of the nonconforming product. Mulgrew Aircraft Components Quality Manager will initiate NCR's and follow up on all NCR's issued to suppliers when it is determined that the supplier is responsible for the nonconformity, and will verify their corrective action and the effectiveness.</p> <p>Supplier Responder: Corrective actions responses = within 30 calendar days</p>	03-02-09
Q23	<b>Notifications of Changes in Product</b>	<p>Supplier is required to notify Mulgrew of changes in product and/or process definition, and where required, obtain Mulgrew's approval. The supplier is also required to notify Mulgrew of nonconforming product, obtain Mulgrew's approval for nonconforming product disposition, notify Mulgrew of changes in product and/or process, changes of suppliers, changes of manufacturing facility location and, where required, obtain Mulgrew's approval, and flow down to the supply chain the applicable requirements including customer requirements.</p>	12-05-12
Q24	<b>Flow down applicable requirements to sub-tier</b>	<p>Supplier is required to flow down to sub-tier the applicable requirements in the purchasing documents, including Key Characteristics where required.</p>	12-05-12

Q25	<b>Proprietary data</b>	<p><b>THIS AGREEMENT is acknowledged by Mulgrew Aircraft Components, Inc. (Mulgrew) and our Sub-Tier Contractors (Vendors) in acceptance of our purchase order.</b> The agreement is made to control Mulgrew's and our Customer's proprietary data which may be provided in support of the manufacturing of goods and or services. This Data which may be in the form of specifications, standards, drawings, or knowledge is proprietary to Mulgrew and/or our customer and is to be controlled as follows:</p> <ul style="list-style-type: none"> <li>This Data shall not be disclosed by Vendor to others nor used for the benefit of anyone other than Mulgrew or our Customer without the advance written consent. (1) are or become within the public knowledge through any wrongful act of the Vendor, or (2) are legally obtainable from other sources without restriction or (3) were in the possession of Vendor prior to the first disclosure of such to Vendor on behalf of our Customer, or (4) were independently developed by Vendor without breach of this Agreement. The confidentiality obligation under this paragraph shall cease upon termination of procurement by Mulgrew directly or indirectly from Vendor and the return of all copies of such Data by Vendor to Mulgrew or a certified statement by Vendor to Mulgrew that all copies of such Data have been destroyed.</li> <li>Mulgrew may furnish the Vendor revisions or access to data or Process Specifications and Vendor agrees to promptly insert such revisions in the appropriate document and destroy data or those pages which have been superseded, or canceled. Subject to the exceptions mentioned, Vendor agrees to maintain in strict confidence and trust all said Data and shall promptly return to buyer all said Data when requested. It is understood that such Data may also include, but not be limited to, business matters, methods, processes, designs and devices used, worked on or developed, manufactured, or under consideration for use, development or manufacture by our customer. Vendor further agrees that unless specific written consent is given by Mulgrew, it will not disclose or in any way make known to any person, firm or corporation any such Data other than such person, firm or corporation employed or retained by Vendor for work under contract directly or indirectly with Mulgrew and subject to the paragraph below.</li> <li>Vendor agrees that any and all persons or firms whom it may employ or whose services it may retain in conjunction with its manufacture and supply of our customers' requirements set forth in purchase orders received directly or indirectly from Mulgrew shall be subject by a written agreement to the same conditions as are applicable to the Vendor under the preceding paragraphs.</li> </ul>	03-02-09
Q26	<b>FOD requirement clause</b>	<ol style="list-style-type: none"> <li>Seller shall maintain a FOD prevention program in accordance with National Aerospace Standard NAS-412, Foreign Object Damage/Foreign Object Debris (FOD) prevention.</li> <li>Whenever and/or wherever FOD entrapment or foreign objects can migrate, Seller shall ensure that applicable Quality Clause FOD requirements are flowed down to Seller's subcontractors at every tier.</li> <li>Prior to closing inaccessible or obscured areas and compartments during assembly. Seller must and shall inspect for foreign objects/materials and ensure no FOD barriers remain embedded, e.g. embedded protective plugs. Sellers shall ensure tooling jigs, fixtures and test or handling equipment are maintained in a state of cleanliness and repair sufficient to prevent FOD.</li> <li>Seller may use Quality Clause FOD Revision NC to meet FOD requirements in any other PO with prior versions of Quality Clause FOD</li> </ol>	03-02-09
Q27	<b>Quality System Requirements</b>	<p>The Supplier shall maintain a documented Quality System as defined within Mulgrew Supplier Quality Assurance Document (latest revision)</p> <p>NOTE: Systems not meeting the applicable "Level" requirements of Table 1, may still be approved provided they are capable of supplying conforming product. A "Limited Approval" may be granted to a supplier for a specific part number based upon historical performance, the supplier maintaining tooling, or the suppliers manufacturing and/or special processes approved by the OEM.</p>	04-01-16
Q28	<b>Boeing D1-4426 Requirements</b>	<p>Processing to be accomplished in performing of this purchase order is directly related to a Boeing deigned product and must be accomplished by D1-4426 approved facilities.</p> <p><a href="http://active.boeing.com/doingbiz/d14426/UserInstProcReq.cfm">http://active.boeing.com/doingbiz/d14426/UserInstProcReq.cfm</a></p>	03-03-15

Q29	<b>Working Conditions &amp; Human Rights</b>	Supplier must adhere to the provision set forth in Boeing's Code of Basic Working Conditions and Human Rights. It is considered a breach of contract to violate any basic rights outlined. This clause shall be included in flow down requirements to all subcontractors awarded under this contract. Ref. <a href="http://www.boeing.com/principles/human-rights.page">http://www.boeing.com/principles/human-rights.page</a>	04-01-16
Q30	<b>Product Safety &amp; Ethics Policy</b>	The supplier shall plan, implement, and control the processes needed to assure product safety during the entire product life cycle, as appropriate to the organization and the product such as:  Assessing hazards and management of associated risks, management of safety critical items, analyze, and report any occurred events affecting safety of the product, communication of these events and training of persons. Supplier shall be aware of the importance of ethical behavior and maintain an Ethics Policy for employees as it relates to their contribution to product or service conformity and product safety.	05-07-18

All suppliers are required to follow the quality clauses indicated in Table 1. Table 2 provides supplier specific requirements base on process being performed.

Table 1

Q01	Packaging and Handling
Q04	Latest revisions
Q14	Provider Performance
Q18	Right of Entry
Q19	Record retention (10 years)
Q22	Notification of Non-Conformances
Q23	Notification of changes in product or process
Q24	Flow down applicable requirements to sub-tier
Q26	(F-O-D) Foreign Object Damage / Foreign Object Debris
Q30	Product Safety and Ethics

Table 2

Raw Material Supplier	Q05, Q05A, Q05B, Q10, Q11, Q20*, Q25* and Q29*
Special Processing	Q02, Q06*, Q09, Q10, Q11*, Q15, Q20, Q25 and Q29*
Outside Manufacturing	Q02, Q05, Q10, Q15, Q20, Q25 and Q29*
Hardware Supplier	Q05, Q05A, Q10, Q20
Calibration	Q02
	<b>(*as applicable)</b>