Aeronautical ACCESSORIES

Bell Helicopter
A Textron Company

Supplier Quality Manual

SQM-001

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UNCONTROLLED IF PRINTED

Forward

Revision History

NR-L	*Various*	*Remove Revision with over one year of information*
M:	*05-09-16*	*Revised pages 9 and 10 to change Form Name to 'Supplier Evaluation for Limited Scopes'; Revised page 11 to change Performance Requirements.*
N:	*08-03-16*	*Added "Category" column, number and "OEM" to table on page 9. Revised Section III page(s) 11-12. Appendix A, removed "Repeated" from Step 1.*
O:	*08-23-16*	*Revised Page 12. Added clarification of how suppliers are monitored and measured. Added minimum score before action is taken.*
P:	*08-18-17*	*Added Counterfeit Parts Program*

To Our Suppliers:

In order to be a preferred supplier to our customers, we must continually improve our quality levels. As part of this improvement, we must have a process in place that encourages, supports and ensures our suppliers meet quality performance expectations.

Specific strategies include:

Long-term partnerships with our suppliers

Close interaction among engineering, manufacturing, purchasing and quality personnel and our suppliers.

Assure compliance with AS9100, AS9102, Nadcap and other industry and regulatory standards.

This manual details what we need from you – our partners.

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Section I – General Quality Requirements

Purpose

Define the quality requirements for Tier 1 suppliers.

Scope

Unless otherwise exempt, this manual applies to suppliers providing products and services used in the direct manufacture of finished goods. The general manual does not apply to sub-tier suppliers unless specifically noted.

Facility Maintenance, Repair and Operational (MRO) items and general services that indirectly support the manufacture of finished goods are excluded from this process unless specified by contract.

Right of Access

The supplier shall provide our company, our customers, and/or regulatory authorities the right of access to all facilities and records related to product ordered by our company or one of its suppliers.

Record Control

Records are to be retained for a minimum of five years and/or ten years for Bell Helicopter Textron *Classified Parts Program* unless otherwise specified on the purchase order.

Facility or Organizational Change

The supplier shall notify Quality in writing of significant facility or organizational changes such as company name, location, senior quality management and/or suspension, revocation, etc. of certifications (ie: ISO, AS9100, Nadcap, etc.)

Purchase Order Requirements

The supplier shall adhere to all Purchase Order terms and conditions plus any stated special instructions.

Sub-Tier Selection

Reserve the right to specify or approve sub-tier suppliers chosen by its suppliers for Bell Helicopter designed parts.

Flow-down to Sub-Tier Suppliers

The supplier shall flow down to its sub-contractors all quality related requirements specified in the applicable purchase order(s) and this manual, including regulatory requirements.

Special Process Suppliers

Regardless of tier, suppliers shall use only approved suppliers for special processes when required by contract or purchase order. The suppliers may request a sub-tier supplier be added to the approved supplier list; however, such sources shall not be used until written approval has been granted.

Special process suppliers shall perform services as required by drawing specifications and/or purchase order requirements. Any deviation from these requirements must be submitted for Engineering, Purchasing and Quality approval.

Special Processes include the following:

- Non-destructive Testing (NDT)
- Heat Treating
- Welding / Brazing
- Chemical Processing
- Coatings
- Non-conventional Machining and Surface Enhancement (Chem milling, shot peening,etc.)
- Material Testing

First Article Production Approval

If required by the purchase order. A first article inspection shall be documented the first time a supplier produces a complete part and for each detail part within an assembly. A new first article is required for any subsequent engineering changes. In addition, a new first article inspection is required for a two year (2) lapse in production if required by purchase order. The new first article includes only the changed or added attributes. The decision to defer the first article inspection requires approval from Quality Management. A first article will be scheduled for the next unit produced.

Purchased Part Control

Suppliers must certify compliance with any constraints on restricted substances as specified by applicable purchase order or contract.

Counterfeit Parts Control

Suppliers shall establish requirements, practices, and methods to mitigate the risks of receiving and providing Bell with counterfeit parts. These requirements shall meet the intent of SAE AS6174 “Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Material” and SAE AS5553 “Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition.” Supplier shall have traceability for non-electrical standard parts (fasteners, nuts, washers, o-rings, etc.) and electronic component parts to the Original Component Manufacturer (OCM), Original Equipment Manufacturer (OEM), Authorized Aftermarket Manufacturer (AAM), or authorized distributor. Certification of product requiring specific source(s) of manufacture shall include name and location of all supply chain intermediaries from the source providing the product to the approved original manufacturing source.

Material Identification

The supplier is required to establish a documented system for the control of materials. The inspection and test status of all materials should be identifiable. Any applicable containment areas or devices should be documented. Product removed from the normal process flow shall be segregated and clearly marked.

Raw materials must be identified as required by material specification or as noted on purchase order.

Monitoring and Measurement of Product

The supplier shall monitor and measure the product characteristics to verify the product meets requirements. This shall be carried out at the appropriate stages of production and include adequate controls to ensure product shipped conforms to the Customer’s physical, dimensional, and visual requirements.

Drawing and Change Control

The supplier’s quality system must ensure the latest engineering drawings and specifications are available at the point of manufacture, inspection, and test.

Change in Product or Manufacturing Process

Continual improvement is encouraged. However, the supplier shall not make any changes to the product or process that effect fit, form, or function without prior approval. The supplier must complete all verifications and tests necessary to ensure the process still produces to specification. The supplier must then obtain written approval prior to delivery.

Non-conforming Material

Suppliers shall begin containment action immediately upon discovery or notification of a non-conformance. In the case of product escape, the supplier shall immediately notify the respective buyer.

For non-conforming material, processes or parts discovered prior to shipment, the supplier must request disposition via the respective buyer. The supplier may be requested to send the product for further evaluation. The buyer will notify the supplier of the disposition following review.

Certification of Conformance

Unless otherwise specified by contract, each shipment shall include certification of conformance (C of C) and/or other documentation as specified in table below. The supplier must provide C of C for all materials and processes specified on the purchase order or contract.

Regardless of whether or not an OEM C of C is provided with the shipment, distributors must maintain and have available C of C and/or acceptable traceability documentation to the original equipment manufacturer per record retention requirements

Where required by contract or purchase order, DFAR 252.225-7009 shall apply for specialty metals.

Section I – General Quality Requirements

Type of Product Supplied	OEM C of C	Supplier/Dist. C of C	Direct Ship Authority	Form 337	Form 8130-3	EASA Form 1	Packing Slip	Process Certification	Mill Certificate	TSO Certification	Flammability Certification
Repaired/ Overhauled Parts				●	●	●	X				
FAA Production Approval Holder supplying New parts, components, or material	X				Optional	Optional	X				
FAA Production Approval Holder's authorized supplier supplying New parts, components, or material	Optional	X	X		Optional		X				
Supplier/ distributor supplying New parts and/or components.	Optional	X	Optional				X				
Supplier of manufacturing services/processes. (i.e. Plating, Heat Treat, NDT, etc.)							X	X			
Standard hardware, nuts, bolts, screws, etc.	Optional	X					X				
Aircraft Tires							X			X	
Aircraft Interior Material		X					X				X
Raw Material		X					X		X		

X = Required document

• = Any Document marked with this symbol is acceptable in conjunction with required documentation marked with "X"

Section II – Supplier Qualification/Approval

Supplier Classification and Evaluation

Suppliers will be classified as shown below based on the highest level part supplied.

Category	Classification Description	Pre-Approval	Periodic Evaluation
1	Supplier provides product such as complete aircraft, aircraft engines, and propellers.	Supplier Quality Survey plus On-site Quality Management (QMS) System audit	On-site Quality Management System (QMS) audit at 30 month intervals
2	Supplier provides product such as landing gear, transmissions, empennage assemblies, etc.	Supplier Quality Survey plus On-site QMS audit	On-site QMS audit at 36 month intervals. Third party certification to AS9100 or related standards may be accepted in lieu of on-site audit
3	Supplier provides a process or service such as NDT, Heat Treat, Welding, Chemical Processing / Plating, etc.	Supplier Quality Survey plus On-site QMS audit	On-site QMS audit at 48 month intervals. Third party certification to AS9100, NADCAP or related standards/training may be accepted in lieu of on-site audit
4	Supplier provides standard parts including anything commercially purchased off the shelf, OEM, government or industry standard controlled part, consumable items, etc. Articles returned to service after maintenance, preventive maintenance, repair, or overhaul	Supplier Quality Survey Supplier Quality Survey and copy of FAA Repair Station Certificate, Operations Specification and/or capabilities listing.	Supplier Quality Survey at 60 month intervals
5	Supplier has ten or fewer employees and/or is unable to pass the appropriate QMS audit. Supplier of tooling used in the manufacturing process.	Supplier Evaluation for Limited Scopes	On-site assessment as determined by Quality Management based on supplier performance. Re-assessment at 60 month intervals.

Supplier Quality Survey

Potential new suppliers complete a Supplier Quality Survey; forwarded by the Quality Assurance department, upon request from the responsible buyer. A supplier self-evaluation document can be acceptable in lieu of the survey, provided the information required and/or requested is included in supplier document.

The purpose of the survey is to give initial overview of the supplier's organization. Upon return and Quality Assurance review, a decision is made regarding approval. Further documentation and information requested as necessary based on survey responses.

Supplier On-Site Audit

In addition to Supplier Quality Survey, depending on supplier classification, on-site audits may be conducted as part of the initial introduction as a new supplier

Once approved, suppliers will be subject to periodic Supplier Verification audits based on classification. The listed audit intervals are a minimum requirement and in no way prevent additional audits as needed to assure product conformance.

These audits may be made up of a cross functional team consisting of Quality, Procurement, Production personnel, or additional team members as assigned.

Supplier Evaluation for Limited Scopes

At the discretion of Quality Management, smaller and otherwise restricted suppliers are accessed to determine their ability to pass a full Quality Management system audit. If determined the supplier is unable to pass a full audit; they will be classified as "Limited" and accessed on a smaller scale to assure a competence to meet requirements including control of supplied material.

Granting Approval

Initial approvals may be made by commodity, part number, facility location, or any combination thereof.

Initial approval may be granted as approved or approved with conditions. Conditions may include the following circumstances:

- The supplier has returned a completed Supplier Quality Survey and an acceptable Certificate of Conformity needs to be approved by Quality Control or Quality Assurance.
- The supplier is pending an on-site audit but has completed a Supplier Quality Survey form or a self-audit.
- The supplier has not closed all corrective action requests resulting from an on-site audit.
- The supplier has returned a completed Supplier Quality Survey and it is currently under review from Quality Assurance.

- The supplier has returned a completed Supplier Quality Survey and Quality Assurance is requesting additional information.

Once approved by Quality Assurance Supplier Control and/or Quality Management, the supplier is added to the “Approved Supplier List”

Section III – Supplier Monitoring

Approved Supplier List Requirements

Suppliers must maintain an approved quality management system and acceptable performance levels in order to remain on the list.

The supplier’s quality system shall be surveyed periodically and upon expiration of the supplier’s ISO or AS certification. Additional assessments may be scheduled based on but not limited to risk or performance. The cost associated with audits performed based on results of supplier performance may be charged to the supplier.

All suppliers will assure materials, services, and processes provided are in-conformance and delivered on time.

Suspension from Approved Supplier List

Our company maintains records of suppliers suspended with the reason for suspension.

If a supplier is suspended from the “Approved Supplier List” for performance reasons, the supplier will have to return to the qualification / approval process to regain approved supplier status. In addition to the normal approval process, the supplier will need to provide documentation on how the quality management system has been improved since being removed from the “Approved Supplier List”.

If a supplier is suspended for non-use or the non-performance related issues, the supplier may at anytime be reinstated provided it can be determined the supplier is still in good standing and will meet all applicable requirements.

Supplier Performance

Supplier performance is tracked, measured and discussed in Management Review Meetings. Suppliers are monitored, measured and scored on a rolling 12 month period. Scores are rated on a descending scale from 1 to 5, with 1 designating outstanding performance and 5 representing unacceptable performance. This score is calculated using two independent metrics; percent good parts and on time delivery. Both will be combined and the supplier will receive one overall weighted rating. Suppliers should strive for 100% quality and on-time delivery. Information for all suppliers is available upon request.

Failure to Maintain Supplier Performance Requirements

Failure to meet the minimum performance requirements of an overall weighted rating of 5, and/or repeated shipment of non-conforming material and/or repeated late deliveries could result in the initiation of the escalation process, up to and including re-sourcing. In addition the supplier is also required to have timely responses to corrective action and show continual improvement through improving performance trends.

Based on supplier category, severity of non-conformance, supplier history, and the discretion of management, the escalation process can be accelerated or decelerated at any time. The escalation process is described in detail in Appendix A.

Quality Performance Rewards

Skip-Lot Inspection

Suppliers that consistently meet performance requirements may be placed on a skip-lot inspection program. Conditions for the use of skip lot will be specified in internal procedures and noted on the PO/Contract terms. Approval for skip-lot inspection will be on a part number specific basis.

Dock to Stock

Suppliers showing the highest quality performance levels may be placed on a Dock to Stock program. This type of program will be defined and controlled by internal procedures and will be noted on the PO terms when used.

Section IV – Appendix

Appendix A – Escalation Process Guidelines for Poor Performance

Step 1 – Supplier Corrective Action Request (SCAR)

- Basis – Receiving inspection non-conformances or performance under minimum requirements.
- Supplier Requirements – Immediate action to contain the problem within 48 hours and Corrective Action to prevent recurrence including verification within 30 days.
- Exit Criteria – Corrective Action accepted by Quality and Purchasing

Step 2 – Certified Shipments

- Basis – Four SCARs in a rolling 6 month period or any delinquent SCARs
- Supplier Requirements – Supplier adds a redundant 100% inspection with documented results. Shipments are identified as certified by marking material or containers.
- Exit Criteria – The greater of 20 days or 10 consecutive shipments with no rejections as noted on the 100% inspection documentation. Documentation must be provided to and accepted by Quality and Purchasing.

Step 3 – Supplier Performance Review

- Basis – Non-conforming material received during Certified Shipments or repeat SCARs.
- Supplier Requirements – Purchasing and Quality schedules a meeting with supplier to review performance. Supplier provides a detailed action plan for resolution within 10 business days of meeting.
- Exit Criteria – Action plan completed by supplier and approved by Quality and Purchasing

Step 4 – Third Party Certified Shipments

- Basis – Continued poor performance
- Supplier Requirements – contract with a third party inspection company to perform a redundant 100% inspection with documented results. This is in addition to the Certified Shipments inspection.
- Exit Criteria - The greater of 20 days or 10 consecutive shipments with no rejections as noted on the 100% inspection documentation. Documentation must be provided to and accepted by Quality and Purchasing.

Step 5 – Supplier Management Review

- Basis – Continued chronic systemic problems
- Supplier Requirements – Management schedules a meeting with Supplier Management. Supplier provides a detailed action plan for resolution within 10 business days of meeting.
- Exit Criteria - Action plan completed by supplier and approved by Management.

Step 6 – Re-sourcing

- Basis – Steps 1 – 5 have been exhausted without resolution
- Requirement –Develop a re-sourcing plan for products, services, and/or processes provided by the supplier and the supplier is suspended from the “Approved Supplier List”.