



HELICOMB

**HWI 74-00
SUPPLIER QUALITY
REQUIREMENTS**

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Revision: AJ
Issued : 08/12/02
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**HELICOMB INTERNATIONAL
STANDARD WORK INSTRUCTION
Supplier Quality Requirements**

PCC Aerostructures,
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DOCUMENT CONTROL NUMBER

HWI 74-00

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Scope

This Quality Assurance Specification establishes the Helicomb specific quality requirements that supplement SQR-10000, PCC Aerostructures Supplier Quality Requirements Manual. In case of conflict, the requirements detailed in this document take precedence over the requirements specified in SQR-10000. These requirements are applicable when one or more of the following Quality Requirements (Q1XX) are specified by code on Helicomb's Purchase Orders.

These requirements are in addition to those set forth in any other contractual document. The provisions indicated herein are an integral part of the purchase order. Compliance with these requirements does not reduce Seller responsibility for furnishing materials and services, which fully comply with all applicable Drawing and Specification Requirements, nor does it guarantee acceptance of materials or services by Helicomb. In the event that materials or services are found to be defective and cannot be demonstrated by the Seller to be in conformance with the Purchase Order Requirements, Helicomb shall have the right to reject them.

Q100 First Article Inspection

Seller shall perform First Article Inspections (FAIs) in accordance with AS9102 Revision B.

Q101 Use of Net-Inspect

Seller and Seller's supply chain shall document First Article Inspections (FAIs) in Net-Inspect.

Q103 Northrop Grumman Flow Down

End customer is Northrop Grumman Aerospace Systems.

All applicable provisions of Northrop Grumman Supplier Quality Assurance Requirements (SQAR) are flowed to seller and its subcontractors including copies of the latest revision process specifications.

Purchase orders for special processes must specify "Northrop Grumman Aerospace Systems as the end customer and the process specification revision.

Sub-tier supplier quality systems shall be compliant to either ISO9001:2008, AS9100, AS9120 or AS9003. Special Process and service suppliers must be compliant with the applicable quality system specified in Table 1 Level 4 of the SQAR.

Seller shall maintain copies of certifications for all subcontracted special processes and flow down a requirement for their sub-tiers to obtain and maintain raw material and process certifications.

Northrop Grumman Aerospace Systems mandates Nadcap approval for the following process categories:

- Nondestructive Testing
- Heat Treating (except suppliers who only perform stress relief or hydrogen embrittlement relief)
- Material Testing Laboratories



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- Chemical Processes (except in-process cleaning, application of paint to composite parts, and touch up of damaged coatings and paint)
- Non-conventional Machining & Surface Enhancements
- Welding
- Composites.

Nadcap accreditation also applies to first-tier suppliers with internal process capabilities. In addition, if the supplier utilizes any external special process sources, this requirement must be flowed down to the processing sources.

Seller to comply with and flow down the requirements of the current SQAR and NGC Supplier Tooling Manual on their P.O., and only use Approved suppliers for special processes. Copies of the SQAR and the NGC Supplier Tooling Manual can be obtained from the Helicomb Buyer.

Q104 Lockheed Martin Flow Down

Seller shall ensure all Seller sub-tier purchase orders and/or associated purchase order documents for LM Aero-controlled processes include the following data elements.

- Seller's unique LM Aero identification number ("vendor code"), and
- all QCS-001 controlled specifications including revision for which processing which will be performed, and
- LM Aero unique "process codes" for each Buyer-controlled process to be performed, and
- applicable program Finish Specification and revision, and
- a statement with the words, "Processing to be accomplished in performance of this purchase order is directly related to a Lockheed Martin Aeronautics Company purchase order and must be accomplished in accordance with process specification(s) on this purchase order and Lockheed Martin Aeronautics Company Appendix QJ", and a statement that Seller's sub-tier must file and maintain a copy of all purchase orders containing the above statement and make these available for review by Buyer, upon request, and
- a statement that Seller's sub-tier must submit a Certificate of Conformance ("CoC") with a unique certification number which contains the elements listed in QJ, and
- fracture durability classification or serialization, when required, and
- a statement to ensure Seller's sub-tiers suitably wraps, boxes or racks parts to guard against shipping damage and to apply rust or corrosion protection.

Purchase Order Flow-Down Requirements - Process Source shall ensure all sub-tier Process Source(s) purchase orders and/or associated purchase order documents for Buyer-controlled processes include the following data elements:

- Process Source's unique LM Aero identification number ("vendor code") and all LM Aero unique "process codes" for each Buyer-controlled process to be performed
- a statement with the words, "Processing to be accomplished in performance of this purchase order is directly related to a Lockheed Martin Aeronautics Company purchase order and must be accomplished in accordance with process specification(s) on this purchase order and Lockheed Martin Aeronautics Company Appendix QJ"
- a statement that sub-tier 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



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- a statement that sub-tier Process Source must submit a Certificate of Conformance ("C of C") with a unique certification number in accordance with paragraph F "Certificate of Conformance."
- a statement requiring sub-tier Process Source to identify specification(s) title, specific revision level(s) and drawing(s) requirement(s) to be performed by a QCS-001 source.

Q105 DPD

- SR-700 DPD Requirement IAW SQR-10000
- When DPD data is provided, the Supplier shall maintain a documented DPD procedure to ensure the integrity of product engineering and/or tooling, and configuration is maintained throughout the supplier's DPD system from receipt of Buyer's supplied data through creation of derivatives to product acceptance and process improvement. Supplier shall include a flow diagram in the documented procedure that graphically depicts the flow of data from receipt to product validation, and in analysis of measurements for process improvements. The flow diagram shall specify all segregated, secure storage locations of authority and derivative media and shall specify all supplier departmental functions responsible for performance of CAD/CAM operations including the delivery of Buyer's provided data to Sub-tier Suppliers. To ensure the Supplier's DPD system is compatible with PCC Aerostructures requirements, Supplier shall maintain and make available to Buyer upon request a list of the current level of hardware configuration, software, software revisions, and other digital system information for computing equipment that receives authority data. The Supplier shall notify Buyer within thirty (30) days of any changes to DPD processes, CAD, CAM, CAI software, and measurement equipment. The Supplier shall assure nonconforming digital product definition datasets are identified as discrepant, segregated and reviewed for disposition and a corrective action system includes reporting, tracking and resolving all transmission, hardware, software and dataset problems, and product deficiencies to Buyer.
- Supplier is responsible for securing access to digital data provided by Buyer. When developing NC Programs, the Supplier shall maintain traceability from the NC Program to the original dataset and ensure only current authority datasets are available for use in production and inspection. Production acceptance software and tooling shall be validated prior to use and re-validated as changes are made. Data protection (encryption) shall be used when electronically transmitting digital data. Training records, which specially identify DPD training has been administered shall be maintained. The Supplier shall conduct audits on all operations affecting DPD data and related documentation to assure compliance with contractual requirements, software and production part quality standards, and the observance of security restrictions. Buyer reserves the right to evaluate the Supplier's DPD system to determine if the Supplier has adequate documentation, hardware/software, equipment, and inspection capabilities and are in compliance with specified DPD requirements. Supplier shall flow down these requirements to their Sub-tier Suppliers.

Q106 Government Surveillance

- Government source will be notified prior to performing the contractually agreed process/s
- This quality clause invokes government verification of the process. DCMA must be notified prior to performing any process on the parts provided by Helicomb International. Government verification of special processes is required every 6 months while parts are being processed on government contracts. Examples of special processes are ultra-sonic, X-ray, shot peening, dye penetrant.



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Q107 Boeing FAA PC700 Supplier Control

This procurement is under Boeing's Federal Aviation Administration (FAA) issued Production Certificate 700 quality system supplier control program. Unless explicit contractual direction is given to the contrary, no articles (or constituent parts thereof) ordered by Helicomb International shall contain any Federal Aviation Administration- Parts Manufacturer Approval (FAA-PMA) markings and the accompanying paperwork (e.g., packages, shippers, etc.) shall not contain any FAA-PMA markings.

THE SELLER WILL PLACE THE FOLLOWING STATEMENT ON THE SHIPPING DOCUMENTATION OF ALL SHIPMENTS TO HELICOMB INTERNATIONAL:

"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."

THE PREFERRED LOCATION FOR THE STATEMENT IS ON THE SHIPPING DOCUMENT, NEXT TO, OR FOLLOWING, THE CERTIFICATE OF CONFORMANCE (C of C). THE STATEMENT MAY BE PRINTED, STAMPED OR ATTACHED AS A LABEL OR STICKER TO THE SHIPPING DOCUMENTATION. IT IS ALLOWABLE TO REPLACE "Seller" WITH THE COMPANY NAME OR "WE".

Helicomb International requires that the provisions/requirements set forth above, as determined by the Seller to be applicable, be included in Seller's direct supply contracts as well as the obligation that they be flowed to the sub-tier supply chain. For purposes of this note, Supply Chain shall mean Seller's complete network of material, equipment, information, and services integrated into products and services. It focuses on direct and all lower-tier suppliers.

Q108 Bell SQRM

For Bell part numbered items, Supplier shall insure compliance to the requirements defined within the Bell contract/purchase order and this manual. Product information, applicable engineering drawings, specifications, special requirements, etc. shall be contained or referenced in the "Technical Data Package" (TDP) file provided by Bell for each purchase order.



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Document Change History

Rev.	Change History	Rev. Date
Orig - H	Changes not documented	
J	HR1 Code for doing business with EOE's removed. Not required on this document.	12/13/07
K	Clarified QR4 & QR18. Mandated flow-down requirements intact.	06/03/08
L	Upgraded and clarified QR12 per new customer-driven requirements.	08/05/08
M	Added QR 23	10/13/08
N	Added QR 24	12/11/09
O	Not used to avoid confusion with the number 0 (zero)	12/09/10
P	Added QR 25 Notification of Org Chgs	12/09/10
Q	Added QR 26 Supplier Quality Records	02/18/11
R	Changed title from "Quality Requirements" to "Supplier Quality Requirements	04/19/11
S	Changed QR 27 from "...sufficient for Helicomb" to ..." commensurate with Helicomb's Record Control Procedure HP 42-03".	09/16/11
T	Added to Sec. 14.1, "Quantity and condition of Helicomb supplied material must be verified upon receipt. Helicomb must be notified immediately of any discrepancies."	11/28/11
U	Added QR 27 Calibration Suppliers Added QR 28 Helicomb Purchase Order Terms & Conditions	02/16/12
V	Changed Sec. 9.1, QR 8 Calibration System Requirements from Z540-1994 to Z450.3-2006.	04/30/12
W	Added to QR 6, "...manufacture "and/or ship date", and... Added to QR 24, "...writing "within 60 days when significant"..."	10/09/12
Y	Added QR28, Requirement for use of the English language for quality documentation. Reformatted work instruction by removing numerical lists for clarification	11/16/12
AA	Added QR 29, Requirement for Purchase Order Acknowledgements to be returned to the Buyer within one week of product acceptance.	12/11/12
AB	Revised QR 21, DFARS Clause 252.225-7009 was DFARS Clause 252.225-7013	05/02/13
AC	Added QR 30 Counterfeit control clause	07/02/13
AD	Minor change to QR 23 to account for Helicomb being purchased by PCC	05/08/14
AE	Rewrite to incorporate PCC Aerostructures Supplier Quality Requirement Manual, SQR-10000	06/03/16
AF	Added Q105 and Q106	10/07/16
AG	Removed Q102 record retention time, now covered by SQR-10000	07/30/17
AH	Added Q107, Boeing FAA PC700 Supplier Control	02/01/18
AJ	Added Q108 Bell SQRM	11/20/19