## QUALITY ASSURANCE CLAUSES
**Q.C. Form No. 2**
**Revision AP – Feb 2020**

*(Clauses are applicable only as noted on Purchase Order)*

*(Where indicated “Cobham” is Cobham Mission Systems Orchard Park Inc.)*

<table>
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<tr>
<td>AE</td>
<td>Added: Clause 848 – Inspection Plan</td>
<td>M. Hammill</td>
<td>04 APR 2016</td>
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| AF       | Revised Clause 880A –
  Is: “…as required by the Terms and Conditions for the Purchase of Goods and Services, Clause 11.4.”
  Was: “…for a minimum of seven years after shipment.” | M. Hammill | 02 NOV 2016 |
| AG       | Reformatted document to clean up pagination
  Added: Clauses 815 and 838
  Revised Clause 873 –
  Added: “This Clause applies . . . protection against an ESD event.” | M. Hammill | 14 MAR 2017 |
| AH       | Added: Clause 849 – Process Capability | M. Hammill | 22 MAY 2017 |
| AJ       | Added: Quality Policy statement to page 2 | M. Hammill | 20 SEP 2017 |
| AK       | Revised Clause 840 – Added “Any parts determined to be counterfeit must be positively destroyed. Supplier must not return to their sub-tier and they must not pass counterfeit parts to Cobham.”
  Revised Clause 900 – Added “Seller must scrap counterfeit material (refer to QC Clause 840).” | M. Hammill | 08 NOV 2017 |
| AL       | Updated hyperlink to Cobham Supplier Resource Forms
  Updated hyperlink to Boeing Approved Processors
  Revised Clause 908 - Added “and shall be included on the part label or on a tag attached to at least one part in the batch or lot.” | C. Wade | 19 JAN 2018 |
| AM       | QC 911 updated to “G. BAE Systems”
  QC 920 added | C. Wade | 11 APR 2018 |
| AN       | QC 917 Removed “The supplier shall also include the document number and revision number of the applicable manufacturing work instructions on the Certificate of Conformance or Certificate of Inspection” | C. Wade | 23 JUL 2018 |
| AP       | The link to Terms and Conditions and Quality Forms updated
  Update to various Quality Clauses, See Appendix A for details | C. Wade | 25 FEB 2020 |
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Further clarification is available through Cobham Buyer for application and adherence to the following Quality Clauses:

800 QUALITY PROGRAM REQUIREMENTS
REFER TO “OP TERMS AND CONDITIONS FOR THE PURCHASE OF GOODS AND SERVICES” Sec. 11.1

Available at: https://www.cobham.com/cms/orchard_park/suppliers

801 INSPECTION SYSTEM REQUIREMENTS - MIL-I-45208A
The supplier shall provide and maintain a system that complies with MIL-I-45208A “Inspection System Requirements”.

Compliance with this clause in no way relieves the seller of the responsibility to furnish acceptable supplies or services as specified on the purchase document. (A Quality Program IAW ISO-9002 may be utilized in lieu of this requirement).

802 QUALITY PROGRAM PROVISIONS - NHB 5300.4 (1B)
The seller shall provide and maintain a system that complies with NHB 5300.4 (1B) “Quality Program Provisions.” Compliance with this clause in no way relieves the seller of the responsibility to furnish acceptable supplies or services as specified on the purchase document.

803 INSPECTION SYSTEM PROVISIONS - NHB 5300.4 (1C)
The seller shall provide and maintain a system that complies with NHB 5300.4 (1C) “Inspection System Provisions.” Compliance with this clause in no way relieves the seller of the responsibility to furnish acceptable supplies or services as specified on the purchase document.

804 CONTROL OF INSPECTION EQUIPMENT
In house inspection/calibration measuring equipment utilized in the manufacture/calibration of this item must be calibrated and traceable to the National Bureau of Standards per ISO-10012

805 SUPPLIER QA PROGRAM REQUIREMENTS
REFER TO “OP TERMS AND CONDITIONS FOR THE PURCHASE OF GOODS AND SERVICES” Sec. 11.1

Available at: https://www.cobham.com/cms/orchard_park/suppliers

807 NOTIFICATION CHANGE TO DESIGN, PROCESS AND LOCATION
The supplier shall notify Cobham of changes to ownership, manufacturing or processing location. The supplier shall notify Cobham as soon as it is apparent that an interruption of 90 or more days is anticipated in the production of an item.
When the supplier is the design authority, the supplier shall notify Cobham of any proposed changes to design, parts, materials, fabrication methods, or processes that may affect Cobham imposed specifications.

Cobham Mission Systems Orchard Park Inc.
809 **GOVERNMENT SOURCE INSPECTION (GSI) – NASA**
All work on this order is subject to inspection and test by the Government at any time and place. The Government Quality Representative who has been delegated NASA Quality Assurance Functions on this procurement shall be notified immediately upon receipt of this order. The Government Representative shall also be notified forty-eight (48) hours in advance of the time articles or materials are ready for inspection or test.

810 **COBHAM/CUSTOMER/GOVERNMENT RIGHT OF ACCESS**
Cobham/Customer/Government reserves the right of access to subcontractor's facility for review of quality systems, records and facilities. The right to inspect any or all work included in this order is also reserved.

Verification by Cobham/Customer/Government does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Cobham/Customer/Government.

811 **GOVERNMENT SOURCE INSPECTION (GSI) IMPOSED**
Government inspection is required prior to shipment from your plant. On receipt of this purchase order/subcontract, promptly furnish a copy to the government representative who normally services your plants or if none, to the nearest Army, Navy, Air Force or Defense Supply Agency Inspection Office in your locality. In the event the representative or office cannot be located, contact Cobham Purchasing. Verification by Cobham/Customer/Government does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Cobham/Customer/Government.

* Documentation of Government acceptance required with shipment.

812 **COBHAM SOURCE INSPECTION**
Source Inspection shall be conducted by Cobham at the supplier’s facilities or where designated in this purchase order subcontract prior to shipment. The supplier shall contact Cobham supplier quality assurance representative at least five working days prior to date items will be ready for the mandatory inspection/test performance, including in process and/or final test. Required documentation for shipment must be completed and signed by the supplier authorized quality personnel, and available for the Cobham's supplier quality assurance representative.

Verification by Cobham does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Cobham/Customer/Government.

* Documentation of Cobham acceptance required with shipment.

813 **FIRST ARTICLE INSPECTION: REFER TO QUALITY CLAUSE 814**
FIRST ARTICLE INSPECTION (AS/EN/SJC 9102)
A FAI or a partial FAI in accordance with AS9102 for affected characteristics is required when any of the following events occurs:
- Initial Production
- A change in the design affecting form, fit or function of the part.
- A change in manufacturing source(s), process(es), inspection method(s), location, tooling or materials that can potentially affect fit, form or function
- A change in numerical control program or translation to another media that can potentially affect fit, form or function
- A natural or man-made event, which may adversely affect the manufacturing process.
- A lapse in production for 12 months
- When multi-cavity molds/dies/tools are used, the First Article Inspection is required for each cavity.

A. Submit the first article and Inspection (bubble/balloon method) results to Cobham for approval. Inspection results shall include the actual value or dimension for each specified characteristic and drawing note
B. Submit the first article item to Cobham for inspection by Cobham personnel.
C. The First Article Inspection shall be maintained on file and available upon request at the supplier’s facility.

* Documentation required with shipment.

FIRST ARTICLE TEST (FAT)
The Supplier shall submit a FAT plan in accordance with the specifications, drawings, and/or any requirements flow down documents as supplied with this order. The FAT plan shall include:
- Dates for submittal of the FAT procedure
- Dates and locations(s) for all testing with anticipated start/completion dates
- Date for submittal of the FAT report

The Supplier shall update/resubmit the FAT plan to cover any changes to the schedule. The procedure and test reports may be prepared using MIL-HDBK-831 as a guide and shall be approved by Cobham prior to start of the test. Cobham and its customer reserve the right to witness FAT testing at any point in the schedule.

Following First Article Test approval, it is the Supplier’s responsibility to notify the Cobham authorized purchasing representative to determine what testing must be repeated when any of the following occurs:
- Receipt of new Purchasing Agreement or contract
- Significant change in manufacturing process (introduction of a new manufacturing technique, etc.)
- Change in any drawing configuration, component, or sub-component parts
- Change in manufacturing location
820 MANUFACTURING LOT OR BATCH NUMBER CONTROL
All parts on this order will be traceable to/identified with a lot or batch number. Where size and shape do not permit stamping, the smallest package shall be stamped. A lot or batch will be defined as material or parts produced by a single type, grade, class, size or composition under unchanged manufacturing conditions in accordance with the same drawing and/or specification revision unless otherwise defined in the P. O.

* Documentation required with shipment.

821 CONTROL OF LIMITED SHELF LIFE MATERIALS
A. Cured elastomeric items which exceed the cure date by more than 30% of the specified shelf life shall not be furnished.
B. Uncured elastomeric material exceeding 30% of the specified shelf-life from date of manufacture shall not be furnished.
C. “Non-elastomeric materials exceeding 25% of the specified shelf life shall not be furnished unless written approval from Cobham Purchasing is obtained.”

* Documentation required with shipment.

822 LEVEL 1 MATERIAL CONTROL
The supplier shall provide a system suitable for control of Level 1 material. Before Level 1 material will be released to the supplier’s facility, a Level 1 Material Control Procedure must be submitted to Cobham for approval.
The supplier will not transfer Level 1 material to other facilities without receiving approval from Cobham.
The supplier will be subject to Level 1 Material Control Audits by Cobham or the Government while Level 1 material resides at that facility.

823 TRACEABILITY
When parts are joined in an assembly, the seller shall prepare an “Assembly History Log” identifying each part in the assembly.

Fabricated parts shall be identified with serial number, material type, heat number, B/P and specification with applicable change letter or number.

Components in the assembly shall be traceable to records of acceptance by part number, serial number and lot number of material from which the components were fabricated by the supplier, and shall accompany the parts they represent to Cobham.

No two parts which have the same part number shall be identified with the same serial number unless otherwise specified.

* Documentation required with shipment.

824 CONTROL OF FORGINGS/CASTINGS
The Seller shall furnish Cobham with one sample forging/casting representative of all processing used. This test forging/casting is in addition to the production quantities required.
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825 REPAIR OF CASTINGS/FORGINGS
Repairs to castings or forgings by welding or impregnation is not permitted without written approval from Cobham.

827 TEST SAMPLES FOR CASTINGS/FORGINGS
The supplier shall furnish with each shipment:
A. Two test bars prepared to Federal Test Standard 151B of each heat as the casting supplied
B. One spectrographic disc representing castings heat or melt supplied.
C. Test bars and disc must be clearly and permanently marked with purchase order number, alloy identification and heat number it represents.

830 CONTROL OF NONDESTRUCTIVE TESTING (NDT)
Items requiring NDT shall be submitted, complete with drawing or document establishing NDT requirement, to a laboratory acceptable to Buyer. Test results shall be reported in writing to the Buyer, identifying the laboratory and the certified technician who performed and/or evaluated the tests, signed by a responsible laboratory representative. An adequate method of identifying and cross-referencing each x-ray film exposure, report and item must be provided. When parts are serialized, serial numbers must appear on the report and film with the control number.
A. Radiographic film of each lot and/or other NDT results, including foundry control NDT, shall be inspected by Cobham at the laboratory performing the work prior to shipment. The seller shall notify Cobham when the film is ready for review.
B. NDT reports shall be submitted with each shipment to Cobham and shall include x-ray film when radiographic inspection is required.
C. Submittal of NDT procedures/x-ray shooting schedule is required. Approval by Cobham is required prior to NDT.

831 NDT CERTIFICATION PROGRAM - MIL-STD-410
Personnel performing NDT must be certified in accordance with the requirements of MIL-STD-410 Nondestructive Testing Personnel Qualification and Certification. Level 1 contracts requiring NDT must be IAW SNT-TC-1A. Copy of Qualification and Certification record to be available upon request.

832 WELDING SUBMITTAL/APPROVAL REQUIREMENTS
All weld schedules/procedures require Cobham approval prior to welding.

833 WELDING PERSONNEL CERTIFICATION
Personnel performing welding must be qualified/certified in accordance with the requirements of:
A. MIL-STD-1595 superseded by AWS D17.1
B. MIL-STD-248 are these current specs superseded by NAVSEA S9074-AQ-GIB-010/248

834 REPAIR OF WELDMENTS
No repair to a weldment is permitted without approval by Cobham
SUPPLIER CONTROL AND CONFORMANCE OF SPECIAL PROCESSES
When special process specifications (e.g. heat treat, soldering, welding, anodizing, chemical film treatment, NDT, etc.) are a contract and/or drawing requirement, the supplier is responsible for maintaining a system to control special processes performed at their facilities.

USE OF COBHAM APPROVED SUPPLIERS: REFER TO QC 911H

NONDESTRUCTIVE TESTING (NDT) CERTIFICATION
Each shipment must be accompanied by one legible copy of a certification (Q.C. Form 837 furnished by Cobham, or supplier equivalent) signed by a responsible representative of the seller performing the NDT. When applicable, the supplier is to maintain and have available for examination, records reflecting certification of personnel, equipment and processes.

*Documentation required with shipment.

Form available at: https://www.cobham.com/cms/orchard_park/suppliers

SOLDERABILITY
Material supplied shall meet the solderability requirements of the product fabrication specification. When no solderability test is specified, the test shall be performed in-accordance with MIL-STD-202, Method 208.

The Supplier shall provide a written certification stating that the components provided were tested and meet the applicable solderability requirements as stated here-in.

A. The certification shall reference the IPC/EIA J-STD-002 Solderability Test for component Leads, Terminations, Lugs, Terminal, and Wires.
B. The certification shall reference the IPC/EIA J-STD-003 Solderability Test for Printed Boards

*Documentation required with shipment.
CONTROL OF NONCONFORMING MATERIAL

The supplier or lower-tier suppliers are not authorized to disposition nonconforming materials as “repair” or “accept as is”. For this purpose, material shall be defined as all material and components of the supplier and lower-tier supplier products which are under Cobham design control. Any nonconforming materials, components or parts shall be segregated and withheld from shipment to Cobham unless negotiated in advance (Supplier Deviation Approval Form - SDA) When authorized to ship nonconforming material, components or parts, the supplier shall insure that the nonconforming items are identified (e.g. tagged) and specifically referenced as being nonconforming on certification statements and SDA included with shipment. Materials or parts rejected by Cobham shall not be returned to Cobham without appropriate corrective action having been taken and then only with reference being made to the discrepancy report on the certification statement.

*SDA required with shipment.

Form available at: https://www.cobham.com/cms/orchard_park/suppliers

Note: Any parts determined to be counterfeit shall be retained as evidence. Supplier must not return to their sub-tier and they must not pass counterfeit parts to Cobham.

REFERENCE QC 922 B

REFERENCE QC 921 F

REFERENCE QC 922 A

REFERENCE QC 921 F

REFERENCE QC 921 C

REFERENCE QC 921 A

REFERENCE QC 921 B

REFERENCE QC 922 A

REFERENCE QC 921 F

DELETED
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851 CERTIFICATION OF COMPLIANCE
Each shipment must be accompanied by one legible copy of a certification (Q.C. Form #851 furnished by Cobham or supplier equivalent) containing the following:

- Statement that material, processing, and finish of parts on this order meet all specifications and drawing requirements.
- Cobham part number and revision
- Purchase Order Number
- Quantity
- Printed Name, Signature & title of authorized company representative.

* Documentation required with shipment.

Form available at: https://www.cobham.com/cms/orchard_park/suppliers

852 CERTIFICATION OF MATERIAL
Each shipment must be accompanied by one legible copy of a certification (Q.C. Form #852 furnished by Cobham or supplier equivalent) containing the following:

- Statement that materials used on this order meet all specifications and drawing requirements.
- Statement that test reports or manufacturer’s certification of material used are available at your facility.
- Cobham part number and revision
- Purchase Order Number
- Printed Name, Signature & title of authorized company representative.

* Documentation required with shipment.

Form available at: https://www.cobham.com/cms/orchard_park/suppliers

853 CERTIFICATION OF COBHAM FURNISHED MATERIAL
Each shipment must be accompanied by one legible copy of a certificate (Q.C. Form #853 furnished by Cobham or supplier equivalent) containing the following:

- Statement that the items supplied were made from parts or material furnished by Cobham
- Cobham number and revision
- Purchase Order Number
- Traceability (i.e., lot number) of Cobham provided material
- Printed Name, Signature & title of authorized company representative

* Documentation required with shipment

Form available at: https://www.cobham.com/cms/orchard_park/suppliers
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854 PROCESS CERTIFICATION
Each shipment must be accompanied by one legible copy of a certification (Q.C. Form #854 furnished by Cobham or supplier equivalent) containing the following:

- Special process specification and revision as referenced on the drawing, purchase order or packing sheet (i.e., military specification and/or Cobham process specification).
- Statement that supplier maintains and has available for examination, records reflecting certification of personnel, equipment and process.
- Printed Name, Signature & title of authorized company representative of the supplier performing the special process.

* Documentation required with shipment.

Form available at: [https://www.cobham.com/cms/orchard_park/suppliers](https://www.cobham.com/cms/orchard_park/suppliers)

855 MATERIAL REPORTS (CHEMICAL/PHYSICAL)
Each shipment must be accompanied by one legible copy of test reports, identifiable with purchase order number, the specification including revision, material heat and/or lot number. Report must contain:

A. Original Mill Certification  
B. Chemical/Physical Analysis  
C. Typical Test Results

Reports must contain the signature and title of a responsible representative of the organization performing the test.

* Documentation required with shipment.

856 CERTIFICATION OF MERCURY EXCLUSION
Each shipment made against the purchase order must contain a statement certifying:

A. The manufacturer has taken appropriate steps to ensure supplies furnished under this order contain no metallic mercury or mercury compounds.  
B. The dealer/distributor has taken reasonable steps to ensure that the supplies furnished under this order have not been contaminated with mercury or mercury compounds.

The certification (Q.C. Form #856 furnished by Cobham, or supplier equivalent) shall reference purchase order number, part number, and quantity of this shipment.

* Documentation required with shipment

Form available at: [https://www.cobham.com/cms/orchard_park/suppliers](https://www.cobham.com/cms/orchard_park/suppliers)
CERTIFICATION OF MANUFACTURER
The supplier (distributor) shall provide the manufacturer’s name and the P.O. number under which the distributor acquired the material.

* Documentation required with shipment.

Form available at: https://www.cobham.com/cms/orchard_park/suppliers

CERTIFICATION OF CALIBRATION (A)
Each item shall be accompanied by a signed certification of calibration stating that the item(s) have been calibrated and are traceable to nationally recognized standards.

A. The certification shall reference the National Institute of Standards and Technology (NIST) test number for the calibration standard(s) used, where applicable.
B. The certification shall reference the NIST test number and accuracy of the calibration standard(s) used, where applicable, including as-found and as-left data for the equipment being calibrated.

* Documentation required with shipment

HANDLING, STORAGE, PACKAGING, PRESERVATION, AND DELIVERY
A. Unless otherwise specified, preservation, packaging, handling and shipping of items shall be in accordance with best commercial practices to prevent damage and ensure that original quality is maintained.
B. Packaging shall be in accordance with MIL- STD-726
C. Items shall be packaged using Cobham specified/designated trays, bins, etc. as indicated on the PO (tray size/count, dimensions, color and tray number if applicable). Substitutions are not permitted unless approved in advance by Cobham Engineering.

MATERIAL IDENTIFICATION INSTRUCTIONS
A. Apply part number and revision letter per applicable drawing note.
B. Bag and tag parts.
C. Tag parts.
D. Identify per procurement instruction requirements.
E. Identify parts in accordance with MIL-STD- 130.

EEE MATERIAL
Each item on this purchase order must be identified with manufacturer and date/lot code number in accordance with applicable specifications.

* Documentation required with shipment

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873 STATIC SENSITIVE DEVICES
Static sensitive devices (e.g., CMOS Integrated circuits) shall be stored, handled and packaged according to appropriate procedures to insure against damage by static induced voltages. The packaging shall be marked to insure static awareness upon receipt at Cobham.

This Clause applies to packaging of ESDS (ELECTRO-STATIC-DISCHARGE SENSITIVE) Devices only. Examples include but are not limited to PWA’s (Printed wiring Assemblies), CCAs (Circuit Card Assemblies), PCBAs (Printed Circuit Board Assemblies) here-in mentioned are considered populated boards with PTH (plated thru hole) and/or SMT (surface mount technology) devices. VMOS, CMOS, ICs, and other active devices that are considered class 0, 1, 2 and/or 3 ESDS devices shall be packaged in- accordance with ANSI. S20.20 requirements.

PCBs (Printed Circuit Boards) unpopulated are NOT considered ESDS (Electro-Static Discharge Sensitive).

FARADAY ANTISTATIC SHIELDING BAGS / PACKAGING SHALL BE UTILIZED for protection against an ESD event.

874 LEVEL 1 MATERIAL IDENTIFICATION
Material on this purchase order is designated for Level 1 naval applications. It is mandatory that each piece of material be mill marked with the melt or heat number. Bar stock must be marked at both ends as a minimum.

Chemical/physical material certifications shall be on the producing mill’s letterhead and shall include the signature of an authorized representative of the mill, their typed name, title and date.

875 IDENTIFICATION OF SHELF LIFE MATERIALS
Seller shall identify each item, package or container, with the cure date of manufacture date, expiration date and special storage or handling conditions, in addition to the normal identification of name, part or code number, specification number, type, size, and quantity. This identification, including special storage and handling conditions shall be recorded on the certification (Cobham QC Form #875 furnished by Cobham, or supplier equivalent) and signed by an authorized representative of the seller. Shelf life for elastomeric items may be based on SAE ARP 5316, Storage of Aerospace Elastomeric Seals guidelines.

* Documentation required with shipment.

Form available at: https://www.cobham.com/cms/orchard_park/suppliers

880 QUALITY RECORDS
A. Quality records, including raw material certifications, work instructions, inspection and test data shall be retained at the supplier facility as required by the Terms and Conditions for the Purchase of Goods and Services, Clause 11.4.
B. Seller shall retain all material certifications, physical/chemical test reports, manufacturing, assembly, inspection, test results, and special process records until directed otherwise by the Cobham. Under no circumstances should these records be destroyed without prior written approval. Records shall be made available upon request.

Cobham Mission Systems Orchard Park Inc.
881  **INSPECTION AND TEST SUBMITTAL**

The supplier is required to ship one copy of the following data with each item shipped:

A. Inspection and test data
B. Inspection record per Cobham Form #881B where is the form?
C. Objective evidence of 100% inspection.
D. Objective evidence of statistical process control.
E. Test report

* Documentation required with shipment.

Form available at: [https://www.cobham.com/cms/orchard_park/suppliers](https://www.cobham.com/cms/orchard_park/suppliers)

883  **PRODUCT FAILURE FEEDBACK**

The supplier shall have a system for rapid feedback to Cobham of information concerning product failure of items covered by this Purchase Order, which occur during any phase of qualification and/or acceptance testing. This feedback system shall include, as a minimum, the following:

A. Written notification to Cobham Purchasing within 24 hours after occurrence of failure.
B. An outline of the failure investigation to be conducted within 5 working days of the failure.
C. A failure analysis report which will completely describe the specific cause, the analysis method and the action taken to eliminate the cause within 30 days of the failure.

Cobham, with its customer, reserves the right to participate in any or all of the failure analysis investigation.

890  **SAFETY PRECAUTIONS FOR AMMUNITION AND EXPLOSIVES**

**DFAR 252.223-7002**

REFER TO “Cobham Purchase Terms Appendix A”

Available at: [https://www.cobham.com/cms/orchard_park/suppliers](https://www.cobham.com/cms/orchard_park/suppliers)

891  **HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA**

**DFAR 252.223-7001**

REFER TO “Cobham Purchase Terms Appendix A”

Available at: [https://www.cobham.com/cms/orchard_park/suppliers](https://www.cobham.com/cms/orchard_park/suppliers)

892  **LANDSCAPERS ENVIRONMENTAL AWARENESS STATEMENT: DELETED**

893  **BUILDING CONSTRUCTION ENVIRONMENTAL AWARENESS STATEMENT: DELETED**

894  **USE OF SPECIAL PROCESS SUBPROCESSORS: REFER TO QC 911B**
895  RESTRICTIONS ON ACQUISITION OF SPECIALTY METALS AND ARTICLES CONTAINING SPECIALTY METALS DFAR 252.225-7008 and/or 252.225-7009

REFER TO “Cobham Purchase Terms Appendix A”
Available at:
https://www.cobham.com/cms/orchard_park/suppliers

896  FOREIGN OBJECT DAMAGE (FOD) PREVENTION
The Seller shall establish and maintain an effective Foreign Object Damage (FOD) Prevention Program to reduce FOD using NAS412 and/or AS9146 as a guideline.

The Seller’s program shall utilize effective FOD prevention practices. The program shall be proportional to the sensitivity of the design of the product(s) to FOD, as well as, to the FOD generating potential of the manufacturing methods.
The written procedures or policies developed by the Seller shall be subject to review and audit by the Cobham and/or government representative and disapproval when the seller’s procedures or policies do not accomplish their objectives.

897  PREFERENCE FOR DOMESTIC PRODUCTS, COMPONENTS OR MATERIAL
DFAR 252.225-7002 – QUALIFYING COUNTRIES
DFAR 252.225-7012 – PREFERENCE FOR DOMESTIC COMMODITIES
REFER TO “Cobham Purchase Terms Appendix A”

Available at:
https://www.cobham.com/cms/orchard_park/suppliers

898  USE OF SPECIAL PROCESS SUBPROCESSORS: REFER TO QC 911A

899  EMPLOYMENT ELIGIBILITY VERIFICATION
The supplier is to conform with FAR 52.222-54 Employment Eligibility Verification System (E- Verify).
COUNTERFEIT PARTS
Seller shall only produce products or purchase components/hardware direct from the original component manufacturer (OCM) original equipment manufacturer (OEM), through an authorized (franchised) distributor or through a Cobham authorized broker. Work shall not be acquired from independent distributors or brokers without approval from the Cobham in writing. The seller will comply with the requirements in AS5553A and AS6174A standards.

Cobham must be notified immediately if the seller suspects they may have been supplied counterfeit parts. Work that is delivered that contains or includes counterfeit parts will be replaced, at the seller’s expense, with certified genuine parts. Seller shall retain counterfeit material as evidence (refer to QC Clause 840).

Seller will flow down the above requirements to all suppliers/subcontractors to ensure they are buying hardware and electronic components from the OCM/OEM or an authorized distributor.

All brokers providing electronic components/hardware must be authorized by Cobham. An Authorized Broker must demonstrate documented tools and procedures are in place, and functioning accordingly, to screen, detect, and ensure that components are not misrepresented.

SUPPLIER DRAWING REVIEW
The supplier shall conduct a critical review of the drawing during the quotation process, prior to submitting a quote to Cobham.

Documentation of the review and feedback shall be provided to Cobham using QC Form 901, available at: https://www.cobham.com/cms/orchard_park/suppliers

The completed form shall be returned with the quote package to Cobham Mission Systems Purchasing Department.

SPECIAL TOOLING REQUIREMENTS
The supplier shall maintain the identified Special Tooling so as to be compliant with Cobham process “Process for Controlling Customer Supplied Tooling” (doc 904), or instead, per other customer Special Tooling requirements when identified with this clause.

Nadcap
All special processes must be performed by a Nadcap approved supplier. Each shipment must be accompanied by one legible copy of process certification from the special processor and Q.C. Form #903 furnished by Cobham or supplier equivalent containing the following:

- Special Process
- Specifications, Class and Type

* Documentation required with shipment.

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904  PMR REQUIREMENT Part of Supplier Development
A Program Management Review will be required at the outset of the agreement to procure a part or parts from the supplier and every 6 months thereafter. The reviews should alternate between the Cobham (Orchard Park, NY) facility and the supplier’s location when possible. An appropriate team from each organization will meet to exchange knowledge of concerns, risks, lessons learned, performance expectations and quality issue resolution. The supplier shall also be prepared to support PMR(s) throughout the procurement period.

905  BLANKET CERTIFICATIONS: Deleted without substitution

906  CERTIFICATION OF CALIBRATION (B)
Each item shall be accompanied by a signed certification of calibration stating that the item(s) have been calibrated and are traceable to ANSI/ISO/IEC 17025:2005.

The certification shall reference the NIST test number and accuracy of the calibration standard(s) used, where applicable, including as-found and as-left data for the equipment being calibrated.

*Documentation required with shipment.

907  AMMO DATA CARD
Ammo Data Cards per MIL-STD-1168 to be supplied with each shipment. Initiator/Primer Lot Number format per MIL-STD-1168.

*Documentation required with shipment.

908  SINGLE LOT CONTROL/ LOT HOMOGENEITY
A lot, identified by a single Purchase Order, shall be manufactured from materials from a single heat, melt, or blow. A lot is defined as a quantity that has been blended, mixed, or fabricated during an uninterrupted manufacturing run by the same personnel.

Each batch or lot shall be properly identified with the assigned lot number and shall be included on the part label or on a tag attached to at least one part in the batch or lot. Traceability shall be maintained by the supplier of the hardware.

*Documentation required with shipment.

909  NON-CONFORMING MATERIAL RECORDS SUBMITTAL
The Supplier shall forward to Cobham, all documents associated with any discrepancy, rejection, scrap, or any other form of non-conformance, whether incurred at receiving inspection, in-process or final acceptance, generated during the processing of the purchased parts or processes; this includes flowdown to all sub-contracts used on Cobham issued purchase orders. The Non-Conforming Material records are to be submitted with each shipment. If there were no non-conformances during the processing of the purchase order, the seller shall state explicitly on the Certificate of Conformance.

*Documentation required with shipment
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910  FAILURE NOTIFICATION
The Seller shall notify Cobham Quality and Procurement within 2 business days of a failure at LAT/IAT:
A. All testing must stop immediately with the test equipment and LAT hardware quarantined. The Seller must submit failure analysis rational and determine if the event is due to testing, process, or product. The LAT testing process may continue and/or release the test equipment once Cobham provides concurrence.
B. All testing must stop immediately with the test equipment and IAT/LAT hardware quarantined. The Seller must submit failure analysis rational and determine if the event is due to testing, process, or product. The IAT or LAT testing process may continue once Cobham provides concurrence. A Failure Review Board (FRB) containing members from the Seller, Cobham (and possibly Cobham’s customer) may be established to investigate and determine the appropriate course of action.

911  APPROVED SPECIAL PROCESSOR
All special processes from suppliers and sub tiers must be approved by Customer listed below:
A. Boeing http://active.boeing.com/doingbiz/d14426/GetAllProcessors.cfm
B. Lockheed Martin (contact Cobham Quality Engineer for approved processors)
C. Raytheon
E. Pratt & Whitney
F. JPL
G. BAE
H. Cobham
I. Collins Aerospace

When QC 917 is imposed notification of changes in location and/or different Supplier or sub-tier for special processes must be submitted to Cobham Quality Engineering Group.

912  SPECIAL PROCESSES – RAYTHEON: REFER TO QC 911C
913  SPECIAL PROCESSES – JPL: REFER TO QC 911F
914  SPECIAL PROCESSES – PRATT & WHITNEY: REFER TO QC 911E
915  SPECIAL PROCESSES – UNITED LAUNCH ALLIANCE (ULA): REFER TO QC 911D
916  PURE TIN COMPLIANCE
Provide certificate for the following: All products on this PO that require solder, platings, coatings, and claddings shall comply with the following:
A. Material composition less than 97% tin by weight
B. Tin alloy with composition of greater than 3% lead by weight
C. Please contact Cobham Buyer immediately if either: (1) there is a conflict between the need for tin/lead and the manufacturer’s part number stated on Cobham drawing, (2) the manufacturer’s part number is not available (do not substitute without prior approval).

*Documentation required with shipment.
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917 PROCESS CHANGE CONTROL
The supplier shall not permit changes to the manufacturing/assembly processes, materials, and procedures (including changing sub-tier suppliers). Any changes require approval by Cobham Procurement and Quality prior to implementation. The approval process may require requalification of the hardware (at the supplier’s cost) prior to implementation of the change. Such approval does not affect or waive applicable and/or acceptance requirements. Depending on Cobham’s customer flowdown, a First Article may be required prior to the production and/or manufacturing of parts or processes.

*Documentation required with shipment.

918 DELEGATION OF PRODUCT VERIFICATION AS9015
Each delegated supplier is responsible for the following:
- Provide notification of change in ownership, management, or location of supplier’s facilities
- Maintain quality system approval with the parameters of the organization’s quality management system requirements
- Make available a current list of their delegated suppliers for customer and/or regulatory agency reviews.

919 SERIALIZATION REQUIREMENTS – COBHAM SUPPLIES SN
Serial numbers are required to be assigned to the parts, assemblies and end items on this purchase order. A serial number control system shall be in place that prevents the same serial number from being used more than once. A list of all serial numbers shall be provided with each shipment of the product. Supplier shall identify the serial numbers of serialized subassemblies contained in deliverable end items. Records must be contained by the supplier.

Serial numbers are to be provided by Cobham and serialized parts must be shipped in sequential order – not mixed.

*Documentation required with shipment.

920 SPECIAL PROCESSES – BAE SYSTEMS: REFER TO QC 911G

921 RISK MITIGATION
The documents in this Quality Clause need to be submitted and approved by Cobham Supplier Quality Engineer prior to the start of manufacture in order to be effective. These documents are related and support each other but may be selected separately by Cobham. Still the supplier is encouraged to complete these to reduce their own risk. These documents must be in alignment with each other. Such as the same operations will be listed in the same sequence across these documents.

NOTE: These are “living” documents that need to be in use and fully implemented in order to be beneficial. When the Supplier’s process changes or if there is a non-conformance, the appropriate documents need to be updated as appropriate.

A. COMPREHENSIVE PROCESS FLOW DIAGRAM (PFD): Cobham Form QC 921 A is available but a supplier template/format may be used when sequence, flow and process owner of all steps in the process are clearly identified.
B. PROCESS POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS (PFMEA): Cobham Form QC 921 B is available but a supplier template/format may be used but must be approved by Cobham Supplier Quality Engineering. All process and production and verification points for all Key Characteristics will be accounted for on the PFMEA.

C. CONTROL PLAN: Cobham Form QC 921 C is available but a supplier template/format may be used but must be approved by Cobham Supplier Quality Engineering. Each process step must be addressed in the control plan. Elements shall include monitoring of process output, controls in place and what to do with non-conformances or unwanted conditions.

D. WORK INSTRUCTION: This could be the shop router or traveler with proper level of detail for the Operator. It is acceptable to identify other reference documents within the Control Plan.

E. MEASUREMENT SYSTEM ANALYSIS (MSA) / GAGE R&R: Measurement system analysis is an important tool in understanding accuracy of the Supplier's measurement equipment. This activity will provide a numerical value to the accuracy, validity or trustworthiness of the measurement and needs to take place prior to production manufacturing for items specified on the purchase order. The Supplier shall submit the MSA for review and approval. The MSA report shall have a result as percentage (%) of repeatability and reproducibility of the gage with the following acceptance criteria.

- <10% is considered acceptable and preferred
- 10% to 30% may be acceptable for some application
- >30% not acceptable for determining good parts from out of specification

F. KEY CHARACTERISTICS and PROCESS CONTROL: Once a Key Characteristic is identified on a drawing or by other means, compliance shall be IAW AS9103 and this Quality Clause. If Key Characteristics are not identified, contact Cobham Supplier Quality Engineering for clarification. Items identified from the Supplier’s PFMEA (high RPN) or other Critical to Quality (CTQ) features must be considered.

Prior to manufacturing, the Supplier shall submit for approval a Process Control Plan (Form QC 921 C) detailing how Key Characteristics and/or Critical to Quality (CTQ) and the applicable processes will be controlled. Cobham approval of this plan is required. Process Capability Study / Statistical Process Control (SPC) artifacts shall be in accordance with AS9103, “Variation Management of Key Characteristics”. Cobham approval of the studies and/or artifacts is required. This (study or artifact) can be submitted during or after manufacturing or processing.

The use of “trial” parts may not be utilized for calculating capability without prior approval.

The applicable process is considered capable once a Cpk => 1.33 is achieved. Characteristics identified as “Safety Critical” shall meet Cpk => 1.67.

100% inspection can be used in place of calculating Cpk. When Cpk is less than 1.33, or 1.67 for Safety Critical contact Cobham SQE for guidance.

Recalculation should occur using the following guidelines:

- Any change in the Key Characteristic as defined on the print
- There is greater than 6 months since last production run
- There is a Cobham NCR or SCAR issued for the applicable item number
- A significant process change(s) has occurred such as:
  - Different/altered/repaired machine
  - Different/altered process
  - Different/altered fixtures
  - Different/altered controlling program (CNC or other)
  - Change in material (type)
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- Different measurement method
- Change in the operator training/certification requirement.

*Documentation required with shipment.

G. PART SUBMISSION WARRANT (PSW): Upon completion of identified items on Production Part Approval Process (PPAP) Checklist, the Supplier shall complete and submit for approval a Part Submission Warrant (PSW). A separate PSW shall be submitted for each item number and revision. When multi-cavity molds / dies / tools / manufacturing sites are used, the appropriate specifics shall be noted on the PSW. A copy of the approved PSW shall be submitted with delivery of the parts.

Note: PSW applies to production parts and does not apply to development parts, samples or trial parts.

Forms available at: https://www.cobham.com/cms/orchard_park/suppliers

922 INSPECTION ACTIVITY
The Supplier shall formulate and identify inspection activity during planning stages of manufacturing. Adequate artifacts shall be submitted for approval by Cobham Supplier Quality Engineering. Objective evidence must be maintained on file and available for review by Cobham.

A. INSPECTION BY SAMPLING: The Supplier may substitute sampling inspection in lieu of 100% inspection if inspection is performed in accordance with ANSI Z 1.4. Other inspection sample plans may be used with Cobham Supplier Quality Engineering approval. A Supplier generated inspection and test plan is required for this part/assembly. As a minimum, the inspection plan will contain characteristics being verified, the acceptance criteria, the frequency, the method of verification and who (function) will perform the inspection. The Supplier must include all Key Characteristics that are determined to be of significant, such as from the PFMEA.

B. 100% INSPECTION REQUIREMENT: The Supplier must perform 100% inspection on all items and features identified on the purchase order.

NOTE: SPECIFICATIONS REFERENCED SHALL BE OF THE REVISION/ISSUE IN EFFECT AT CONTRACT AWARD UNLESS OTHERWISE SPECIFIED IN THE CONTRACT/PURCHASE ORDER.
APPENDIX A

ADDED
Further clarification is available through Cobham Buyer for application and adherence to the following Quality Clauses:

DELETED

Quality Policy

Cobham Mission Systems, Orchard Park and Westminster

We are executing business in a technical market in which exacting product performance is expected. The products we manufacture at Carleton perform at the deepest depths of the oceans, in all levels of the atmosphere, and in the farthest reaches of outer space. More importantly, many of them provide vital life support for their users. In essence, our systems must work and perform flawlessly, and without failing for their entire missions. There is no margin of error. Because the cost of failure is prohibitive, our performance standard is zero defects.

We will always pursue excellence and accept the product and service challenges we are offered. The responsibility to design, manufacture, and build defect-free products is imperative to all employees. To perform our work well, to do it consistently, and to do it with pride necessitates each of us to be responsible for the quality of our own work.

Our quality objectives are established through strategic planning, strategy deployment, and via specific program requirements defined by our customers and chosen markets. Assessment of the level of achievement of these objectives are performed through structured management and program reviews.

Our ability to consistently and predictably deliver quality products to our customers at a competitive price fortifies our reputation and ensures the company’s and our own success. We will achieve and maintain this goal within a team environment through a continual process of quality improvement using structured problem solving with a process focus.

800

WAS: QUALITY PROGRAM REQUIREMENTS - MIL-Q-9858A

The supplier shall provide and maintain a system that complies with MIL-Q-9858A “Quality Program Requirements”. Compliance with this clause in no way relieves the seller of the responsibility to furnish acceptable supplies or services as specified on the purchase document. (A Quality Program IAW ISO-9001 may be utilized in lieu of this requirement).

IS: QUALITY PROGRAM REQUIREMENTS
REFER TO “OP TERMS AND CONDITIONS FOR THE PURCHASE OF GOODS AND SERVICES” Sec. 11.1
Available at: https://www.cobham.com/cms/orchard_park/suppliers
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807
WAS: CHANGE OF CONFIGURATION, DESIGN, PROCESS
The supplier shall notify Carleton of any proposed changes to design, parts, materials, fabrication methods, or processes, and obtain written approval from Carleton Purchasing Department prior to change incorporation. The supplier shall immediately notify Carleton of changes to ownership, manufacturing or processing location. The supplier shall notify Carleton as soon as it is apparent that an interruption of 90 or more days is anticipated in the production of an item.

IS: NOTIFICATION CHANGE TO DESIGN, PROCESS AND LOCATION
The supplier shall notify Cobham of changes to ownership, manufacturing or processing location. The supplier shall notify Cobham as soon as it is apparent that an interruption of 90 or more days is anticipated in the production of an item.
When the supplier is the design authority, the supplier shall notify Cobham of any proposed changes to design, parts, materials, fabrication methods, or processes that may affect Cobham imposed specifications.

809
WAS: GOVERNMENT SOURCE INSPECTION (GSI)
A. All work on this order is subject to inspection and test by the Government at any time and place. The Government Quality Representative who has been delegated NASA Quality Assurance Functions on this procurement shall be notified immediately, upon receipt of this order. The Government Representative shall also be notified forty-eight (48) hours in advance of the time articles or materials are ready for inspection or test.

B. The Government has the right to inspect any or all of the work included in this order at the suppliers plant. Verification by Carleton/Customer/Government does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Carleton/Customer/Government.

IS: GOVERNMENT SOURCE INSPECTION (GSI) - NASA
All work on this order is subject to inspection and test by the Government at any time and place. The Government Quality Representative who has been delegated NASA Quality Assurance Functions on this procurement shall be notified immediately upon receipt of this order. The Government Representative shall also be notified forty-eight (48) hours in advance of the time articles or materials are ready for inspection or test.

810
WAS: CARLETON/CUSTOMER/GOVERNMENT
Carleton/Customer/Government reserves the right of access to subcontractor’s facility for review of quality systems, records and facilities. The right to inspect any or all work included in this order is also reserved.
Verification by Carleton/Customer/Government does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Carleton/Customer/Government.

IS: COBHAM/CUSTOMER/GOVERNMENT RIGHT OF ACCESS
Cobham /Customer/Government reserves the right of access to subcontractor’s facility for review of quality systems, records and facilities. The right to inspect any or all work included in this order is also reserved.
Verification by Cobham/Customer/Government does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Cobham/Customer/Government.

811
WAS: GOVERNMENT SOURCE INSPECTION
Government inspection is required prior to shipment from your plant. Evidence of such inspection must be indicated on the packing sheet accompanying each shipment. On receipt of this purchase order/subcontract, promptly furnish a copy to the government representative who normally services your plants or if none, to the nearest Army, Navy, Air Force or Defense Supply Agency Inspection Office in your locality. In the event the representative or office cannot be located, contact Carleton Purchasing. Verification by Carleton/Customer/Government does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Carleton/Customer/Government.

IS: GOVERNMENT SOURCE INSPECTION (GSI) IMPOSED
Government inspection is required prior to shipment from your plant. On receipt of this purchase order/subcontract, promptly furnish a copy to the government representative who normally services your plants or if none, to the nearest Army, Navy, Air Force or Defense Supply Agency Inspection Office in your locality. In the event the representative or office cannot be located, contact Cobham Purchasing. Verification by Carham/Customer/Government does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Cobham/Customer/Government.

* Documentation of Government acceptance required with shipment.

812
WAS: CARLETON SOURCE INSPECTION
Source Inspection shall be conducted by Carleton at the supplier’s facilities or where designated in this purchase order subcontract prior to shipment. The supplier shall contact Carleton supplier quality assurance representative at least five working days prior to date items will be ready for the mandatory inspection/test performance, including in process and/or final test. Required documentation for shipment must be completed and signed by the supplier authorized quality personnel, and available for the Carleton supplier quality assurance representative.

Verification by Carleton/Customer/Government does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Carleton/Customer/Government.

IS: COBHAM SOURCE INSPECTION
Source Inspection shall be conducted by Cobham at the supplier’s facilities or where designated in this purchase order subcontract prior to shipment. The supplier shall contact Cobham supplier quality assurance representative at least five working days prior to date items will be ready for the mandatory inspection/test performance, including in process and/or final test. Required documentation for shipment must be completed and signed by the supplier authorized quality personnel, and available for the Cobham’s supplier quality assurance representative.

Verification by Cobham does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Cobham/Customer/Government.
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* Documentation of Cobham acceptance required with shipment.  

813  
WAS: FIRST ARTICLE INSPECTION  
On the initial production, a comprehensive inspection and test is required of the first article piece to assure conformance with all drawing requirements and specifications. When multi- cavity molds/dies/tools are used, the First Article Inspection is required for each cavity.  
The First Article Inspection for subassemblies shall include inspection of all detailed parts.  
A new First Article Inspection is required when:  
1. The item has not been produced for a period of 12 months; or  
2. A change in facilities used to produce the item has taken place.  
A Delta First Article Inspection is required when a change in revision (a significant design or process change) that affects the original First Article and is only applicable to the characteristics affected by the change.  
The supplier assumes full responsibility for production prior to receipt and approval of first article, piece and/or assembly from Carleton. The supplier is required to:  
A. Submit the first article and Inspection (bubble/balloon method) results to Carleton for approval. At a minimum, inspection results shall include the actual value or dimension for each specified characteristic and drawing note.  
B. Submit the first article item to Carleton for inspection by Carleton personnel.  
C. The First Article Inspection (bubble/balloon method) shall be maintained on file and available upon request at the supplier’s facility  
IS: FIRST ARTICLE INSPECTION: REFER TO QUALITY CLAUSE 814  

814  
WAS: FIRST ARTICLE INSPECTION (AS/EN/SJC 9102)  
A FAI or a partial FAI in accordance with AS9102 for affected characteristics is required when any of the following events occurs:  
- Initial Production  
- A change in the design affecting form, fit or function of the part.  
- A change in manufacturing source(s), process(es), inspection method(s), location, tooling or materials that can potentially affect fit, form or function  
- A change in numerical control program or translation to another media that can potentially affect fit, form or function  
- A natural or man-made event, which may adversely affect the manufacturing process.  
- A lapse in production for 12 months  
A. Submit the first article and Inspection results to Carleton for approval  
B. Submit the first article item to Carleton for inspection by Carleton personnel.  
C. The First Article Inspection shall be maintained on file and available upon request at the supplier’s
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IS: FIRST ARTICLE INSPECTION (AS/EN/SJC 9102)
A FAI or a partial FAI in accordance with AS9102 for affected characteristics is required when any of the following events occurs:

- Initial Production
- A change in the design affecting form, fit or function of the part.
- A change in manufacturing source(s), process(es), inspection method(s), location, tooling or materials that can potentially affect fit, form or function
- A change in numerical control program or translation to another media that can potentially affect fit, form or function
- A natural or man-made event, which may adversely affect the manufacturing process.
- A lapse in production for 12 months
- When multi-cavity molds/dies/tools are used, the First Article Inspection is required for each cavity.

D. Submit the first article and Inspection (bubble/balloon method) results to Cobham for approval. Inspection results shall include the actual value or dimension for each specified characteristic and drawing note
E. Submit the first article item to Cobham for inspection by Cobham personnel.
F. The First Article Inspection shall be maintained on file and available upon request at the supplier’s facility.

* Documentation required with shipment.

827

WAS: CONTROL OF CASTINGS/FORGINGS
The supplier shall furnish with each shipment:

D. Two test bars prepared to Federal Test Standard 151B of each heat as the casting supplied
E. One spectrographic disc representing castings heat or melt supplied.
F. Test bars and disc must be clearly and permanently marked with purchase order number, alloy identification and heat number it represents.

IS: TEST SAMPLES FOR CASTINGS/FORGINGS
The supplier shall furnish with each shipment:
A. Two test bars prepared to Federal Test Standard 151B of each heat as the casting supplied
B. One spectrographic disc representing castings heat or melt supplied.
C. Test bars and disc must be clearly and permanently marked with purchase order number, alloy identification and heat number it represents.

833

WAS: WELDING PERSONNEL CERTIFICATION
Personnel performing welding must be qualified/certified in accordance with the requirements of:

A. MIL-STD-1595
B. MIL-STD-248 are these current specs

IS: WELDING PERSONNEL CERTIFICATION

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Personnel performing welding must be qualified/certified in accordance with the requirements of:
A. MIL-STD-1595 superseded by AWS D17.1
B. MIL-STD-248 superseded by NAVSEA 59074-AQ-GIB-010/248

835
WAS: SPECIAL PROCESS CONFORMANCE
When special process specifications (e.g. heat treat, soldering, welding, anodizing, chemical film treatment, NDT, etc.) are a contract and/or drawing requirement, the supplier is responsible for maintaining a system to control special processes performed at his facilities.

IS: SUPPLIER CONTROL AND CONFORMANCE OF SPECIAL PROCESSES
When special process specifications (e.g. heat treat, soldering, welding, anodizing, chemical film treatment, NDT, etc.) are a contract and/or drawing requirement, the supplier is responsible for maintaining a system to control special processes performed at his facilities.

836
WAS: USE OF CARLETON APPROVED SUPPLIERS
The supplier is required to use Carleton / Customer / Government approved suppliers for performance of all special processes / NDT. The use of Carleton / Customer / Government suggested/approved Suppliers does not relieve the supplier of the responsibility for product/service quality.

IS: USE OF COBHAM APPROVED SUPPLIERS: REFER TO QC 911H

840
WAS: CONTROL OF NONCONFORMING MATERIAL
The supplier or lower-tier suppliers are not authorized to disposition nonconforming materials as “repair” or “accept as is”. For this purpose, material shall be defined as all material and components of the supplier and lower-tier supplier products which are under Cobham design control. Any nonconforming materials, components or parts shall be segregated and withheld from shipment to Cobham unless negotiated in advance. When authorized to ship nonconforming material, components or parts, the supplier shall insure that the nonconforming items are identified (e.g. tagged) and specifically referenced as being nonconforming on certification statements. Materials or parts rejected by Cobham shall not be returned to Cobham without appropriate corrective action having been taken and then only with reference being made to the discrepancy report on the certification statement.

Any parts determined to be counterfeit must be positively destroyed. Supplier must not return to their sub-tier and they must not pass counterfeit parts to Cobham.

IS: CONTROL OF NONCONFORMING MATERIAL
The supplier or lower-tier suppliers are not authorized to disposition nonconforming materials as “repair” or “accept as is”. For this purpose, material shall be defined as all material and components of the supplier and lower-tier supplier products which are under Cobham design control. Any nonconforming materials, components or parts shall be segregated and withheld from shipment to Cobham unless negotiated in advance (Supplier Deviation Approval Form - SDA) When authorized to ship nonconforming material, components or parts, the supplier shall insure that the nonconforming items are identified (e.g. tagged) and specifically referenced as being nonconforming on certification statements and SDA included with shipment. Materials or parts rejected by Cobham shall not be returned to Cobham without appropriate corrective action having been taken and then only with reference being made to the discrepancy report on the certification statement.
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*SDA required with shipment.

Form available at: https://www.cobham.com/cms/orchard_park/suppliers

Note: Any parts determined to be counterfeit shall be retained as evidence. Supplier must not return to their sub-tier and they must not pass counterfeit parts to Cobham.

841 WAS: 100% INSPECTION REQUIREMENT
The supplier must perform 100% inspection of all items on this purchase order to ensure compliance to drawing and specification requirements. Objective evidence of such inspection must be maintained on file and available for review by Carleton.

IS: REFERENCE QC 922 B

842 WAS: STATISTICAL PROCESS CONTROL
The supplier shall submit a Process Control Plan detailing how Critical to Quality (CTQ) characteristics and processes will be controlled for items under this purchase order. Carleton approval of this plan is required. Objective evidence of compliance to the Control Pan is to be maintained on file and available for review by Carleton.

IS: REFERENCE QC 921 F

843 WAS: INSPECTION BY SAMPLING
The supplier may substitute sampling inspection in lieu of 100% inspection if inspection is performed in accordance with ANSI Z 1.4. Other inspection plans may be used with Carleton approval.

IS: REFERENCE QC 922 A

844 WAS: KEY CHARACTERISTICS
When a Key Characteristic is identified on a print, compliance will be IAW AS9103 and this Quality Clause. Once process capability is established, recalculation should occur using the following guidelines:
D. Any change in the Key Characteristic as defined on the print
E. At the next product run if over 6 months since last run
F. A significant process change(s) has occurred such as:
   1. Different/altered/repaired machine
   2. Different/altered process
   3. Different/altered fixtures
   4. Different/altered controlling program (CNC or other)
   5. Change in material (type)
   6. Different measurement method
   7. Change in the operator training/certification requirement.

NOTE: The use of “trial” parts may not be utilized for calculating capability without prior approval.
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**IS: REFERENCE QC 921 F**

**845 WAS:** CONTROL PLAN  
A Carleton approved control plan is required for this part/assembly

**IS: REFERENCE QC 921 C**

**846 WAS:** COMPREHENSIVE PROCESS FLOW DIAGRAM  
A Carleton approved Process Flow Diagram is required for this part/assembly. Use Form 846, unless Carleton Quality Engineering has approved a different method.

Form available at: [https://www.cobham.com/cms/orchard_park/suppliers](https://www.cobham.com/cms/orchard_park/suppliers)

**IS: REFERENCE QC 921 A**

**847 WAS:** PROCESS FMEA  
A Process FMEA is required for this part/assembly. Use Form 847, unless Carleton Quality Engineering has approved a different form. Process steps identified in the Process Flow Diagram will be accounted for on the PFMEA. Manufacturing and Verification points for all Key Characteristics will be accounted for on the PFMEA.

Form available at: [https://www.cobham.com/cms/orchard_park/suppliers](https://www.cobham.com/cms/orchard_park/suppliers)

**IS: REFERENCE QC 921 B**

**848 WAS:** INSPECTION PLAN  
A supplier generated inspection and test plan is required for this part/assembly. As a minimum, the inspection plan will contain characteristics being verified, the acceptance criteria, the frequency, the method of verification and who (function) will perform the inspection. Inspection and test record submittal shall follow this plan. CMS OP Quality Engineering approval is required.

**IS: REFERENCE QC 922 A**

**849 WAS:** PROCESS CAPABILITY  
Process Capability Study is to be performed in accordance with AS9103 “Variation Management of Key Characteristics”. Studies are to be reviewed with Cobham Mission Systems Quality Engineering as an input to the Supplier’s Control Plan and Inspection Plan. If Key Characteristics are not identified, contact Cobham Mission Systems Quality Engineering for clarification.

**IS: REFERENCE QC 921 F**

**855 WAS:** CHEMICAL/PHYSICAL TEST

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Each shipment must be accompanied by one legible copy of test reports, identifiable with purchase order number, the specification including revision, material heat and/or lot number. Report must contain:

A. Original Mill Certification
B. Chemical/Physical Analysis
C. Typical Test Results

Reports must contain the signature and title of a responsible representative of the organization performing the test.

* Documentation required with shipment

**IS:** MATERIAL REPORTS (CHEMICAL/PHYSICAL)
Each shipment must be accompanied by one legible copy of test reports, identifiable with purchase order number, the specification including revision, material heat and/or lot number. Report must contain:

A. Original Mill Certification
B. Chemical/Physical Analysis
C. Typical Test Results

Reports must contain the signature and title of a responsible representative of the organization performing the test.

* Documentation required with shipment

**890**

**WAS:** SAFETY PRECAUTIONS FOR AMMUNITION AND EXPLOSIVES
The supplier is to comply with specification DFAR 252.223-7002 “Safety Precautions for Ammunition and Explosives”.

**IS:** SAFETY PRECAUTIONS FOR AMMUNITION AND EXPLOSIVES
DFAR 252.223-7002
REFER TO “Cobham Purchase Terms Appendix A”

Available at: [https://www.cobham.com/cms/orchard_park/suppliers](https://www.cobham.com/cms/orchard_park/suppliers)

**891**

**WAS:** HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA
The supplier is to comply with specification DFAR 252.223-7001 “Hazardous Material Identification and Material Safety Data”

**IS:** HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA
DFAR 252.223-7001
REFER TO “Cobham Purchase Terms Appendix A”

Available at: [https://www.cobham.com/cms/orchard_park/suppliers](https://www.cobham.com/cms/orchard_park/suppliers)

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WAS: LANDSCAPERS ENVIRONMENTAL AWARENESS STATEMENT
The supplier/contractor shall provide a listing of all chemicals dispensed on Carleton Technologies property and include relevant certificates or licenses for use of these chemicals.

IS: LANDSCAPERS ENVIRONMENTAL AWARENESS STATEMENT: DELETED

893
WAS: BUILDING CONSTRUCTION ENVIRONMENTAL AWARENESS STATEMENT
The contractor shall provide the necessary details regarding your plan to disposal, including how and where waste will be disposed.

IS: BUILDING CONSTRUCTION ENVIRONMENTAL AWARENESS STATEMENT: DELETED

894
WAS: USE OF SPECIAL PROCESS SUBPROCESSORS
All special processes must be performed by an approved processor. Lockheed Martin approved special processors may be found by contacting Carleton Quality Engineering. Supplier may contact Carleton for a Lockheed Martin audit request for any sub processors not on the Lockheed Martin approved list.

IS: USE OF SPECIAL PROCESS SUBPROCESSORS: REFER TO QC 911B

895
WAS: RESTRICTIONS ON ACQUISITION OF SPECIALTY METALS AND ARTICLES CONTAINING SPECIALTY METALS
The supplier is to conform with specification DFAR 252.225-7008 and/or DFAR 252.225-7009.

IS: RESTRICTIONS ON ACQUISITION OF SPECIALTY METALS AND ARTICLES CONTAINING SPECIALTY METALS
DFAR 252.225-7008 and/or 252.225-7009
REFER TO “Cobham Purchase Terms Appendix A”
Available at: https://www.cobham.com/cms/orchard_park/suppliers

897
WAS: PREFERENCE FOR DOMESTIC PRODUCTS, COMPONENTS OR MATERIAL
The Suppliers to comply with 10 U.S.C. 2533a (Berry Amendment) all applicable products, components or materials used in the realization of this supplied item must be grown, reprocessed, reused or produced in the United States. This applies to all subcontractor tiers. A certificate of adherence to 10 U.S.C 2533a and DFARS Subpart 225.7002, signed by a cognizant quality representative and material certification (QC 852) stating the country of origin of all applicable products, components or materials, must accompany each shipment. It is permissible for a statement of adherence to 10 U.S.C. 2533a and DFARS Subpart 225.7002-1 to be incorporated into a general certificate of conformance (QC 851).

* Documentation required with shipment.

IS: PREFERENCE FOR DOMESTIC PRODUCTS, COMPONENTS OR MATERIAL
DFAR 252.225-7002 - QUALIFYING COUNTRIES

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DFAR 252.225-7012 - PREFERENCE FOR DOMESTIC COMMODITIES
REFER TO “Cobham Purchase Terms Appendix A”

Available at: https://www.cobham.com/cms/orchard_park/suppliers

898
WAS: USE OF SPECIAL PROCESS SUBPROCESSORS
All special processes must be performed by an approved processor. Boeing approved special processors found on the internet at: http://active.boeing.com/doingbiz/d14426/GetAllProcessors.cfm

IS: USE OF SPECIAL PROCESS SUBPROCESSORS: REFER TO QC 911A

900
WAS: COUNTERFEIT PARTS
Seller shall only produce products or purchase components/hardware direct from the original component manufacturer (OCM)/original equipment manufacturer (OEM), through an authorized (franchised) distributor or through a Cobham authorized broker. Work shall not be acquired from independent distributors or brokers without approval from the buyer in writing. The seller will comply with the requirements in AS 5553 for electronic components.

Buyer must be notified immediately if the seller suspects they may have been supplied counterfeit parts. Work that is delivered that contains or includes counterfeit parts will be replaced, at the seller’s expense, with certified genuine parts. Seller must scrap counterfeit material (refer to QC Clause 840).

Seller will flow down the above requirements to all suppliers/subcontractors to ensure they are buying hardware and electronic components from the OCM/OEM or an authorized distributor.

All brokers providing electronic components/hardware must be authorized by Cobham. An Authorized Broker must demonstrate documented tools and procedures are in place, and functioning accordingly, to screen, detect, and ensure that components are not misrepresented.

IS: Seller shall only produce products or purchase components/hardware direct from the original component manufacturer (OCM) original equipment manufacturer (OEM), through an authorized (franchised) distributor or through a Cobham authorized broker. Work shall not be acquired from independent distributors or brokers without approval from the Cobham in writing. The seller will comply with the requirements in AS5553A and AS6174A standards.

Cobham must be notified immediately if the seller suspects they may have been supplied counterfeit parts. Work that is delivered that contains or includes counterfeit parts will be replaced, at the seller’s expense, with certified genuine parts. Seller shall retain counterfeit material as evidence (refer to QC Clause 840).

Seller will flow down the above requirements to all suppliers/subcontractors to ensure they are buying hardware and electronic components from the OCM/OEM or an authorized distributor.
All brokers providing electronic components/hardware must be authorized by Cobham. An Authorized Broker must demonstrate documented tools and procedures are in place, and functioning accordingly, to screen, detect, and ensure that components are not misrepresented.

**903**

*WAS:* NADCAP

All special processes must be performed by a NADCAP approved supplier. Documentation required with shipment.

* Documentation required with shipment.

**IS:** Nadcap

All special processes must be performed by a Nadcap approved supplier.

Each shipment must be accompanied by one legible copy of process certification from the special processor and Q.C. Form #903 furnished by Cobham or supplier equivalent containing the following:

- Special Process
- Specifications, Class and Type

* Documentation required with shipment.

**905**

*WAS:* BLANKET CERTIFICATIONS

For those suppliers who have been approved for Blanket Biennial Certifications, the supplier is responsible for maintaining on file the certifications listed and have available upon request in a timely fashion. Only the certifications listed on the blanket apply, all other certifications requested via the Quality Clauses must be supplied with the shipment.

Form available at: [https://www.cobham.com/cms/orchard_park/suppliers](https://www.cobham.com/cms/orchard_park/suppliers)

**IS**

BLANKET CERTIFICATIONS: Deleted without substitution.

**911**

*WAS:* PROCESSOR CHANGES

Changes in location and/or different Supplier (sub-tier) for special processes are not allowed from what was performed on the previous production lot. Supplier change request must be submitted to Carleton for written approval.

A. Boeing  
B. Lockheed Martin  
C. Raytheon  
D. United Launch Alliance  
E. Pratt & Whitney  
F. JPL  
G. BAE Systems

**IS:** APPROVED SPECIAL PROCESSOR
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All special processes from suppliers and sub tiers must be Nadcap accredited or approved by Customer listed below:
A. Boeing [http://active.boeing.com/doingbiz/d14426/GetAllProcessors.cfm](http://active.boeing.com/doingbiz/d14426/GetAllProcessors.cfm)
B. Lockheed Martin (contact Cobham Quality Engineer for approved processors)
C. Raytheon
E. Pratt & Whitney
F. JPL
G. BAE
H. Cobham
I. Collins Aerospace

When QC 917 is imposed notification of changes in location and/or different Supplier or sub-tier for special processes must be submitted to Cobham Quality Engineering Group.

912
WAS: SPECIAL PROCESSES - RAYTHEON
All special processes from suppliers and sub-tiers must be performed by Raytheon approved suppliers.

IS: SPECIAL PROCESSES - RAYTHEON: REFER TO QC 911C

913
WAS: SPECIAL PROCESSES - JPL
All special processes from suppliers and sub-tiers must be performed by JPL approved suppliers.

IS: SPECIAL PROCESSES - JPL: REFER TO QC 911F

914
WAS: SPECIAL PROCESSES - PRATT & WHITNEY
All special processes from suppliers and sub-tiers must be performed by Pratt & Whitney approved suppliers.

IS: SPECIAL PROCESSES - PRATT & WHITNEY: REFER TO QC 911E

915
WAS: SPECIAL PROCESSES - UNITED LAUNCH ALLIANCE (ULA)
All special processes from suppliers and sub-tiers must be performed by ULA approved suppliers.

IS: SPECIAL PROCESSES - UNITED LAUNCH ALLIANCE (ULA): REFER TO QC 911D

920
WAS: SPECIAL PROCESSES - BAE SYSTEMS

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All special processes from suppliers and subtiers must be performed by BAE Systems approved suppliers or Nadcap approved Suppliers.

IS: SPECIAL PROCESSES - BAE SYSTEMS: REFER TO QC 911G

New Clauses

921 RISK MITIGATION

The documents in this Quality Clause need to be submitted and approved by Cobham Supplier Quality Engineer prior to the start of manufacture in order to be effective. These documents are related and support each other but may be selected separately by Cobham. Still the supplier is encouraged to complete these to reduce their own risk. These documents must be in alignment with each other. Such as the same operations will be listed in the same sequence across these documents.

NOTE: These are “living” documents that need to be in use and fully implemented in order to be beneficial. When the supplier’s process changes or if there is a non-conformance, the appropriate documents need to be updated as appropriate.

A. COMPREHENSIVE PROCESS FLOW DIAGRAM (PFD): Cobham Form QC 921 A is available but a supplier template/format may be used when sequence, flow and process owner of all steps in the process are clearly identified.

B. PROCESS POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS (PFMEA): Cobham Form QC 921 B is available but a supplier template/format may be used but must be approved by Cobham Supplier Quality Engineering. All process and production and verification points for all Key Characteristics will be accounted for on the PFMEA.

C. CONTROL PLAN: Cobham Form QC 921 C is available but a supplier template/format may be used but must be approved by Cobham Supplier Quality Engineering. Each process step must be addressed in the control plan. Elements shall include monitoring of process output, controls in place and what to do with non-conformances or unwanted conditions.

D. WORK INSTRUCTION: This could be the shop router or traveler with proper level of detail for the Operator. It is acceptable to identify other reference documents within the Control Plan.

E. MEASUREMENT SYSTEM ANALYSIS (MSA) / GAGE R&R: Measurement system analysis is an important tool in understanding accuracy of the Supplier’s measurement equipment. This activity will provide a numerical value to the accuracy, validity or trustworthiness of the measurement and needs to take place prior to production manufacturing for items specified on the purchase order. The Supplier shall submit the MSA for review and approval. The MSA report shall have a result as percentage (%) of repeatability and reproducibility of the gage with the following acceptance criteria. Supplier shall follow AIAG style of MSA. Contact Cobham SQE for guidance.

- <10% is considered acceptable and preferred
- 10% to 30% may be acceptable for some application
- >30% not acceptable for determining good parts from out of specification

F. KEY CHARACTERISTICS and PROCESS CONTROL: Once a Key Characteristic is identified on a drawing or by other means, compliance shall be IAW AS9103 and this Quality Clause. If Key Characteristics are not identified, contact Cobham Supplier Quality Engineering for clarification. Items identified from the Supplier’s PFMEA (high RPN) or other Critical to Quality (CTQ) features must be considered.
Prior to manufacturing, the Supplier shall submit for approval a Process Control Plan (Form QC 921 C) detailing how Key Characteristics and/or Critical to Quality (CTQ) and the applicable processes will be controlled. Cobham approval of this plan is required. Process Capability Study / Statistical Process Control (SPC) artifacts shall be in accordance with AS9103, “Variation Management of Key Characteristics”. Cobham approval of the studies and/or artifacts is required. This (study or artifact) can be submitted during or after manufacturing or processing.

The use of “trial” parts may not be utilized for calculating capability without prior approval.

The Supplier shall include appropriate documentation with shipment of item(s). Use Form QC 881A Inspection and Test Data unless otherwise specified or authorized.

The applicable process is considered capable once a Cpk => 1.33 is achieved. Characteristics identified as “Safety Critical” shall meet Cpk => 1.67.

100% inspection can be used in place of calculating Cpk. When Cpk is less than 1.33, or 1.67 for Safety Critical contact Cobham SQE for guidance.

Recalculation should occur using the following guidelines:
- Any change in the Key Characteristic as defined on the print
- There is greater than 6 months since last production run
- There is a Cobham NCR or SCAR issued for the applicable item number
- A significant process change(s) has occurred such as:
  - Different/altered/repair machine
  - Different/altered process
  - Different/altered fixtures
  - Different/altered controlling program (CNC or other)
  - Change in material (type)
  - Different measurement method
  - Change in the operator training/certification requirement.

G. PART SUBMISSION WARRANT (PSW): Upon completion of identified items on Production Part Approval Process (PPAP) Checklist, the Supplier shall complete and submit for approval a Part Submission Warrant (PSW) form. A separate PSW shall be submitted for each item number and revision. When multi-cavity molds / dies / tools / manufacturing sites are used, the appropriate specifics shall be noted on the PSW. A copy of the approved PSW shall be submitted with delivery of the parts.

Note: PSW applies to production parts and does not apply to development parts, samples or trial parts.

Forms available at: https://www.cobham.com/cms/orchard_park/suppliers

921 INSPECTION ACTIVITY

The Supplier shall formulate and identify inspection activity during planning stages of manufacturing. Adequate artifacts shall be submitted for approval by Cobham Supplier Quality Engineering. Objective evidence must be maintained on file and available for review by Cobham.

C. INSPECTION BY SAMPLING: The Supplier may substitute sampling inspection in lieu of 100% inspection if inspection is performed in accordance with ANSI Z 1.4. Other inspection plans may be
used with Cobham Supplier Quality Engineering approval. A Supplier generated inspection and test plan is required for this part/assembly. As a minimum, the inspection plan will contain characteristics being verified, the acceptance criteria, the frequency, the method of verification and who (function) will perform the inspection. The Supplier must include all Key Characteristics that are determined to be of significant, such as from the PFMEA.

D. **100% INSPECTION REQUIREMENT:** The Supplier must perform 100% inspection on items and features identified on the purchase order.