



Quality Assurance Requirements (QAR)

Document Number P-P-0006

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General Information:

This document provides a set of Quality Assurance (QA) Requirements (clauses) for use in specifying the level of quality control ACE Aeronautics, LLC will exercise over suppliers on procurements.

The following Quality Clauses are applicable only when specifically referenced in the Purchase Order by number.

ELEMENT Q100 - QUALITY MANAGEMENT SYSTEM

Q101 General – ANSI/ISO/ASQC - 9001

The Seller shall maintain an effective Quality Management System in accordance with ANSI/ISO/ASQC 9001, Quality Management System – Requirements. Buyer reserves the right to perform periodic audits at Seller's facility.

Q102 Aerospace – SAE AS9100

The Seller shall maintain an effective Quality Management System in accordance with SAE AS9100, Quality Management Systems – Aerospace – Requirements. Buyer reserves the right to perform periodic audits at Seller's facility.

Q103 Calibration – ANSI/ISO/ASQ/IEC - 10012

The Seller shall maintain, and Seller's subcontractors shall maintain an effective and accredited Calibration System in accordance with the national or international approved standard(s), such as: ANSI/ISO/ASQ/IEC 10012, 17025, Z540-1 or an equivalent standard approved by the buyer. Buyer reserves the right to perform periodic audits at Seller's facility.

Q104 NADCAP – National Aerospace and Defense Contractors Accreditation Program

The Seller shall maintain NADCAP approval for special processes being performed on all material being furnished on this Purchase Order. Buyer reserves the right to perform periodic audits at Seller's facility.

Q105 Quality Assurance Requirement for Distributors – AS9120

Quality System Requirements for Sellers that procure parts, material and assemblies from a manufacturer then sells the products to ACE Aeronautics, LLC. Seller will establish and maintain a quality assurance system compliant to the requirements of AS9120, Quality Management Systems – Requirements for Aviation, Space and Defense Distributors. Buyer reserves the right to perform periodic audits at Seller's facility.

Q106 General – TERMS AND CONDITIONS

The Seller shall comply with ACE Aeronautics, LLC. Standard Purchase Order Terms and Conditions (P-P-0008) unless otherwise indicated on the Purchase Order.

ELEMENT Q200 – INSPECTION REQUIREMENTS

Q201 Government Source Inspection

Government Source Inspection/test is required prior to shipment from your facility. Upon receipt of this order the seller shall immediately notify the government representative who services your facility so appropriate planning for government inspection can be accomplished. If a government representative does not service your facility, contact the Defense Contract Management Command (DCMC) for direction.

Q202 Buyer Source Inspection

ACE Aeronautics source inspection/test is required prior to shipment from your facility. Notify the applicable ACE Aeronautics Purchasing Representative five (5) working days in advance of the date when material is ready for inspection/test. If the material is not ready for ACE Aeronautics review when called for, the Seller may be liable for all expenses incurred by ACE Aeronautics surveillance personnel. Inspection at the Seller's facility does not guarantee final acceptance at ACE Aeronautics unless otherwise specified on the purchase order.

Q203 Non-Government Customer Source Inspection

Work under this contract is subject to inspection by ACE Aeronautics' customer Quality Assurance Representative (QAR) prior to shipment of goods from Seller's facility. Evidence of ACE Aeronautics' customer source inspection is required to accompany shipment of goods on this Order.

Source inspection shall be conducted by ACE Aeronautics' customer AQR at the Seller's facility or where designated in the Order.

Upon receipt of this contract, the Seller shall promptly notify the ACE Aeronautics Buyer to coordinate with ACE Aeronautics' customer QAR so the appropriate inspection plan can be coordinated for source inspection at Seller's facility. The level of customer inspection performed will be as determined by the customer's QAR and may be conducted during processing, fabrication, or as a final inspection.

Seller shall make available to the QAR all applicable drawings, specifications, and changes thereto, related inspection and/or test equipment, and applicable inspection, measurement and test equipment as may be required to satisfactorily perform the inspections and tests required under this Order.



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Seller shall notify ACE Aeronautics Buyer a minimum of five (5) working days in advance of the time the articles, processes or services are ready for inspection or test to allow for notification of ACE Aeronautics' customer QAR for the planned activity. The Seller shall not proceed past Customer Mandatory Inspection Points without written authorization from the Buyer.

Q204 First Piece Inspection

Supplier first piece inspection is required. Seller shall clearly identify and furnish the first deliverable product, and a complete inspection report for that product, to the Buyer for inspection. Seller shall ensure the first piece conforms to all drawings, specifications and specified requirements of the Purchase Order, and that the first piece is a representative of the production materials, processes, production equipment and inspection equipment that is intended for use to produce the contracted quantity and verified by qualified personnel.

Seller may, at their own risk, continue to manufacturer additional items prior to notification of inspection results, however; no production lots shall be shipped to the Buyer until written approval of the first piece is received from ACE Aeronautics Quality Assurance via the ACE Aeronautics Purchasing Representative. Buyer's acceptance of Seller's first piece part does not guarantee acceptance of the production lot.

Q205 First Article Inspection (FAI) (IAW AS9102)

Supplier first article inspection is required. The first production piece must have a complete 100% First Article Inspection performed, and documented, to become part of the First Article Package to be submitted to the Buyer for review/approval prior to continuation of production and is a deliverable report with the initial shipment of product. The FAI documentation shall be retained and shall include a list of the characteristics required by the design data and any required tolerances, the actual results, and when testing is required, the results of the test. The First Article Package must consist of; the first production piece (segregated and identified as being the FAI part(s)), a documented inspection report containing each characteristic of the production piece, material certifications, and special processing certifications. When the item being delivered is an assembly or subassembly, the first article inspection shall also include all detailed parts contained therein. Seller shall ensure the first article conforms to all drawings, specifications and specified requirements of the Purchase Order, and that the first article is a representative of the production materials, processes, production equipment, and inspections equipment that is intended for use to produce the contracted quantity and verified by qualified personnel.

Seller may not continue to manufacture additional items without written authorization from the Buyer. Buyer's acceptance of Seller's first article does not guarantee acceptance of the production lot.

When documenting the FAI, Seller may use the forms contained with AS9102 or their equivalent format and will include all the information required in the AS9102 as applicable to the article's configuration and must be in English.

Seller's FAI records will provide objective evidence of 100%-dimensional inspection, tolerances and inspection results. Standard catalog hardware is exempt from this FAI requirement.

First Article Inspection is required when any of the following occurs:

- The product is new to the supplier.
- The supplier has changed production facility
- There has been a change if design affecting fit, form, or function of the product.
- There has been a change in numerical control program that can potentially affect fit, form and function.
- A lapse in production for more than 24 months.

In the event that this FAI requirement has been imposed by Buyer on subsequent procurements of the same article within a 24-month period, Seller shall be required to provide evidence of that FAI to Buyer's Quality Assurance Representative in lieu of performing another FAI.

Q206 Welding

The Seller's welding personnel and inspection personnel must be appropriately trained, qualified and certified to the applicable standard(s) for the work to be performed on this Purchase Order. Personnel certification documents shall be supplied to the Buyer upon request.

Q207 Non-Destructive Test/Inspection (NDT/NDI)

The Seller's personnel must be appropriately trained, qualified and certified to the applicable standard(s) called out on the drawing(s) and/or specification(s) for the work to be performed on this Purchase Order. Personnel certification documents shall be supplied to the Buyer upon request.

The Supplier shall furnish with each shipment, affixed to the product/material being supplied, a copy of the NDT/NDI process certification, clearly identifying the results of the test/inspection, for all items requiring any of the following tests and/or inspections:

- Penetrant
- Magnetic Particle
- Ultrasonic
- Radiographic (must supply film as well)
- Eddy Current



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Q208 Use of ACE Aeronautics Approved Suppliers

The Seller shall utilize ACE Aeronautics/Customer/Government approved suppliers for performance of all special processes. The use of ACE Aeronautics/Customer/Government suggested/approved suppliers does not relieve the Seller of the responsibility for product/service quality.

Q209 100% Inspection Required

The Seller 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 ACE Aeronautics.

Q210 Inspection Plan

Seller shall prepare and submit an inspection system plan for the manufacture, test and inspection of articles under this specific Order. The plan shall be submitted for buyer approval prior to contract award. The inspection system plan shall cover activities for the Order period and be tailored to the Order requirements. The plan shall also describe Seller's detailed implementation of the quality requirements, statement of work, and associated drawings and specification. Specific element/provisions imposed by Buyer will require Seller to provide a detailed method of ensuring the applicable quality inspection system provisions and technical criteria are satisfactorily met.

Q211 Drawings

Seller shall furnish with the first shipment of the Purchase Order, drawing(s) or sketch(s) and specification(s) adequate to permit inspection and/or test of the product. Seller shall ensure that such documentation is controlled, and the revision furnished is the latest, valid description of the product.

ELEMENT Q300 – MATERIAL AND CERTIFICATION REQUIREMENTS

Q301 Certified Inspection/Test Data

Seller shall provide a legible and reproducible copy of all certified inspection/test data, indicating results of all required inspections with each shipment.

Q302 Chemical and Physical Test Reports

Seller shall provide a legible and reproducible copy of all original manufacturers' chemical and physical test reports for material procured under this Purchase Order with each shipment. All paperwork must be traceable per material lot number and/or purchase order numbers and provide manufacturers' name,

specification number(s) and, if specified on Buyer's Order, the revision date or change letter.

Q303 Certificate of Compliance/Conformance (C of C)

Seller shall provide a legible and reproducible OEM/OCM certification with each shipment to attest that the parts, assemblies, subassemblies, or detail parts conform to the Purchase Order requirements and must be signed by a responsible company representative. When applicable, the true manufacturer's lot, heat, batch, date code, and/or serial number must appear on the certification. The certificate of conformance must contain:

- Name and Address of Supplier
- Name and Address of the Original Component Manufacturer (OCM) or Original Equipment Manufacturer (OEM)
- The ACE Aeronautics Purchase Order number and line item number
- The Part Name, Part Number (and revision number if applicable) and quantity shipped
- The Serial Number for serialized items and/or lot number for lot-controlled items
- A Conformance Statement that all Purchase Order and Specification requirements have been met.

Q304 Certificate of Calibration (Inspection, Measuring, and Test Equipment)

Seller shall furnish, with each item shipped, a legible and reproducible certificate of calibration signed by a responsible company representative and shall be traceable to the individual item tested and shall include the Buyer's part number, serial number, and Purchase Order number for each item being shipped. The Seller's calibration certificate shall include a unique tracking number, tolerance range, and when applicable, environmental condition for each parameter calibrated. The certificate shall also state the operating error per specification, the degree of correction of out of tolerance condition and remaining uncorrected out of tolerance condition, if applicable.

Q305 Material Safety Data Sheets (SDS)

Seller shall furnish a material Safety Data Sheet (SDS) for the material being provided. The material Safety Data Sheet must accompany each shipment of material.

Q306 Special Process Certification

All Special processes shall be identified and approved by the Buyer. Special Processes shall be defined as any processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement and as a consequence,



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deficiencies become apparent only after the product is in use or the service has been delivered.

Seller shall ensure that special processes (e.g. heat treat, soldering, welding, anodizing, chemical film treatment, NDT, etc.) are performed only by sources that have been surveyed and qualified/approved to perform those processes. The Seller shall provide to the Buyer all documentation showing evidence of special processor qualification and/or certification to perform special manufacturing, assembling, and/or test processing required by the Purchase Order or specifications. The Seller may elect to utilize sources already approved by the Buyer for the applicable special process.

A special process certification, signed by a responsible company representative, shall be provided with each shipment of item(s) delivered. Special process certifications shall include the following:

- The ACE Aeronautics Purchase Order number and line item number
- A statement that the process was performed per the applicable drawings/specification requirements
- Part Number(s), Serial and/or Lot Number(s), of the item processed
- Material process specification and revision
- Type and/or Class of specification, if applicable
- Seller's name and address, and if performed by someone other than the Seller, the name and address of the organization performing the process

Q307 Life Limited and Age Controlled (Shelf Life) Items

Items on the Order require submittal of either the date of manufacture or the date of shipment from the manufacturer, whichever is the basis for determining shelf life.

Seller shall provide all pertinent shelf life data with each shipment. Seller shall ensure that at least 80% of the material's usable shelf life is remaining, if total shelf life is 1 year or less, upon delivery to the Buyer. Seller shall ensure that all materials which are harmful to human health and/or property are contained in accordance with applicable regulatory specifications.

Certification must contain the following:

- Order Part Number
- Drawing and specification, with revision as specified on the Buyer's order
- Manufacturer's name, lot, heat, batch, date code, and/or serial number (as applicable)
- Date of manufacture (as specified on order)
- Date of shipment from manufacturer (as specified on order)
- Seller name and date

**If total shelf life is greater than 1 year, providing material with 60% remaining useful life is acceptable.

Q308 Certification of Solderability

Seller shall provide applicable solderability certification from the Manufacturer that electronic parts/components furnished on this Purchase Order meet the requirements of approved and accepted joint industry standards.

Q309 Electrostatic Discharge (ESD) Sensitive Devices

Seller shall maintain an ESD program compliant with MIL-STD-1686 or ANSI/ESD S20.20 that is appropriate to protect electrical and electronic parts, assemblies and equipment during all stages of handling, storing, packaging, preservation and delivery of such parts. Seller shall properly package and identify all items and will place them in conductive or static-dissipative packages, tubes, carries, bags, etc. The packaging must be clearly labeled to indicate that it contains electrostatic sensitive goods.

Q310 Raw Material Traceability

Seller shall mark each individual item and applicable documentation to show material type or designation, material specification and temper, as well as clear traceability to lot, heat lot, or batch (melt) number. All items shall be identified by continuous stenciling (not to exceed 12 inches), of sufficient size, to be readily legible, applied by permanent ink or dye of contrasting color, non-injurious to metal surfaces and not soluble in cutting and coolant oils.

Seller shall retain on file one reproducible record of actual chemical and/or physical material analysis of all metallic raw materials, including certification and shall be made available upon request. Material shall be traceable to Seller's and Seller's sub-tier's procurement documents.

Q311 Parts Traceability

When the Seller is a distributor – The Seller shall ensure, and certify as such, that the part(s) being provided comply with all the requirements of the Purchase Order; and shall provide the manufacturer's certification and/or chemical/physical test reports to the Buyer.

Each lot shall be packaged in a manner that ensures there will be no co-mingling of like parts from different lots in the same container.

Each interior/individual package shall be identified with, at a minimum, the lot number, part name, part identification number, ACE Aeronautics PO number, project number and name of fastener manufacturer.



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(Pay particular attention to restriction on "Deviations and Substitutions")

When the Seller is the fastener manufacturer – The Seller shall ensure, and certify as such, that the part(s) have been manufactured in accordance with requirements of the applicable NAS, AN, MS, etc., government approved Parts Standard (i.e. Fastener Quality Act (FQA) Public Law 101-592) and Procurement Specification; and shall provide manufacturer certifications and/or chemical/physical test reports to the Buyer.

Each lot shall be packaged in a manner that ensures there will be no co-mingling of like parts from different lots in the same container.

Each Package shall be identified with, at a minimum, the lot number, part name, part identification number, ACE Aeronautics PO number, and name of fastener manufacturer.

Q312 Requirement for Airworthiness Certification (FAA)

Seller shall ensure that the parts and/or material being provided conform to the airworthiness requirements mandated by the Federal Aviation Administration, USA (FAA). FAA Conformity Certification is required for parts and/or material specified on this Purchase Order and a true copy of FAA Form 8130-3, Release Certificate Approval Tag for Airworthiness or a Maintenance Release Entry made in accordance with 14 CFR § 43.9 shall be included with each shipment.

When the parts and/or material being provided are from a foreign government, it must be from a country with which the United States of America has an active Bilateral Airworthiness Safety Agreement (BASA) in place for the item(s) being provided. An equivalent to FAA Form 8130-3 from the importing country's Civil Aviation Authority (CAA) is acceptable in this instance.

NOTE: For a list of countries with a United States Bilateral Airworthiness Safety Agreement in place, consult FAA Advisory Circular (AC) 21-18 and AC 21-23.

Q313 Acceptance Data Package

Seller shall submit with each shipment of a part or assembly an acceptance data package with Seller name, buyer Order, part nomenclature, part number and serial number with the applicable data items as specified in the Purchase Order and/or Statement of Work to consist of all items in support of ACE Aeronautics conformity inspections, in accordance with FAA Order 8110.4C, such as, but not limited to:

- Work Order
- Routing Sheets
- Configuration Data

- Drawings
- Inspection Reports
- Waivers/Deviations and non-conformance reports
- Material Certification
- Material Test Reports
- Processor Certification
- Personnel Certification
- Acceptance Test

Q314 O-Ring Shipments

With each shipment of O-rings, Seller shall:

- Individually package all O-rings in opaque packaging.
- Part mark all O-ring packages in accordance with specification (i.e., nomenclature, part number, material specification, manufacturer's name or cage code, compound number, batch number, cure date.) as applicable.
- Ship all O-rings to Buyer within 2 years (8 quarters) of their noted cure date. NOTE: This requirement (shipment within two years of cure date) does not apply to O-rings with unlimited shelf life per ARP5316, Elastomer Shelf Life Recommendation.
- Provide a Material Test Report for each lot or batch number shipped. Buyer's Order number must be included on the documentation provided by the procurement source.

Certification must contain the following:

- Seller name and date
- Manufacturer Name
- Part Number
- Material Specification
- Batch/Lot Number
- Cure Date

Q315 Pressure Vessel

With each shipment, Seller shall provide a copy of American Society of Mechanical Engineering Code Reports showing conformance of the units to the requirements of the Pressure Vessel Code. When required, the hardware markings must be in accordance with the applicable drawing/specification.

Q316 EEE Hardware Manufacturer's Certificate of Compliance and Chain of Traceability Requirements

Hardware provided on this Order shall only be procured from the Original Component Manufacturer (OCM) or through the OCM Authorized Distributor(s). A Certificate of Compliance from the



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manufacturer is required with this Order. Seller shall provide documentation to record acquisition supply chain of traceability back to the manufacturer of all Electrical, Electronic, and Electromechanical (EEE) parts provided on this Order.

The full quantity of date code controlled Electrical, Electronic, and Electromechanical (EEE) parts provided under this Order is preferred to have a single lot/date code. If mixed lot/date codes are provided, the shipping documentation shall list individual lot/date codes and quantity. Multiple lot/date codes shall not be commingled, and separate packages shall be marked with the quantity and lot/date code. Seller's certification shall contain the following data and accompany each shipment:

- Buyer's Purchase Order Number
- Part Number
- Quantity
- Manufacturer's name
- Batch identification for the item(s) such as date codes, lot codes, serializations, or other batch identifications.
- Certification of Compliance from the part manufacturer (OCM) or OCM authorized distributor, as applicable, stating compliance to the applicable specification requirements identified on the purchase order
- Statement that the shipment contains only new parts (e.g., not reworked or returned from another user)
- Seller name and date
- Seller's Supply Chain Traceability records must contain the following data and accompany each shipment
- Evidence of procurement from OCM or OCM Authorized Distributor
- Data that identifies the name and location of all the supply chain intermediaries from the manufacturer to the direct source of the product for the Seller, and shall include the manufacturer's batch identification for the item(s) such as date codes, lot codes, serializations or other batch identifications.

Q317 Burn Test Reports

Materials (including finishes or decorative surfaces applied to the materials) must meet the applicable test criteria prescribed in part I of Appendix F of 14 CFR Part 25.853 and/or 14 CFR Part 29.853., or other approved equivalent methods. Burn Test Report shall be reproducible and legible, traceable to manufacturer's name, part number, PO number and lot/batch number. Burn Test Reports shall be traceable to ACE Aeronautics PO Number.

Q318 Counterfeit Parts

Seller shall have a counterfeit parts prevention program to prevent the delivery of counterfeit parts and control parts identified as counterfeit, in accordance with AS5553.

Seller shall establish and maintain controls to prevent the purchase of counterfeit parts. Seller shall maintain a method of item traceability which ensures tracking of the item(s) back to the Original Equipment Manufacturer (OEM) for all components and devices including those items in assemblies and subassemblies being delivered under this PO.

If a suspect/counterfeit item(s) is furnished under this PO, Seller shall promptly disclose such item(s) to Buyer and replace such item(s) with item(s) acceptable to Buyer at no increase price, cost or fee to Buyer. Seller shall be liable for all costs relating to impoundment, removal, and replacement of counterfeit item(s).

Q319 Preservation and Packaging

Seller shall incorporate good practices for preservation and packaging of all articles submitted under the Buyer's Purchase Order and shall identify each package permanently and legibly with the purchase order number, date shipped and packing slip number. Components with fragile leads and items susceptible to breakage (i.e., glass, bulbs, etc.) shall be packaged in individual compartments to prevent intermingling and damage.

The Seller shall have an established system to ensure conformity and preservation of product during internal processing and delivery to ACE Aeronautics. This includes (as applicable) identification, handling, packaging, storage and protection. Preservation also applies to the constituent parts of a product. Preservation of product shall also include, where applicable in accordance with product specifications and/or applicable regulations, provisions for:

- Cleaning;
- Prevention, detection and removal of foreign objects;
- Special handling for sensitive products;
- Marking and labeling including safety warnings;
- Special handling for hazardous materials.

NOTICE TO ALL VENDORS: The use of loose fill materials in product being shipped to ACE Aeronautics is not acceptable. Please refrain from shipping product with Styrofoam or any similar loose fill material. Product may be returned if packaged in such a manner.

In addition, the supplier shall ensure that any documentation required by the purchase order to accompany the product(s) is present at delivery and protected against loss and deterioration.

- Electronic submittal of the documentation package, in advance of the order shipment, is permitted with prior agreement by the ACE Aeronautics buyer.



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- The Supplier agrees to produce these documents whenever specified on an ACE Aeronautics purchase order in accordance with the applicable Quality Clause requirements.
- Failure to supply these documents with product shipment may result in delays in payment, product return as well as potential negative effect on the supplier's quality performance rating.

MFR – XXXXX (MFR - Manufacturer's CAGE Code**) Optional Marking allowed

- Subassemblies and Assemblies shall be marked as follows:

XXXXXASSY123456-0001 (Original Design Group's CAGE CODE* "ASSY" Part Number) Per the Drawing

MFR – XXXXX (MFR - Manufacturer's CAGE Code**) Optional Marking allowed

Q320 Aircraft Wiring

Seller shall ensure that all Wire and Cable lengths on Buyer's PO be continuous.

Q321 Lot Traceability

Seller shall ensure Lot Traceability to the individual item provided to the Buyer, which shall include the part number, description, production lot number, manufacturer's heat/batch number and manufacturer's name. A unique lot/control number assigned by the manufacturer to the production lot, provided that it is traceable to all raw materials, processing and testing is mandatory.

Q322 Lot Code Uniformity

Seller shall ensure each item provided to the Buyer will be from one manufacturer's lot and date code.

Q323 Mercury Exclusion

Supplies furnished under this contract or purchase order shall not be contaminated by mercury or mercury compounds, nor shall they contain functional mercury. If mercury is used in the processing of the supplied material, it shall be separated from the material by a minimum of two barriers. Seller shall include a certification of conformance to the above requirement, indicating that the material supplied is mercury free, with each shipment of material on this order.

Q324 Build to Print Machined, Sheet Metal Parts, and Cables etc. Marking

Part marking shall be permanent, legible, and located as specified on drawing. If not specified on drawing, locate marking on part's interior surface or contact ACE Aeronautics procurement representative for additional marking information

- Parts shall be marked as follows:

XXXXX - 123456-0001 (Original Design Group's CAGE Code* – Part Number) Per the Drawing

- Subassemblies requiring electrical testing may have suppliers internal tracking information added to the item by the supplier (i.e. on the band marker) to allow traceability from the test data to the assembly.

- Bag and Tagging of parts or subassemblies with the above information is only permitted under either of the following conditions:

- Piece parts are too small to individually mark, or
- The drawing specifically states to bag and tag
- Subassemblies requiring electrical testing that are bag and tagged may have the suppliers internal tracking information added to the item by the supplier (i.e. on the band marker) to allow traceability from the test data to the assembly.

* Original Design Group's CAGE Code found in drawing's title block located to left of part number.

** If manufacturer has no CAGE Code, then Manufacturer's Name or Logo shall be substituted for CAGE Code.

Q325 DFARS 252.225-7014, Preference for Domestic Specialty Metals, Alt 1 (has the following basic requirements):

Specialty metals must be melted in the United States or a qualifying country, or they can be melted anywhere but must be "incorporated in an article manufactured in a qualifying country". The clause allows a qualifying country to manufacture parts from metal that was melted anywhere, provided it meets specifications, but a United States company can only use metal that was melted in the United States or a qualifying country.

- As of the date of this document, the qualifying countries are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Egypt, Estonia, Finland, Germany, France, Greece, Israel, Italy, Japan, Latvia, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom and Northern Ireland.



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"Specialty Metals" means:

- (a) Steel with a maximum alloy content exceeding one or more of the following limits: manganese, 1.65%, silicon, 0.60%, or copper, 0.60%, or containing more than 0.25% of any of the following elements: aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, or vanadium.

• **Example 1:** Steel containing 1.15% chromium melted in Japan and used in the United States by the manufacturer of an item to be delivered pursuant to a contract with the US Government is not compliant with DFARS252.225-7014 Alt I.

Explanation: Steel containing more than .25% chromium is defined as a specialty metal and, therefore, must either be melted in the United States or a qualifying country, or be melted anywhere and incorporated into a deliverable item in a qualifying country. Japan is not on the list of qualifying countries.

• **Example 2:** Steel melted in Mexico containing .20% chromium and not having alloy or element contents in excess of the thresholds set forth in DFARS 252.225-7014, Alt 1 is compliant with the DFARS clause.

Explanation: Steel containing more than .25% chromium is defined as a specialty metal. The steel described in Example 2 is not a "specialty metal" and therefore does not have to be produced in the United States or a qualifying country. This material from Mexico would be acceptable. Note that Mexico is not on the list of Qualifying Countries, however, the material does not meet the definition of "Specialty Metal".

- (b) Metal alloys consisting of nickel, iron-nickel, and cobalt base alloys containing a total of other alloying metals (except iron) in excess of 10 percent;

Example: All Samarium Cobalt magnets are considered "Specialty Metals" because its cobalt content is over 10% and therefore may not be supplied to the US Government on contracts that impose this clause. Alnico magnets are also considered "Specialty Metals" because it consists of nickel and again fall under the same provisions as described.

- (c) Titanium and titanium alloys; and
- (d) Zirconium and zirconium base alloys.

Q326 Foreign Object Debris / Foreign Material Inspection

A foreign object damage prevention program (FOD) must be maintained to assure prevention, detection and removal of foreign objects during the manufacture, assembly and shipping of item. Supplier shall document and investigate all FOD incidents assuring elimination of the root cause. Buyer shall have the right to perform inspections, verification and FOD Prevention Program audits at supplier's facility to assure program documentation and effectiveness. Supplier shall provide a statement of certification that deliverable products are free of any foreign materials that could result in foreign object damage to the installed product or companion components/systems.

Q327 Parts Purchased for Company Owned Aircraft (Unairworthy)

No Vendor Compliance Required - Parts with this requirement should be segregated upon arrival and placed in Non-Conformance Cage until an inspection and airworthiness determination can be made by a properly certificated Mechanic.

Q328 Made in the USA

Material and or alloys incorporated into the Product shall be sourced from the United States. The Material Certificate of Conformance must state the Country of Origin. All exceptions to this requirement clause shall require prior written approval from Program Quality and Program Management.