

**Pacific Cast Products**  
**12711 Imperial Highway, Santa Fe Springs, CA 90670**

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**Purchasing Quality Assurance Clauses for Suppliers**

**Purpose**

This document describes the general and special product assurance requirements (clauses) that will be used by PCP on the Purchase Order, Contract, or other formal agreement (hereafter referred to as the Contract) between a Supplier and PCP. The purpose of this document is to clearly define for each purchase of products or services, all of the necessary and applicable technical and quality requirements with which the Supplier is required to comply to meet PCP, PCP's customer, and/or regulatory requirements.

This document applies to all contracts issued by any of the divisions of PCP-Corporation unless otherwise specifically defined within the issued contract.

Unless otherwise specified on the contract, the following chart shall be used by the Supplier to determine the applicable Purchasing Quality Clauses, based on the commodity being contracted. Any exceptions to the applicable clauses shall be noted on the face of the contract.

<b>Commodity</b>	<b>Applicable Purchasing Quality Assurance Clauses (PQAC)</b>
Calibration	PQAC-010, 060, 100, 320, 350, 360
Machining	PQAC-010, 020, 030, 050, 060, 080, 100, 110, 120, 130, 140, 230, 240, 270, 290, 300, 320, 350, 360
Raw Material	PQAC-010, 050, 100, 110, 130, 140, 230, 240, 320, 350, 360
Tooling	PQAC-010, 030, 100, 300, 350, 360
Inspection & Test	PQAC-010, 020, 030, 050, 060, 120, 130, 140, 150, 180, 190, 200, 210, 240, 270, 300, 310, 320, 350, 360
Process	PQAC-010, 040, 100, 110, 120, 130, 140, 150, 160, 170, 180, 220, 230, 240, 280, 290, 300, 320, 330, 340, 350, 360
All Other	PQAC-010, 350, 360

**PQAC-010**  
**Supplier Responsibilities**

**Delivery Certification:** By delivering products or services on the Contract, the Supplier certifies that such products or services are in compliance with all applicable requirements of the Contract, and objective evidence of compliance is available and will be furnished to PCP for review upon request.

**Compliance to Contract Requirements:** The Supplier is responsible to verify and demonstrate compliance to all Contract requirements. Neither audit, surveillance, inspection and/or tests made by PCP, representatives of PCP, or representatives of PCP's customers, at Supplier's facilities or at the facilities of the Supplier's sub-tier sources, or upon receipt at PCP, relieves the Supplier of the responsibility to furnish acceptable products or services that conform to all Contract requirements, nor does it preclude subsequent rejection by PCP or PCP's customers.

**Control of Sub-tier Sources:** The Supplier, as the recipient of the Contract, is responsible for meeting all Contract specified technical and quality requirements, whether the Supplier performs the work, or the work is performed by the Supplier's sub-tier sources. When the Supplier uses sub-tier sources to perform work on products and/or services scheduled for delivery to PCP, the Supplier shall include (flow-down) on Purchase Orders or Contracts, to his sub-tier sources, all of the applicable technical and quality requirements of the PCP Contract, including when applicable the requirement to document and control 'key characteristics' and/or 'key processes', and to furnish certifications and test reports required by the applicable 'PQAC' Clauses.

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Right of Entry to Suppliers Facilities: During Contract performance, the Supplier shall grant reasonable access to Supplier's facilities to representatives of PCP, PCP customers, US government and/or regulatory agencies for the purpose of evaluating Suppliers conformance to all Contract requirements. When applicable, the Right of Entry requirement shall be flowed-down by Supplier to Suppliers' sub-tier sources.

**Document Control**

Applicability of Documents: All documents, including drawings and specifications from Prime Contractors, PCP, Industry, National, International, Federal, US Government, and others, are applicable to and considered part of the Contract requirements when such documents are specified directly in the Contract or in documents referenced by the Contract. Unless otherwise specified by the Contract, all of the lower tier documents referenced in Contract specified documents are applicable to the Contract.

Document Revision Status: Unless otherwise specified by the Contract, the document revision in effect on the date of issue of the Contract, applies to the Contract.

Document Sources: Copies of PCP proprietary documents, or PCP customer proprietary documents, required by the Supplier to comply with Contract requirements will be furnished to the Supplier by PCP with the Contract. Copies of Industry, National, International, or US Government documents and Standards are generally available on the internet or from commercial sources. The Supplier is responsible for obtaining such documents, including current revision of such documents. Any problems experienced by the Supplier in obtaining required documents should be brought to attention of the PCP Buyer.

Control & Release of PCP Furnished Documents: Proprietary documents furnished by PCP (PCP's or PCP's Customers) to the Supplier are furnished solely for Supplier to use during performance of work on the PCP Contract. Proprietary documents are PCP or PCP customer documents and may be furnished to the Supplier in hard copy, electronic, or other format. The Supplier is responsible for controlling and maintaining such documents to preclude loss, damage, alteration, and/or deterioration. Unless authorized by PCP Buyer in writing, the Supplier may not transmit or furnish any proprietary documents, or copies of such documents, to anyone outside the Supplier's business organization except to a sub-tier source used by the Supplier for performance of work on the PCP Contract. The Supplier shall return to PCP all proprietary documents with the last delivery of products or services on the Contract.

**Prohibited Practices**

The following acts and practices are prohibited, unless approved by PCP in writing. Any violation by the Supplier may result in disqualification of the Supplier for future business with PCP:

Unauthorized Facility Changes: During performance on the Contract, the Supplier shall give PCP written notice before relocating any production, inspection or processing facilities; or, transferring work between different facilities; or, when applicable, prior to initiating any changes in the source of major components procured by the Supplier and designated for use in or for installation on products scheduled for delivery to PCP; or, making any other changes which may affect product quality, reliability, or integrity. Such changes are subject to approval/disapproval by PCP. A change in ownership or a change in the individual designated as the management representative with respect to the Suppliers quality/inspection system shall be construed as a facility change and requires the Supplier to notify PCP.

Unauthorized Casting Repairs & Salvage: The Supplier may not perform any repairs such as welding, brazing, soldering, plugging, or, use of paints, adhesives or plating, or use any standard or other repair practice or method, on castings damaged or found to be discrepant during performance of services contracted or processing of castings, or, on defects in castings, unless such repairs are specifically

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permitted by the applicable drawing or specification, or are specifically authorized by PCP in writing for each occurrence. Unless specifically authorized by PCP, this prohibition also applies to reworking castings by removing plating (stripping) and re-plating. In those cases, where PCP authorized product repair, salvage or stripping has been accomplished, the Supplier shall include on the packing list/shipper or on a separate attached document a list of the products that have been subjected to such PCP approved repair, salvage or stripping, and the method used.

Unauthorized Product Changes or Substitutions: The Supplier may not make any changes or substitutions to any products or services required by the Contract, drawing, specification, standard, or other applicable document without prior written authorization by PCP. Authorization may be contingent on PCP conducting an on-site review of the proposed product or service changes at the Supplier's facilities, or the facilities of the Supplier's sub-tier sources.

Altering Data on Documents: The use of any method that causes the original data on documents to be obliterated and unreadable (i.e. the use of correction fluids, correction tape, write-over, or other methods) to correct, modify or otherwise alter the data and/or entries on any certifications, test reports or other documents required by the Contract, is strictly prohibited. Corrections may be made on inspection reports such as FAIR's or processing certifications, providing it is clearly obvious that a correction was made and it is signed (initialed) or stamped by an authorized individual. Upon receipt at PCP, products or services represented by documents that show evidence that they have been corrected or altered in an unauthorized manner are subject to return to the Supplier at Supplier's expense.

**Contract Changes & Their Effectivity**

PCP Initiated Changes: The Supplier shall incorporate, at the specified and agreed upon effectivity points, all changes initiated by PCP and communicated to the Supplier through a formal Contract change and/or amendment. Such changes may be in the form of revised drawings, specifications, tests, inspection, or machining methods, etc., and may apply to products as well as to the Supplier's management and administrative systems. The Supplier's business management system shall include appropriate controls and records, including controls at the Supplier's sub-tier sources, which provide objective evidence that changes were incorporated as required by the Contract. Objective evidence may be in the form of date, lot, serial number, revision letter, or other positive identification. Such records are subject to on-site verification by PCP at the Supplier's facilities or the facilities of the Supplier's sub-tier sources.

Supplier Initiated Changes: The Supplier may not make any changes in product design, drawings, performance specifications, materials or processes without specific approval by PCP in writing prior to making such changes in products or data. When applicable, the Supplier shall flow-down this requirement to the Supplier's sub-tier sources. The Supplier shall furnish a copy of the change prior to the initial delivery of products to PCP, so that PCP can verify that the change does not violate the above requirements.

**Certifications**

Certification Requirements: The Supplier shall furnish all certifications, test reports and other documents (hereafter certifications), issued by the Supplier or by the Supplier's sub-tier sources that are required by the specific "PQAC" Clauses listed on the Contract. The Supplier is responsible to ensure that all certifications furnished by the Supplier, or by the Supplier's sub-tier sources, are complete, legible and reproducible, accurate and in compliance with all Contract requirements. PCP reserves the right to return all products to the Supplier at Supplier's expense when the certifications that support the products are not properly executed.

Certification Content: All certifications shall, as a minimum include the following information and data:

- Name of the issuing organization (company);
- Clear definition of services or products being provided along with corresponding specifications, and their current revision levels;

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- Part number and revision;
- Quantity processed and/or delivered;
- PCP contract number; and
- Name and signature of the authorized official of the issuing organization.

Acceptable & Authorized Signatures: All certifications and test reports shall include the typed or printed name and an acceptable signature of the authorizing company official. The following methods are the only PCP approved and acceptable methods for applying signatures to certifications: (a) actual signatures rendered in ink by the signing official; (b) facsimiles of actual signatures such as rubber stamps; or (c) machine or computer graphics generated facsimile signatures. When quality or inspection stamps are used in lieu of signatures, such stamps shall clearly identify the issuing organization and the authorized individual to whom the stamp is assigned. The issue, use, and control of such stamps shall be governed by documented procedures in the Supplier's Quality Management System.

**Maintenance of Records**

Unless otherwise required by the Contract, the Supplier shall maintain all records that provide objective evidence of compliance to the Contract requirements for a minimum of ten (10) years after the last delivery of products and/or services on the Contract. Such records include drawings, specifications, work instructions, certifications, and test reports, and any other records generated in the course of procurement, manufacturing, testing, processing, inspecting, preserving, packaging, and shipping products to PCP, and when applicable include records generated by the Supplier's sub-tier sources. Upon request, the Supplier shall be capable of retrieving & delivering required records to PCP within forty-eight (48) hours or sooner from day of request by PCP. Prior to discarding, transferring to another facility, or destruction of such records, the Supplier shall notify PCP in writing and allow PCP the opportunity to gain possession of such records including applicable records at the Supplier's sub-tier sources.

**Nonconforming Products & Material Review**

Any products found to be nonconforming to PCP drawings, specifications, contract, or other applicable requirements either by the Supplier or the Supplier's sub-tier sources, shall be identified, segregated and reworked or replaced with conforming products prior to delivery to PCP. PCP reserves the right to reject and return any nonconforming products to the Supplier at the Supplier's expense.

**Supplier Material Review Authority**

No Supplier is granted Material Review authority. All nonconforming material shall be submitted to PCP for disposition in accordance with the following:

Submittal to PCP MRB for Disposition: Unless otherwise specified in the Contract, in order for the Supplier to submit nonconforming products to PCP Material Review Board (MRB) for disposition, the Supplier shall submit a request to the PCP Buyer. When authorized by the Buyer, the Supplier shall complete the required MRB forms that will be furnished, along with instructions for their completion, to the Supplier by the Buyer. PCP MRB will not accept for review and disposition any products that can be reworked to meet drawing or specification requirements, or, are obviously scrap.

A 'use-as-is' or 'repair' (salvage) disposition by MRB does not relieve the Supplier of the legal responsibility and liability for such products. The Supplier may not ship to PCP any nonconforming products that have not been dispositioned by PCP MRB unless authorized by PCP in writing. When PCP MRB dispositioned products are delivered to PCP, the Supplier shall reference on the packing list/shipper the serial number of the MRB document which describes the PCP MRB disposition.

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When the Supplier's shipment includes products dispositioned by PCP MRB along with conforming products, the products dispositioned by PCP MRB shall be segregated and marked or tagged so as to permit easy identification upon receipt at PCP.

Supplier Notification of Nonconforming Products Delivered to PCP: When the Supplier has determined that nonconforming product(s) have been delivered to PCP, the Supplier shall notify the PCP Buyer within twenty-four (24) hours of the initial discovery. The Supplier shall use receipt acknowledged e-mail or other positive notification method. The notification shall include the following information:

- Supplier name;
- PCP Purchase Order or Contract number;
- Part number and description;
- Affected quantity and serial numbers (if known);
- Dates delivered (if known); and
- Brief description of the nonconforming condition

The initial notification shall be followed by a formal "Disclosure Letter" delivered to the PCP Buyer within five (5) days of the initial notification. The Disclosure Letter shall include the following information:

- Complete description of the nonconforming condition(s);
- The affected quantity of products (including serial numbers when applicable) and dates delivered to PCP;
- Potential effect of the nonconformance on the performance, reliability, safety and/or usability of the product(s);
- Recommendations for PCP action including for products that PCP may have already delivered to its customers;
- Immediate action taken by Supplier to contain the nonconforming products;
- Root cause analysis of the nonconforming condition;
- Root cause corrective action plan and schedule;
- The plan and schedule for verifying the effectiveness of the corrective action In those cases where data (a) through (h) above is under investigation and incomplete, the Supplier may request, from the PCP Buyer, authority to submit an interim disclosure letter. The interim letter shall include as much information as available and identify the due date for completion of the investigation and the date final disclosure letter that includes all (a) though (h) data will be submitted to PCP. PCP reserves the right to participate in the nonconforming product investigation at the facilities of the Supplier or its sub-tier sources.

Re-Submittal of Products Previously Rejected by PCP:

Products returned to the Supplier by PCP and re-worked or replaced by the Supplier and re-submitted to PCP shall be clearly identified as re-submitted products. The Supplier's packing list/shipper shall include a statement that the products delivered are:

- Replacement, or
- Reworked to meet all applicable requirements, and
- Include reference to the PCP rejection document serial number.

**Product Identification**

The Supplier shall identify all products delivered to PCP in accordance with the drawing, specification and/or Contract requirements. Unless permitted by drawing and/or specification, steel stamping, and vibro-engraving identification methods are prohibited, except on product identification nameplates or decals and on attached metal tags.

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**Preservation, Packaging and Shipment**

Unless otherwise required by the Contract, the Supplier shall incorporate good commercial standard practices for the preservation, packaging and shipment to preclude damage to products during shipment to PCP or deterioration while in storage at PCP. Identification on packages shall include the contract number to which they apply.

**Supplier Performance**

The Quality performance of the supplier will be measured by the number of parts accepted, divided by the number of parts received. The on-time delivery performance of the supplier will be measured by the number of deliveries on time, divided by the total number of deliveries made.

The supplier's Composite Rating is determined by assigning the average level achieved on quality and delivery. Composite Ratings are per the following scale:

<u>Composite Score</u>	<u>Rating</u>
100%	Excellent (A)
99.99 – 95%	Good (B)
94.99 – 90%	Satisfactory (C)
89.99% below	Unsatisfactory (D)

Suppliers with a quarterly composite rating of "D" will require formal corrective action. The goal for the purchasing function is to maintain the supplier base with a composite rating of B as minimum. The Quality Assurance function will initiate activities with under-performing suppliers to bring their rating to acceptable levels.

**PQAC-020**

**Variation Management Program per SAE AS9103** – The Supplier shall establish and maintain a Variation Management Program in compliance with the current requirements of SAE AS9103 - "Variation Management of Key Characteristics." AS9103 requires the use of statistical methods to control manufacturing and processing operations. Supplier's variation management program is subject to audit, verification, and approval, and/or disapproval by PCP designated representative(s).

**PQAC-030**

**Inspection & Test System per SAE AS9003** – The Supplier shall establish and maintain an Inspection & Test System in compliance with the current requirements of SAE AS9003 - "Inspection and Test Quality System." Supplier's Inspection & Test System is subject to audit, verification, and approval and/or disapproval by PCP designated representative(s).

**PQAC-040**

**Quality Management System per AS AS9100** – The Supplier shall establish and maintain a Quality Management System that is in compliance with all of the requirements of AS9100 latest revision. The Suppliers Quality Management System is subject to audit, verification, and approval and/or disapproval by PCP designated representative(s).

**PQAC-050**

**Quality Management System per AS9100/ISO 9001**– The Supplier shall establish and maintain a Quality Management System that is in compliance with the current revision of the requirements of AS9100/ISO 9001. The

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Suppliers Quality Management System is subject to audit, verification, and approval and/or disapproval by PCP designated representative(s).

**PQAC-060**

**Requirements for Calibration Laboratories per ANSI/NCSL Z540-1/ ISO 10012-1** - The Supplier shall establish, document and maintain a system that is in compliance with the current revision of document ANS/NCSL Z540-1/ ISO 10012-1. The Supplier's calibration system is subject to audit, verification, and approval and/or disapproval by PCP designated representative(s).

**PQAC-070**

**In-Process Source Inspection** - Products to be delivered on this Contract, require in-process source inspection, tests or both by a PCP Quality Assurance representative. The points in the manufacturing sequence at which in-process inspection is required will be specified in the Contract. The Supplier shall notify PCP at least forty eight (48) hours in advance of the time the product will be ready for in-process source inspection. Upon request, the Supplier shall make available to the PCP representative any measuring, and test equipment, facilities, records, and personnel to facilitate the in-process source inspection.

**PQAC-080**

**PCP Source Inspection** - Products to be delivered on this Contract require final source inspection, tests, or both by a PCP Quality Assurance representative, prior to delivery to PCP. The Supplier shall notify PCP at least forty-eight (48) hours in advance of the time the products will be ready for final inspection. Upon request, the Supplier shall make available to the PCP representative any measuring and test equipment, facilities, records, and personnel to facilitate the final source inspection.

**PQAC-090**

**Government Source Inspection (GSI)** - US Government Source Inspection (GSI) is required prior to delivery to PCP. Upon receipt of this Contract, the Supplier shall promptly notify the US Government representative who normally services the Supplier's plant, in order that the US Government representative can accomplish appropriate planning for conducting source inspection at the Supplier's facilities. If the Supplier cannot locate the US Government representative to arrange for the required source inspection, the Supplier shall notify PCP immediately. Upon request, the Supplier shall make available to the US Government representative any measuring and test equipment, facilities, records, and personnel to facilitate the Government source inspection.

**PQAC-100**

**Certificate of Conformance (C of C)** – With each delivery of products on this Contract, the Supplier shall include on the packing list/shipper or on a separate attached document, a written statement titled “Certificate of Conformance” and is worded as follows:

“This is to certify that all products or services delivered on this Contract (number) and packing list/shipper (number) are in compliance with all requirements of the Contract. Objective evidence to substantiate this certification will be made available for review upon request.”

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Authorized Person: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_ Signature/Stamp: \_\_\_\_\_

**PQAC-110**

**Raw Material Verification Program** – The Supplier shall develop, document, and implement a raw material (weld plugs, welding rod, helical coils, etc.) verification program that will ensure that material received from the Supplier's sub-tier sources meets all applicable technical and quality requirements. The Supplier's verification program shall include provisions for monitoring and periodic testing of raw material upon receipt to ensure that

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such material meets all applicable requirements, and implement appropriate storage and controls to preclude commingling of different heat/lots or batches of material. Raw material testing shall be in accordance with specification requirements and may be performed by the Supplier or a recognized testing laboratory. Supplier's verification program shall document the frequency of such tests and the test results. Records showing the results of the Supplier's material verification program and its effectiveness shall be available to PCP for review upon request.

**PQAC-120**

**PCP Furnished Material** – PCP may furnish castings and/or components to the Supplier for use in or on products to be delivered on, or of the realization of this Contract. In such cases the Supplier shall establish and maintain strict accountability for all PCP furnished material to ensure that it is properly used and accounted for. When raw material is furnished, the Supplier shall establish required controls to ensure traceability of the raw material to the finished product and furnish material traceability records with the delivery of products to PCP. For components, unless individual component traceability is required by Contract, the Supplier shall ensure that such components are used only on products to be delivered to PCP on the Contract. Unless otherwise specified by the Contract, the Supplier shall return any unused PCP furnished material to PCP with the last delivery of products on the Contract.

**PQAC-130**

**Traceability of Products to Raw Material** - For each lot of products incorporated or used during the realization of this contract, the Supplier shall provide positive traceability of each individual product to the material certification/test report that represents the raw material from which each of the products was manufactured (i.e.: welding rods, helical coils, paint, etc.). Traceability on supplied castings shall also be maintained by identifying the material heat, lot, batch or melt number as originally provided by PCP from the certification/test report on tags attached to each product and/or on packaging (when used). Heat/lot identification required for castings is acceptable for traceability purposes provided it is clearly marked and not obliterated by subsequent operations.

**PQAC-140**

**Qualified Process Sources & Certifications**

All special processes must be performed by sources approved by the applicable Prime Contractor, PCP, or applicable AVL, as defined within the contract. Use of processes and/or process sources that have not been approved by the corresponding AVL may result in return of all products to the Supplier at the Supplier's expense.

- **Special Process:** A Special Process is the application of chemical, metallurgical, nondestructive, or any other special manufacturing, joining, or inspection processes, controlled by Federal, Military, US Government, Industry (i.e.: Boeing, General Electric, Honeywell, Airbus, Lockheed Martin, Bell Helicopter, etc.), National, International, or other applicable specifications. All special processes shall be performed only by those sources currently approved for the specific process by the corresponding prime contractor. In addition, when required by a PCP customer, the Supplier may be required to use customer approved special process sources. Upon request, PCP will provide the Supplier with a list of the approved process sources.
  
- **Proprietary Process** – Prior to initial application of a process that is controlled by a proprietary specification developed by the Supplier or the Supplier's sub-tier source, the Supplier shall furnish a copy of the specification, or sufficient technical data to PCP (subject to normal proprietary rights consideration and nondisclosure agreement) so that PCP can determine whether adequate process controls exist to ensure that the proprietary process will yield products that meet all PCP technical and quality requirements. In addition, the Supplier shall notify PCP when any changes to the proprietary process are planned so that PCP can evaluate the potential impact on product technical or quality requirements.
  
- **Process Certifications** - For all special processes required by the Contract or reference documents, the Supplier shall furnish to PCP, with the delivery of products, the certification/test report issued by



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company that actually performed the process. All certifications/test reports shall, as a minimum contain a complete description of the special process performed, including:

- Process name, applicable specification and revision, type, class, grade, etc.; and
- When applicable, a statement that the process was performed by certified operator(s).

**PQAC-150**

**Nadcap Accreditation** - Special processes shall only be performed by sources that are accredited and approved by the National Aerospace and Defense Contractors Accreditation Program (Nadcap). This requirement applies whether the process is performed by the Supplier or by the Supplier's sub-tier sources. Use of sources not accredited by Nadcap shall result in return of products to the Supplier at the Supplier's expense. For a list of Nadcap accredited sources contact the PCP Buyer.

**PQAC-160**

**Heat Treat Certifications** - With each delivery of products on this Contract, the Supplier shall furnish a time/temperature certification that includes the following data: (a) part number and revision; (b) quantity heat treated; and (c) for each heat treatment cycle – the actual temperature range & duration (hours) of each heat treat cycle.

**PQAC-170**

**Heat Treat Furnace Charts** - With each delivery of products on this Contract, the Supplier shall furnish the original, or a legible copy, of the furnace temperature chart, which shows the part number, the date, and the actual time the part was moved in/out of the furnace.

**PQAC-180**

**Test Samples** - With each delivery of products on the Contract, the Supplier shall furnish for verification testing by PCP one (1) additional product or suitable test sample produced from the same material lot and processed simultaneously with the lot of products delivered. When more than one lot of material was used, a sample is required for each lot of material. The sample shall be marked or tagged to identify the process that it represents (i.e. material, heat treat, anodizing, plating, etc.), and noted on the packing list/shipper.

**PQAC-190**

**Nondestructive Test (NDT) Reports** – Unless otherwise specified by the contract, drawing or specification, NDT shall be performed on 100% of the lot of products. With each delivery of products on the Contract, the Supplier shall furnish a certified test report that shows that the required NDT (i.e. penetrant, radiographic, ultrasonic, etc.) test was performed on all delivered products. The test report shall be issued by the organization that actually performed the NDT and include:

- A complete description of the test, test name, specification, revision, type, method, etc.;
- The acceptance criteria document number and revision, that applies to the NDT operation;
- The number and revision level of the NDT procedure used; and,
- When applicable, identity of the qualified/certified personnel who performed the NDT.

All products subjected to NDT and found to be acceptable shall be identified as required by the applicable NDT specification. When castings are serialized, the serial numbers shall be referenced on the NDT reports and certifications.

**PQAC-200**

**Radiographic (x-ray) Inspection** - With each delivery of products on the Contract, the Supplier shall furnish a certified test report of radiographic (x-ray) inspection performed on the products. The document package supporting the radiographic inspection shall be issued by the organization that actually performed the radiographic inspection and include: (a) test report showing the accept/reject quantities, and (b) copy of the approved shooting

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sketch; The shooting sketch or test report shall include the number and revision of the approved radiographic technique. (c) the Supplier is required to furnish the exposed film with delivery of the products.

**PQAC-210**

**PCP Approval of NDT Techniques** - Prior to conducting any nondestructive testing (NDT) required by drawing or specification on products scheduled for delivery on this Contract, the Supplier shall prepare and submit to PCP for review and approval a detailed procedure describing the NDT to be performed. The Supplier's procedure shall include all necessary information including pictures or sketches, materials, tooling and/or equipment to be used. The procedure shall be: (a) identified with a control number; (b) reference the applicable NDT specification and revision with which it complies, and (c) include the name, signature and date of the qualified and certified technician who prepared and/or approved the NDT technique. Changes to PCP approved NDT techniques shall be submitted to PCP for approval prior to their use in production.

**PQAC-220**

**PCP Weld Schedule Approval** - Prior to performing any welding on products scheduled for delivery on this Contract, the Supplier shall prepare and submit to PCP for review and approval a detailed written weld schedule and a weld sample or an actual part that was produced using the submitted weld schedule. The weld schedule shall identify: (a) Part Number and revision; (b) applicable weld specification and revision, and (c) name & signature of the qualified/certified welder who approved the weld schedule.

**PQAC-230**

**Limited Shelf Life Materials** - With each delivery of materials on this Contract, that have a limited or specified shelf life, the Supplier shall furnish the following data: (a) cure or manufacture date; (b) expiration date or shelf life; (c) lot or batch number, and (d) when applicable, any special storage requirements and handling procedures to be followed. The above information shall be marked on each container or certification and shall be in addition to normal identification requirements such as material name, part or code number, drawing, specification number and revision, type, size and quantity and other markings as applicable. For each delivery of limited shelf life materials on the Contract the time lapse between the cure or manufacturing date of such materials, and the date of scheduled receipt by PCP, shall not exceed one fourth (1/4) of the total shelf life of the material without prior written waiver from PCP.

**PQAC-240**

**FOD Control Program** – The Supplier shall establish, document and maintain a program to control and eliminate Foreign Object Damage (FOD) and/or contamination during the Supplier's manufacturing, assembly, test and inspection operations. When applicable, the Supplier's FOD control program shall include controls to preclude FOD or contamination at the Supplier's sub-tier sources. MIL-STD-980 may be used as a guide to establish and implement the Supplier's FOD program. The Supplier's FOD program is subject to on-site review and approval by PCP.

**PQAC-250**

**1st Article Inspection at Source** - Inspection and/or testing and acceptance of 1st Article product by PCP is required prior to delivery of any products on this Contract. The 1st Article product shall be complete, documented per AS9102 and ready for delivery to PCP. The Supplier shall notify PCP at least forty-eight (48) hours in advance so that the inspection and/or testing of the 1st Article product as well as review of supporting documentation can be scheduled and completed prior to the required product delivery date. Upon request, the Supplier shall make available to PCP representatives any measuring and test equipment, facilities and/or personnel to facilitate the 1st Article inspection.

**PQAC-260**

**1st Article Inspection at PCP** – The Supplier shall submit a 1st Article product and supporting documentation, as required by current revision of AS9102, for inspection and/or testing and acceptance by PCP prior to delivery of

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products on this Contract. The 1st article shall be completely processed in accordance with Contract requirements. When authorized by the Contract, the 1st Article product may be included as part of the initial quantity delivered on the Contract and included as part of the total Contract order quantity. In such cases, failure of the 1st Article product to meet Contract specified requirements may result in rejection and return of the delivered production quantity to the Supplier at the Supplier's expense.

**PQAC-270**

**1st Article Inspection Requirements (FAIR)** – The Supplier shall perform a First Article Inspection (FAI) in accordance with the requirements of the current revision of AS9102. Excess castings, remaining from a previous production lot, may not be used to fulfill the 1st Article requirements unless it is specifically approved by PCP in writing. The Supplier shall furnish a copy of the completed 1st Article Inspection results with the initial delivery of products on the Contract.

**PQAC-280**

**100% Inspection Report** – The Supplier shall perform 100% inspection of all characteristics on all products delivered on this Contract. The Supplier's 100% inspection data shall show the part number and drawing revision and the actual values obtained during inspection versus the requirements of the applicable drawing or specification. When applicable, copies of material and/or process certifications shall be attached to the inspection report.

**PQAC-290**

**Detailed Inspection Plan (DIP)** - When this clause is included in the Contract, PCP will provide the Supplier with blank forms and define the specific product inspection to be accomplished by the Supplier on this Contract. The Supplier shall perform the required inspections and record the actual results on the forms. The DIP shall include the name and signature of the Supplier's authorized representative responsible for quality and be included with each delivery of products on this Contract.

**Classification of Characteristics** - Classification of characteristics on the DIP is a means by which PCP Engineering conveys the potential seriousness of non-conformance of certain product characteristics. Classification of characteristics is not intended to indicate that other drawing requirements are not important or need not be met. The purpose is to establish a common basis for placing emphasis on the more important characteristics during all phases of tooling, machining, inspection, and testing. Any characteristic found to be nonconforming during inspection is cause for rejection regardless of classification. On all products delivered on this Contract, the Supplier shall furnish an Inspection Report showing the actual results of inspection of all classified characteristics in accordance with the inspection requirements for each classified characteristic defined below. The Supplier's inspection report shall show the part number, drawing revision and the actual values obtained during inspection versus the requirements of the drawing (including block data and notes) or specification. When applicable, copies of material and/or process certifications shall be attached to the inspection report. Inspection requirements for each classified characteristics are as follows:

- **Critical Characteristics:** (1) Characteristics that judgment and experience indicates that if defective could result in hazardous or unsafe conditions for individuals using or maintaining the product or vehicle on which it installed. (2) Affect flight safety objectives, or (3) prevent performance of a military vehicle's operational function as a weapon (e.g., mission abort). Critical characteristics shall be inspected 100%.
- **Major Characteristics:** Characteristics, other than critical, which if defective, could: (1) Result in product failure (other than critical), or (2) materially reduce the usability of the vehicle on which the defective product is installed. Unless otherwise specified in the Contract, major characteristics shall be inspected in accordance with a PCP approved sampling plan.

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**PQAC-300**

**Final Inspection Report** – Prior to delivery of products to PCP, the Supplier shall perform final inspection on all products and document the results. The format of the report is optional; however, it shall show the actual inspection results obtained, versus the drawing or specification requirements. The Supplier shall maintain the completed reports as part of Suppliers quality records. Upon request, the final inspection reports shall be made available to PCP, or PCP customers, or regulatory agencies for review.

**PQAC-310**

**Product Serialization Requirements** - Serial numbers for all products on this Contract have been assigned by PCP and are defined in the Contract or reference documents. The Supplier shall apply the specified serial numbers on all products and record the serial numbers on all applicable documentation. The assigned serial numbers may not be altered or replaced without written authorization from PCP.

**PQAC-320**

**Traceability Requirements** – The Supplier shall establish and maintain traceability of all detail components used in the machining or assembly of castings delivered on this Contract. Data (such as parts inventory or bill of material lists, that include lot numbers, job numbers or work orders., etc.) which provides traceability of each detail component, including sub-assemblies, to the raw material from which it was made, including all processing, testing and inspection operations performed during machining operations shall be furnished with the delivery of products to PCP on this Contract.

**PQAC-330**

**Process FMEA Requirements** - The Supplier shall implement Failure Mode & Effects Analysis or a similar tool to use for identifying variation in production/machining processes, their effects and causes, and to develop solutions that will minimize/eliminate the effects of variation in products delivered on this Contract. The Supplier's process FMEA program shall be submitted to PCP for review and approval prior to start of work on the Contract.

**PQAC-340**

**Process Control Plan Requirements** - The Supplier shall implement a Process Control Plan or a similar tool to use for identifying the controls in production/machining processes, the applicable procedures and reaction plans, and to develop plans that will ensure the process controls to prevent variation in products delivered on this Contract. The Supplier's process Control Plan program shall be submitted to PCP for review and approval prior to start of work on the Contract.

**PQAC-350**

**Counterfeit Conditions**- Suppliers, shall plan, implement and control processes that are appropriate for the prevention of counterfeit or suspect counterfeit part use and their inclusion in product(s) delivered to PCP. Counterfeit prevention should consider:

- Training of appropriate persons in the awareness and prevention of counterfeit parts;
- Application of a parts obsolescence monitoring program;
- Controls for acquiring externally provided product from original manufacturers, authorized distributors, or other approved sources;
- Requirements for assuring traceability of parts and components to their original authorized manufacturers;
- Verification and test methodologies to detect counterfeit parts;
- Monitoring of counterfeit parts reporting from external sources;
- Quarantine and reporting of suspect or detected counterfeit parts.

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**PQAC-360**

**Additional Requirements-** Suppliers shall ensure that their personnel are aware of:

- their contribution to product or service conformity;
- their contribution to product safety;
- The importance of ethical behavior.