Summary of Major Changes as of 04/13/2020

**Code 146**: Added bullets 4 & 5

- Visual examination for applicable attributes, to all Classes of IPC-6012 and IPC-6013 Series Qualification and Performance Specifications, shall be conducted at 3 diopters (approx. 1.75X) Minimum. For feature sizes less than or equal to 0.254 mm [0.010 in] in size, in their smallest dimension, visual examination shall be conducted at 10X Minimum. If the acceptable condition of a suspected defect is not apparent, it should be verified at progressively higher magnifications (up to 40X) to confirm that it is a defect. Dimensional requirements such as spacing or conductor width measurements may require other magnifications and devices with reticles or scales in the instrument, which allow accurate measurements of the specified dimensions. Contract or specification may require other magnifications.
  - Visual examination of microvia structures for applicable dimensional or workmanship attributes shall be conducted at 30X minimum.

**Code 314**:  
Changed last paragraph FROM: ***Delta FAI’s will be processed per QA Material Code 214 and will not require on site validation by BAE Systems but shall be submitted for approval prior to shipment, as defined in QA Material Code 214. Unless the change is considered by BAE Systems to be a major / critical change then an onsite FAI / PPV assessment may be required.

TO: After the initial FAI activity per QA Material Code 314 has been completed and approved by BAE Systems; any New FAIR’s against that part, regardless of PO, shall be processed per QA Material Code 214. On site FAI review by BAE Systems is not required and the New FAI shall be submitted and approved prior to shipment, as defined in QA Material Code 214. Exception is when the change is considered by BAE Systems to be a major / critical change then an onsite FAI / PPV assessment may be required.

**Code 714**:  
Changed last paragraph FROM: ***Delta FAI’s will be processed per QA Material Code 214 and will not require on site validation by BAE Systems but shall be submitted for approval prior to shipment, as defined in QA Material Code 214. Unless the change is considered by BAE Systems to be a major / critical change then an onsite FAI / PPV assessment may be required.

TO: ***After the initial FAI activity per QA Material Code 714 has been completed and approved by BAE Systems; any New FAIR’s against that part, regardless of PO, shall be processed per QA Material Code 614. On site FAI review by BAE Systems is not required and the New FAI shall be submitted and approved prior to shipment, as defined in QA Material Code 214. Exception is when the change is considered by BAE Systems to be a major / critical change then an onsite FAI / PPV assessment may be required.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title / Description</th>
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</table>
| G01  | **Group Code (EFF DATE: 4-26-2017)**  
This code carries with it QA Material Codes: 100, 102, 175, 190 and 195 |
| G02  | **Group Code (EFF DATE: 4-26-2017)**  
This code carries with it QA Material Codes: 100, 102, 175, 190, 195 and 197 |
| G03  | **Group Code (EFF DATE: 4-26-2017)**  
This code carries with it QA Material Codes: 100, 102, 157, 175, 190, 195, and 197 |
| G04  | **Group Code (EFF DATE: 4-26-2017)**  
This code carries with it QA Material Codes: 100, 175, 185, 190, and 195 (Nadcap approved Special Process approval “ONLY”) |
| G05  | **Group Code (EFF DATE: 4-26-2017)**  
This code carries with it QA Material Codes: 100, 185, 190, 195 and 197 (Nadcap approved Special Process approval “ONLY”) |
| G06  | **Group Code (EFF DATE: 4-26-2017)**  
This code carries with it QA Material Codes: 100, 146, 190, and 195 (PWB’s only) |
## QUALITY ASSURANCE CODE REQUIREMENTS

**NUMBER:** 00-315  
**EFFECTIVE FOR PURCHASE ORDER WITH AN ISSUE AFTER APRIL 13th, 2020**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title / Description</th>
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| G07  | Group Code (EFF DATE: 2-07-2019)  
This Code carries with it QA Material Codes: 100, 110, 119, 134, 160, 182 |
| G08  | Group Code (EFF DATE: 2-07-2019)  
This Group Code carries with it QA Material Codes: 100, 110, 134, 160, 182 |
| G09  | Group Code (EFF DATE: 2-07-2019)  
This Group Code carries with it QA Material Codes: 100, 110, 119, 134, 160 |
| G10  | Group Code (EFF DATE: 2-07-2019)  
This Group Code carries with it QA Material Codes: 100, 110, 134, 160 |
| G11  | Group Code (EFF DATE: 2-07-2019)  
This Group Code carries with it QA Material Codes: 100, 110, 160, 175, 190 |
| G12  | Group Code (EFF DATE: 2-25-2019)  
This Group Code carries with it QA Material Codes: 100, 102, 190, 195 |
This Group Code carries with it QA Material Codes: 100, 175, 190, 195 |
This Group Code carries with it QA Material Codes: 173, 199, 214 |
This Group Code carries with it QA Material Codes: 100, 137, 522 |
| G16  | Group Code (EFF DATE: 2-25-2019)  
This Group Code carries with it QA Material Codes: 100, 522 |
| G17  | Group Code (EFF DATE: 2-25-2019)  
This Group Code carries with it QA Material Codes: 100, 112, 175, 190, 195 |
| G18  | Group Code (EFF DATE: 2-25-2019)  
This Group Code carries with it QA Material Codes: 100, 175, 190, 195, 199 |
| G19  | Group Code (EFF DATE: 2-25-2019)  
This Group Code carries with it QA Material Codes: 100, 102, 137, 175, 190, 195, 199 |
| G20  | Group Code (EFF DATE: 2-25-2019)  
This Group Code carries with it QA Material Codes: 100, 157, 175, 190, 195, 197 |
000  Refer to PO Quality Provisions (EFF DATE: 4-26-2017)
This is a default Oracle code. Supplier shall ensure compliance to all PO requirements and BAE Systems Terms and Conditions.

100  Certificate of Conformance / Compliance (EFF DATE: 11-18-2019)
By accepting Purchase Orders with this Quality Assurance Material Code Imposed on it, from BAE Systems ES, the Seller is certifying (Manufacturers and Suppliers including Distributors) that all product being provided to BAE Systems ES to satisfy this Purchase Order is fully compliant to BAE Systems Terms and Conditions and contains only new product and the supplier has in their possession acquisition traceability documentation (C of C’s, or Packaging slips, or proof of procurement)** provided by/from the Original Equipment or Component Manufacturer and any / all previous Franchised/Authorized distributors within the supply chain utilized for all material contained in this shipment.

Note: Acquisition Traceability documentation is not required to be delivered with the product unless QA Material Code “186” is imposed or required by specification / Drawing,

The supplier shall provide a Certificate of Conformance / Compliance (C of C) with each delivery of product. This C of C is acknowledgement by the supplier that the requirements of the purchase order/subcontract have been fully met and any required chemical / physical analysis has been performed with substantiating evidence/data on file and available upon request by BAE Systems.

The Certificate of Conformance / Compliance (C of C) provided with each delivery shall contain the BAE Systems PO number at a minimum. (Part Numbers, Lot numbers, Date Codes, etc. as well are preferred if applicable / available. If the Part Number ordered is on the C of C it should not contain supplier’s internal prefixes or suffixes.) (The BAE Systems part number listed on the C of C shall be written exactly as stated on the BAE Systems Purchase order). The C of C / Packaging documentation shall contain the BAE Systems part number listed on the Purchase Order and the supplied part number if they are different; providing it is per the BAE Systems drawing / specification as called out on the purchase order. The statement shall be certified by an authorized representative of the company (signed, typed or printed) who is approving the C of C or it may be machine generated. Machine generated certifications may not have a name or signature associated with it as it is certified by the COMPANY. . The Supplier also certifies that the requirements of the BAE Systems PO and other appropriate requirements have been conveyed to any sub-tier suppliers in the execution of this purchase order / subcontract.

The Supplier also certifies that there have been no unauthorized repairs performed on the delivered product. Authorization for repair shall be received from BAE Systems prior to performing any repair activities and shall be submitted to, and approved by BAE Systems via the SVR process as outlined in the External BAE Systems Supplier Portal. (www.baesystems.com/suppliercenter)

** The supplier shall maintain this documentation for a minimum of 7 years

101  Chemical Test Report  (EFF DATE: 4-26-2017)
Results of chemical tests conducted on materials submitted shall be provided. The report shall identify material specification (including revision level), tests conducted, and identify the material. Analysis reports shall be sent with each lot shipped and shall be endorsed by a responsible representative. Each report shall positively identifiable to the lot shipped and shall show composition and purity of chemicals in percent, or other industry standard units.
102 **Certificate of Special Process (EFF DATE: 11-18-2019)**

Supplier shall provide a Certificate of Conformance with each delivery, certifying compliance with all special processes required in executing this Purchase Order. The Special Process C of C may be included in the C of C for clause 100. However, the Special Process used and the Special Process Supplier shall still be identified. The Certification shall contain the suppliers name and address used for the special processes unless the Special Process Suppliers certification is included with the shipment. All special process suppliers utilized on this purchase order/subcontract require certification by Nadcap or approval by BAE Systems ES. Some examples of special processes include, but are not limited to; Chemical Processes (including Plating, Passivation), Heat Treating, Protective Coatings (Paint/ Epoxy), Welding (EG: Resistance/ EB Fusion), Brazing (Vacuum/ Dip), Non-Destructive Inspection or Test (NDI/NDT), Material Testing Laboratories, Composites, Non-conventional Machining & Surface Enhancements, X-Ray Inspection, etc. and other special processes as defined by Nadcap. All relevant information shall be included on the Certificate of special Processes. (e.g. Chemical composition, temperature data, treatment times, etc.) A list of BAE Systems' approved special process suppliers can be found at [www.baesystems.com/suppliercenter](http://www.baesystems.com/suppliercenter). The supplier shall contact the BAE Systems buyer for clarification or applicability of this requirement, as needed.

** Supplier records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract. These requirements shall be flowed down to any sub-tier suppliers.

Note: When a supplier is approved to Chemical Processing (CP) by BAE Systems or Nadcap, material may be accepted to an identified commercial standard listed in the procurement documents, which may not be listed on either BAE, or Nadcap approved list. BAE or Nadcap approval for chemical processing (CP) shall include applicable Military & Commercial standards for all, types, methods, grades, and classes.

103 **Software Source Evaluation (EFF DATE: 2-07-2019)**

Items to be supplied under this Purchase Order are subject to evaluation by BAE Systems Supplier Quality Assurance/Software Quality Assurance representatives at any time during the life cycle of the product. Supplier completes Source Inspection Request Form 11-054 (this form is available on the Supplier Center Website: [www.baesystems.com/suppliercenter](http://www.baesystems.com/suppliercenter)) and e-mail form to es.sir@baesystems.com at least five (5) business days in advance of inspection and/or acceptance testing. This requirement does not relieve the supplier of the responsibility for final inspection and/or test, nor does it constitute final acceptance by BAE Systems.

104 **Chemical/Physical Report (EFF DATE: 2-07-2019)**

The supplier shall provide results of chemical/physical testing conducted on materials furnished on this purchase order/subcontract which will be validated by Incoming Inspection up receipt (cannot be used with Inspection Codes N,Y7/Y8). These results shall be in accordance with the purchase order requirements and signed by an authorized representative of the company and sent to BAE Systems. Supplier shall maintain a copy of all procured raw material certifications, which shall be readily retrievable and shall include material specifications. In addition, material shall meet any other contractual requirements as stated in the Purchase Order, and any applicable DFARs such as Specialty Metals. Supplier records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract. These requirements shall be flowed down to any sub-tier suppliers.

105 **Technical Data Sheets (EFF DATE: 4-26-2017)**

The supplier is to provide Technical Data Sheets with each shipment. Technical Data Sheets are not safety requirements but are the manufacturers’ instruction of how to mix, cure, and apply deteriorative material, such as paint, primers, and adhesives.
106 **Source Inspection (EFF DATE: 2-07-2019)**

The products or services specified on this purchase order/subcontract require Customer Source Inspection by BAE Systems personnel or their delegate prior to shipment from the supplier’s facility. Supplier shall complete Source Inspection Request Form 11-054 (this form is available on the Supplier Center Website: www.baesystems.com/suppliercenter and e-mail form to es.sir@baesystems.com at least five (5) business days in advance of inspection and/or acceptance testing. In order to facilitate the performance of source inspection, the seller shall furnish the necessary facilities and equipment, supply data, and perform tests as required by applicable drawings, specifications, and inspection instructions. Source inspection may be witnessed by BAE Systems customers or government representatives.

107 **Pre-closure Inspection (Pre Cap) (EFF DATE: 2-07-2019)**

The products or services specified on this purchase order/subcontract require Customer Source Inspection by BAE Systems personnel or their delegate. This inspection shall occur at points agreed to by BAE Systems (i.e. before closure, sealing, foaming, and tuning pot encapsulation). Supplier shall complete Source Inspection Request Form 11-054 (this form is available on the Supplier Center Website: www.baesystems.com/suppliercenter and e-mail form to es.sir@baesystems.com at least five (5) business days in advance of inspection and/or acceptance testing. Final acceptance of deliverable items shall be at BAE Systems.

Source Inspection may be witnessed by BAE Systems customers or government representatives.

108 **Process Controls (EFF DATE: 4-26-2017)**

The supplier is expected to institute sufficient process controls to result in consistently meeting the quality requirements for the specific product being ordered. BAE Systems shall have the right to perform process control audits. A process control audit checklist shall be provided to the supplier in advance if an audit is to be performed.

109 **Better-Than Part Limitations (EFF DATE: 4-26-2017)**

Program/System Qualification process has yet to be finalized. Only the exact part number ordered is acceptable. “Better-Than” versions (i.e. failure rates, tolerance, etc.) of any specific part type are not permitted on this purchase order, even in cases where the applicable military specification may allow such practices.

110 **Part Traceability (EFF DATE: 4-26-2017)**

The shipment record provided with each delivery of parts shall identify the Original Equipment, or Original Component, Manufacturer (OEM/OCM) CAGE code / manufacturer identification, Purchase Order, part number and lot number and/or date code. In addition, each container shall be marked with the OEM / OCM CAGE code/manufacturer identification, Purchase Order, part number and lot number and/or date code.

111 **Supplier Recorded Data (EFF DATE: 2-07-2019)**

The supplier is to provide data for each shipment (electronic or hardcopy) in accordance with the following requirements. The supplier is required to notify and receive written authorization from BAE Systems, if deviations from the following criteria are desired, i.e. sampling, etc.

- The supplier will perform and record the results of mechanical and/or electrical test in accordance with the final...
acceptance criteria as specified in the applicable specification/drawing, unless otherwise specified in the purchase order.

i. When final acceptance is not defined in the controlling documents, the supplier will perform and record results of the mechanical and/or electrical tests that are considered part of the supplier’s acceptance criteria.

ii. Variable data shall be utilized for 100% of the end item acceptance parameters within a specification or drawing or that are considered part of the supplier's acceptance criteria. Attribute data shall only be utilized for appropriate notes and to identify the condition (i.e. form feed, illumination, continuity, etc.. or other pass/fail, go/no-go conditions.)

- When specified in the purchase order, use of critical control characteristics as part of an approved Variable Reduction Process/ Statistical Process Control (VRP / SPC) Control Plan may be substituted for the 100% variable/attributes data VRP / SPC Control should be compliant to AS9103.

- Recorded data shall be traceable to the parts inspected/tested. Traceability may be controlled through part serialization, tagging, or identification of individual unit packaging unless otherwise specified in the purchase order or specification/drawing

- 100% of the lot shall be inspected and / or tested unless otherwise stated in the purchase order or specification/drawing. When sampling is authorized, it shall be in accordance with ANSI/ASQ Z1.4 or other statistically based plan, with specific lot size, AQL, and sample size identified on each data sheet.

112 Shelf Life Material – Require 80%** useful life remaining if total useful shelf life is 1 year or less. (EFF DATE: 2-07-2019)

If this code is on the Purchase order and material is adversely affected by time, the container and/or certification shall be marked with the expiration date and the recommended storage conditions. Information supplied shall be in accordance with any military/BAE Systems specification referenced on the drawing or on the purchase order. Do not deliver material with less than 80% of the useful shelf life remaining if total shelf life is 1 year or less.

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

113 Designated Supplier (EFF DATE: 2-07-2019)

The use of DSQR Product Verification Report, Supplier Quality Verification Report, DSQR C of C or equivalent Supplier C of C, is authorized for this purchase order. This requirement does not relieve the supplier of responsibility for final inspection and/or test, nor does it constitute final acceptance by BAE Systems.

114 First Article Inspect Data Required (EFF DATE: 8-08-2019)

Any new or partial FAI’s shall be accomplished IAW BAE Systems Electronic Solutions document B25279 (Supplier Requirements for First Article Inspection Reports) located at www.baesystems.com/suppliercenter. This document breaks down AS9102 for BAE Systems requirements related to AS9102 Forms 1, 2 and 3 and any or all required supporting documentation.

Once approved by BAE Systems, the supplier may continue to ship product under the existing FAIR regardless of the PO Number as long as there has not been: a break in production of greater than 24 months, a change in the production process, a manufacturing location change or a revision change to the drawing / specification, and the
current / active FAIR IS compliant to “LATEST REVISION” of the B25279 document posted on the Supplier Center. If not the supplier shall generate and submit an updated FAIR with the next delivery. The supplier shall maintain these records for a minimum of seven (7) Years.

** Any new or partial FAIR’s shall be accomplished IAW BAE Systems Electronic Solutions document B25279 (Supplier Requirements for First Article Inspection Reports) located at www.baesystems.com/suppliercenter. This document breaks down AS9102 for BAE Systems requirements related to AS9102 Forms 1, 2 and 3 and any or all required supporting documentation.

Note; The original FAIR need only to be submitted with the 1st delivery of product unless changes have occurred which could affect product as defined in the B25279 document.

BAE Systems reserves the right to perform a Production Process Verification Review (PPVR) at the supplier in lieu or in addition to a FAIR.

Data may be required to be sent to the Company Procurement Representative via SharePoint, or equivalent, depending on Security/ITAR restrictions. If Material Certifications or Special Processes are considered proprietary, a certificate of conformance will be attached to the FAI indicating that product conforms to the requirements of the Purchase Order. Data shall be available for review at the supplier’s facility, upon request. Records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract.

115 First Piece Article for Tooling (EFF DATE: 4-26-2017)

The first sample produced of each article of tooling, molds, jigs, fixtures, etc., shall be submitted to BAE Systems with a First Article Inspection report (in accordance with AS9102) prior to delivery of any additional quantities. The samples shall have been fabricated using the parts, material and processes proposed for full PO production. Such manufacture shall have taken place at the same location proposed for full PO production. The samples shall be accompanied by complete data demonstrating performance of the equipment in compliance with the drawing and specification requirements. Production prior to written approval from BAE Systems buyer is at the supplier's risk. BAE Systems approval or conditional approval of such samples shall not relieve the supplier from complying with the requirements of this order.

116 Element of Evaluation (EFF DATE: 4-26-2017)

Element of Evaluation to be performed by the Supplier in accordance with MIL PRF 38534 or MIL PRF 38535 or MIL PRF 19500. Supporting documentation shall be retained for 7 years minimum and will be available upon request.

117 QA Notes (EFF DATE: 2-07-2019)

Other required additional and/or special Quality requirements are specified by the purchase order in the QA Notes field of the Manual Purchase Requisition or the QA Notes field of the QA Clauses.

119 Lot Code Uniformity  (EFF DATE: 4-26-2017)

Each delivery / receipt shall be of one lot and date code.
QUALITY ASSURANCE CODE REQUIREMENTS

NUMBER: 00-315  EFFECTIVE FOR PURCHASE ORDER WITH AN ISSUE AFTER APRIL 13th, 2020

121 Software Issue Identification (EFF DATE: 4-26-2017)
If there are any software licenses, restrictions, etc. involved the supplier shall define such restrictions and provide a copy thereof with quotation/proposal response. Each delivery / receipt shall be of one lot and date code.

122 Date Code Restriction (EFF DATE: 2-07-2019)
Parts with a date code older than 52 weeks, at the date of shipment, shall not be delivered to BAE Systems.
Note: Submit an SVR to BAE Systems Procurement if date code parts are not available to meet this purchase order requirement. If older parts are to be allowed with re-screen, the date of the re-screen shall be identified on the C of C or attribute data sheet for each shipment. The SVR form and instruction can be found at www.baesystems.com/suppliercenter

125 Lot Control (EFF DATE: 4-26-2017)
Lot control is required which provides traceability to the records for the processes, inspections, and tests used in the manufacture of the items. Lot number/date code is to be identified outside of intermediate and/or unit packages. When multiple lot/date codes are shipped together, individual lot/date codes are to be segregated (only one date code per reel) and identified on the outside of the intermediate packages.

128 Serialization (EFF DATE: 4-26-2017)
Serial numbering of the parts is required.

131 Retention of Test Record (EFF DATE: 4-26-2017)
Pass/fail data shall be retained and made available upon request. Quality Group “A” electrical test for each date code used to fill this order shall be retained for 7 years minimum. Data shall be identifiable to the items supplied. Parts tested to BAE Systems specifications shall include the drawing number, revision level and software program number revision level. Supplier shall notify BAE Systems 30 days in advance of shipment, of any changes to BAE Systems drawings effecting the electrical specifications.
Parts tested to military specifications shall include the specification drawing number, revision level plus any amendments.
The above data may be written on the C of C or included as an attached separate Item.

132 Identification of Lot/Date Code (EFF DATE: 2-07-2019)
Supplier shall record all delivered lot identification numbers and/or date code(s) on the outside of intermediate and/or unit packages if available. Multiple lot/date codes shall be individually packaged and labeled. For tape and reel, waffle pack, or JEDEC / Matrix tray packaged parts, only one date code per reel / waffle pack / tray is allowed.

133 Radiographic Inspection (EFF DATE: 4-26-2017)
The material on this purchase order requires radiographic inspection. Each Radiograph shall include the image of the number, part serial number, identification of the area radiographed and identification of the view direction. Films shall be interpreted by the seller’s laboratory and findings reported on an appropriate form. Copies of the laboratory report and the radiographs shall accompany the material. Each report submitted shall be signed by a certified
radiographer, stating the level of certification IAW MIL-STD-410/NAS 410.

134 **Lot Screening Summary (EFF DATE: 2-07-19)**

Seller shall include one copy of Electrical or Screening data and Environmental Stress Screen (ESS) data with each shipment. The summary shall include the conditions of test, quantity tested and quantity rejected at each test or screen.

**Note:** ESS typically involves Centrifuge or Mechanical shock, and/or Vibration, and Temperature Cycle or Shock, and may include Burn In, if applicable to the military specification the part is manufactured / ordered to. Supporting documentation shall be retained for 7 years minimum. Reference the appropriate MIL PRF 38534, MIL PRF 38535, MIL PRF 19500 or MIL STD 810, Mil-Std-883, etc.)

135 **Lot Screening and Variables Data (EFF DATE: 4-26-2017)**

Seller shall include one copy of the lot screening and burn-in (if applicable by governing Military Specification) variables data with each shipment.

136 **Destructive Physical Analysis (DPA) per MIL-STD–1580 (EFF DATE: 4-26-2017)**

Supplier will perform DPA (Destruct Physical Analysis) on parts and accept them based upon passing MILITARY-STANDARD 1580

137 **No Pure Tin, Bismuth or SAC Alloyed Materials Allowed (EFF DATE: 2-07-2019)**

No pure tin plating allowed. The use of pure unalloyed tin is prohibited in the construction and surface finish of goods required to be delivered to Buyer under this Purchase Contract. Construction and finish include solders and plating. Tin is considered to be pure if it contains less than 3% alloying elements. The critical concentration of bismuth begins in the range of 3 to 5%, so lead finishes with greater than 3% bismuth are not allowed. BGA's and CCGA's are not allowed with Tin, Silver, Copper, (SAC) alloyed Balls.

Data / Certifications / Material Composition Certs or Procurement evidence to this requirement shall be maintained by the OEM / OCM and is not required to be submitted with each shipment unless specifically stated by QA notes (code 117) on the PO. These validation documents / certifications shall be provided upon request by BAE Systems. For all Purchase Orders placed after 7/15/2014 with 117 code stipulation.

138 **Mercury Exclusion (EFF DATE: 4-26-2017)**

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. Suppliers 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.

140 **Government Source Inspection (GSI) (EFF DATE: 2-07-2019)**

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The products or services specified on this purchase order/subcontract require Government Source Inspections (GSI) prior to shipment from the supplier’s facility. Upon receipt of this order promptly notify government representative who normally services the supplier’s facility so appropriate planning for government inspection can be accomplished. All shipments on this PO/Subcontract shall be accompanied by objective evidence of government acceptance. The products or services specified may require Government Quality Assurance Surveillance. Therefore, prior to commencement of any special test, notify the government representative. The government representative is requested to verify by signature all reports of testing accomplished, verifying only those portions actually witnessed. Such verification shall signify concurrence with the recorded data, but not necessarily with conclusions derived there from.

141 Independent Distributor Certificate of Conformance. (EFF DATE: 8-08-2019)

Traceability Documentation - With each shipment the supplier shall provide a Certificate of Conformance that includes the following information:

- BAE Purchase Order and Line Item Number
- Quantity included in shipment
- Part Number as listed on the Purchase Order
- Manufacturer’s Name and Address and Cage code
- Manufacturer’s Part number (If Different)
- Lot code/Date code
- Product Description
- An authorized representative of the supplier shall sign and date the certificate attesting to the conformance

The supplier shall provide acquisition traceability provided by the original component manufacturer and previous distributors for each shipment (If Available). If not they must provide evidence of full compliance to the BAE Systems Independent Distributor Procurement Authorization form (601.2) The supplier shall also submit a Supplier Variation Request (SVR) approved by BAE Systems with each delivery against this PO.

Military compliant microcircuits and discrete semiconductors shall adhere to the acquisition traceability requirements in Mil-PRF-38534, MIL-PRF-38535 and MIL-PRF-19500. These documents require that manufacturer certifications follow the parts throughout the supply chain. (In no case shall the acquisition traceability documentation be altered or shows signs of alteration. This is grounds for immediate rejection of the lot/shipment.) The original component manufacturer’s certification shall include (at a minimum):

- Manufacturer's name and address.
- Device type
- Lot identification code (including plant code).
- Conformance inspection acceptance date.
- Quantity of devices in shipment from manufacturer.
• Statement certifying product conformance and traceability.
• Signature and date of transaction
• Customer or Distributors name and address

Other device deliveries should include the documentation cited above for military parts as available and applicable. At a minimum these device deliveries shall be accompanied by documentation (for example, packing slips, invoices, certificates of conformance) that confirms acquisition traceability back to the device OEM / OCM.

Acquisition traceability also includes distributor documentation for each distributor in the supply chain:
• Distributor's name and address.
• Name and address of customer as involved in the chain of custody.
• Quantity of devices in shipment.
• Lot/Date code

Copies of acquisition traceability documentation shall be maintained by the supplier for a minimum of 15 years. If acquisition traceability is not available, then the supplier shall perform all testing required by AS5553 to prove heritage to the OCM. Supporting data shall be sent with the product.

145 Workmanship (EFF DATE: 4-26-2017)

The product purchased shall meet the soldering and workmanship requirements contained in the latest issue of IPC/ANSI J-STD-001, Class 3 or IPC 610 Class 3 unless otherwise specified on the purchase order/subcontract or drawing. In case of a conflict, IPC/ANSI J-STD-001 takes precedence.

146 Printed Circuit Boards (EFF DATE: 4-13-2020)

The articles specified on the face of this purchase order are printed wiring boards that are to be manufactured to IDS, Military, or IPC specification(s). The following requirements are in addition to those specified:
• Military specification(s): for double-sided and multilayer printed wiring boards, a minimum of two (2) quality conformance micro sectioned test coupons for each production panel utilized on this order shall be maintained by the manufacturer. They shall be available for review for a minimum of 3 years after delivery, for each lot of printed wiring boards shipped against this purchase order.
• IPC specification(s): for double-sided and multilayer printed wiring boards, micro sectioned coupon acceptance testing and frequency shall be performed as specified for Equipment Class 3. Test coupons for each production panel utilized on this order shall be maintained by the manufacturer and available for review for a minimum of 3 years after delivery, for each lot of printed wiring boards shipped against this purchase order.
• All printed wiring boards, unless otherwise specified, shall be packaged in accordance with contract requirements and unit packaged to prevent contamination from humidity.
• Visual examination for applicable attributes, to all Classes of IPC-6012 and IPC-6013 Series Qualification and Performance Specifications, shall be conducted at 3 diopters (approx. 1.75X) Minimum. For feature sizes less than or equal to 0.254 mm [0.010 in] in size, in their smallest dimension, visual examination shall be conducted at 10X Minimum. If the acceptable condition of a suspected defect is not apparent, it should be verified at
progressively higher magnifications (up to 40X) to confirm that it is a defect. Dimensional requirements such as spacing or conductor width measurements may require other magnifications and devices with reticles or scales in the instrument, which allow accurate measurements of the specified dimensions. Contract or specification may require other magnifications.

- Visual examination of microvia structures for applicable dimensional or workmanship attributes shall be conducted at 30X minimum.

The supplier shall provide a Material Report, with each delivery, for the raw material supplied or used in the parts supplied. The Material Report shall be from the original raw material supplier and include original supplier, lot number, material specification, tests conducted, composition breakdown by percentage and any other relevant information needed to identify / trace the raw material. This includes raw structural materials and all peripheral materials. Acceptable examples include, but are not limited to: composition breakdown and supplier of the Prepreg, Laminate, Durroid, Coverlay Material, Bondply, Foil, Tear Stop, Solder mask, Marking Ink, Hole Plug/Fill Material, Strain Relief Material, Adhesives, etc. certs / composition analysis, dimension / description. The supplier shall maintain the original certification / material reports and any secondary independent test laboratory certification(s) (if any additional process was done to the material altering it from its original state). Supplier records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract. These requirements shall be flowed down to any sub-tier suppliers.

157 Build to Print Machined, Sheet Metal Parts, and Cables etc. Marking (EFF DATE: 4-26-2017)

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 your BAE Systems 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
  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
- 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.
158 **Equipment Calibration Requirements (EFF DATE: 4-26-2017)**

Supplier shall maintain a documented calibration system for the calibration and maintenance of tools, jigs, ovens, equipment used in Screening/ESS operations, Inspection and Test equipment. The Supplier’s calibration system shall be compliant to industry requirements in accordance with the Supplier’s QMS, including without limitation ISO 17025, ISO 10012-1 and ANSI Z540. As the minimum requirements, the Supplier will provide the following:

- Identification or serial number of the BAE Systems standards or test equipment to which the report pertains.
- Relevant condition under which the calibration was performed (temperature, relative humidity, etc.) as required.
- Accuracy of the standard under test (expressed in percentage or other suitable terms).
- Report number.
- Reports for the highest level standards of sources other than National Institute Standards and Technology (NIST) or a Government laboratory shall bear a statement that comparison has been made and is traceable to NIST or that the calibration system used is based upon standards equivalent to those of NIST. A NIST test number is one means of substantiating comparison and shall be provided with date of issue by NIST to BAE Systems via the Supplier.
- Correction factors which shall be applied if standard conditions of temperature, gravity, air buoyancy, etc. are not met or differ from those at the place of calibration.
- Person(s) performing the test/calibration shall be identified by name, stamp (unique number), employee number, or other suitable means.
- When repair actions are required, the extent of repair(s) shall be documented and provided by the Supplier to BAE Systems.

159 **PIND Testing Required (EFF DATE: 4-26-2017)**

Each shipment of devices shall be accompanied by objective evidence of particle impact noise detection (PIND) testing as specified in the purchase order requirements and Mil-STD-883 Method 2020.

Note: the following details shall be specified on all PO’s placed after 10-5-2014

a). Test Condition Letter A or B
b). Lot Acceptance / Rejection criteria (if other than specified in 3.5)
c). The number of test cycles if other than one
d). Pre-test shock level and co-test levels if other than specified

160 **Prohibited Materials (EFF DATE: 4-26-2017)**

Supplies furnished under this contract or purchase order shall not contain any of the following:

1. **Pure Tin**: Unalloyed tin or tin plate where tin is greater than 97% pure and the remainder is lead is prohibited. Tin with less than 97% tin and the remainder is lead is acceptable. Reflowed pure tin plating is not acceptable.
2. **Cadmium**: Pure Cadmium and high Cadmium alloys (>=15% Cadmium) are prohibited.
3. **Zinc**: Pure zinc and high zinc alloys (>=15% Zinc) are prohibited
4. **Mercury**: Pure mercury and high mercury alloys (>=15% Mercury) are prohibited
5. **Selenium**: Pure selenium and high selenium alloys (>=15% Selenium) are prohibited
6. **Corrosive solder flux**: Active rosin and organic acid fluxes are prohibited on “closed” surfaces such as a wire termination (stranded wire).

7. **Magnesium**: Pure magnesium or high magnesium alloys. Magnesium alloy may be acceptable with a maintained protective coating of Dow 17 or equivalent coating. Trace amounts of Mg are acceptable in material systems such as Aluminum and Steel alloys.

8. **Polyvinyl Chloride (PVC)**: No forms of PVC are acceptable.

9. Potting and foam formulations that is prone to reversion.

10. **Polyurethane** or silicone compounds that is prone to reversion.

11. **Silicones** that release acetic acid or other corrosive products during the cure process.

12. **Cyanoacrylate** bonding as primary adhesives. In-process bonding is acceptable provided an approved adhesive provides the primary bond support.

13. **Graphite** as filler for lubricants or grease.

14. **Elastomeric materials** that contact hydrazine except for F-E-332 for diaphragms and AF-E-411 for soft valve seats. Materials that have known compatibility by test, usage, or similarity are acceptable.

15. **Silicone greases** intended for thermal bonding for end-item design (not test).

16. **Flammable materials** that are not packaged to preclude accidental fire.

17. **Honeycomb**, metallic or non-metallic, except when perforated or vented.

18. **Radioactive materials**.

19. **Silver-plated copper** wire with less than 40 micro inches of silver plating.

20. **Polyimide (Kapton) insulated copper/copper alloy wire** used in applications where the voltage is greater than 18 volts and where flexure, tight bend radii, physical or chemical damage, or abrasion could crack the insulation.

21. **Teflon (tetrafluoroethylene-TFE)** insulated hookup wire when not routed or protected to prevent cold flow.

22. **Fluorinated Ethylene Propylene (FEP)** tubing where it provides the sole insulation for a wire conductor and is routed or contacts adjacent metal conductors.

If any of these requirements are not met, please provide the specific material and its percentage as applicable.

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163 **Certificate of Calibration (EFF DATE: 4-26-2017)**

The Supplier’s calibration system shall be compliant to industry requirements in accordance with the Supplier’s QMS, including without limitation ISO 17025, ISO 10012-1 and ANSI Z540. The supplier shall provide a Certificate of Calibration with each delivery of product stating that the requirements of the purchase order/subcontract have been fully met and any required chemical/physical/electrical analysis has been performed. Substantiating evidence/data sheets shall be on file and available upon request. The Supplier shall comply with an approved calibration system. The Certificate of Calibration shall also include the following:

- Identification or serial number of the BAE Systems standards or test equipment to which the report pertains.
- Report Number or other unique identifying number.
- The Certificate of Calibration shall be signed and dated by an authorized representative of the company.

168 **Group B Test Requirements (EFF DATE: 4-26-2017)**

Group B shall be performed in accordance with the requirements of the applicable drawings, specifications and
approved test procedures. A Certificate of Conformance for Group B testing signed by the Supplier's Quality representative shall be provided with each shipment. Group B tests will be compliant to MIL PRF 38534, MIL PRF 38535 or MIL PRF 19500, as applicable, or as otherwise indicated on the PO. Shipments prior to Group B testing being completed are NOT PERMITTED, without written approval by BAE Systems.

170 Magnetic Particle / Penetrant Inspection (EFF DATE: 4-26-2017)
Magnetic particle / penetrant inspection per drawing specification or as specified in the purchase order is a requirement. Personnel performing this inspection shall be qualified in accordance with MIL-STD-410/NAS 410.

The supplier shall implement a Variability Reduction Plan (VRP) / Statistical Process Control (SPC) plan for those key processes or Key Characteristics (KC’s) that affect form, fit, function, reliability or service as defined by BAE Systems or the Supplier. The (VRP) / (SPC) plan will be compliant to AS9103 and shall be in place before any deliveries begin.

Each control characteristic listed in the plan shall be in statistical control as evidenced by control charts. Out of control conditions shall have corrective/preventive actions documented. Capability for each control characteristic shall have been calculated. Minimum Cpk=1.33. For attribute data, at least 99.9% conformance to specification or drawing may identify one or more key characteristics by way of special flag, table or notation. Key characteristics so identified shall comply with the above requirement. The Supplier will perform 100% inspection of any KC’s that are determined to be out of control by the SPC charts. Any data sent to BAE Systems will document any out of control conditions and corrective/preventive action taken.

Records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract. These requirements shall be flowed down to any sub-tier suppliers.

174 Wire Identification (EFF DATE: 4-26-2017)
Each package or spool of wire on this order shall be legibly and permanently identified with (1) purchase order, (2) gauge, (3) Military Specification, and (4) BAE Systems specification number (if applicable).

Wire with shelf life expiration requirements shall be identified.

175 Raw Material Report and/or Certificate of Conformance (EFF DATE: 2-07-2019)
The supplier shall provide a Report or Certificate of Conformance (C of C), with each delivery, for the raw material supplied or used in the parts supplied. The C of C shall be from the original raw material supplier and include original supplier, lot number, material specification, tests conducted and any other relevant information needed to identify the raw material. Acceptable examples include foundry report, mill report, dimension/ description, temper/hardness, alloy and condition. The supplier shall maintain the original mill certification and any secondary independent test laboratory certification(s) if any additional process was done after original mill certification for procured metallic material that shall include physical properties, chemical analysis and lot number(s). For plastics and other “proprietary” materials, a C of C from the OEM / OCM stating the material is proprietary or providing only the material properties and characteristics to that material specification is acceptable. In addition, material shall meet any other contractual requirements as stated in the Purchase Order, and any applicable DFARs such as Specialty Metals.
Supplier records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract. These requirements shall be flowed down to any sub-tier suppliers.

181 **Pink Poly Material Prohibited (EFF DATE: 2-07-2019)**

Anti-static polyethylene known as “pink poly” is prohibited from all packaging (e.g. anti-stat bags, foam, bubble wrap, etc.). Material selected for packaging or protecting all delivered part, including but not limited to: ESD sensitive devices, Optics, PWB’s and polycarbonates shall not leach chemicals, leave residues, or otherwise contaminate parts or assemblies.

182 **Date Code Restriction (EFF DATE: 4-26-2017)**

Parts with a date code older than 3 years, at the date of shipment, shall not be delivered to BAE Systems. **Note:** Notify BAE Systems procurement and Component Engineer (CE) if date code parts are not available to meet this purchase order requirement. If older parts are to be allowed with re-screen, the date of the re-screen shall be identified on the C of C or attribute data sheet for each shipment provided.

185 **Certificate of Special Process (SP) (EFF DATE: 2-07-2019)**

Special Processors shall be accredited by Nadcap. This requirement shall be flowed down to all sub-tier suppliers. Supplier shall provide a Certificate of Conformance (C of C) certifying compliance with all Special Processes (SP) performed as required by this Purchase Order (PO)/Subcontract and any associated specifications and/or drawings. All Special Process suppliers, and sub-tier suppliers, utilized on this purchase order/subcontract shall have current accreditation by Nadcap. The Certificate of Compliance shall document all processes used in satisfying the PO/Subcontract and the Nadcap accreditation code(s) and date of last audit. Special Processes are as defined by Nadcap. All costs associated with Nadcap accreditation shall be borne by the Special Processor. If First Article Inspection (FAI) is also imposed by the PO/Subcontract, the Special Process C of C and other data, such as material certifications and paint gloss readings, will be attached as part of the FAI report.

Some examples of special processes include, but are not limited to; Chemical Processes (including Plating, Passivation), Heat Treating, Protective Coatings (Conformal Paint/ Epoxy), Welding (EG: Resistance/ EB Fusion), Brazing (Vacuum/ Dip), Non-Destructive Inspection or Test (NDI/NDT), Material Testing Laboratories, Composites, Non-conventional Machining & Surface Enhancements, X-Ray Inspection, etc.

186 **Certificate of Authenticity (EFF DATE: 2-07-2019)**

By accepting Purchase Orders with this Quality Assurance Material Code Imposed on it, from BAE Systems ES, the Seller is certifying (Manufacturers and Suppliers including Distributors) that all Electronic Components being provided to BAE Systems ES to satisfy this Purchase Order is fully compliant to BAE Systems Terms and Conditions and contains only new product and the supplier has in their possession acquisition traceability documentation (C of C’s, or Packaging slips, or proof of procurement) provided by / from the Original Equipment or Component Manufacturer and any / all previous Franchised/Authorized distributors within the supply chain utilized for all material contained in this shipment.

The C of C provided with this order from the supplier on the BAE Systems PO shall as a minimum contain the PO number and shall explicitly state the supplier’s certification or compliance to the PO. The statement shall be certified by an authorized representative of the company (signed, typed or printed) who is approving the C of C or it may be machine generated. Machine generated certifications may not have a name or signature associated with it as it is certified by the COMPANY. The C of C / packaging documentation shall contain the BAE Systems part number listed on the Purchase Order and the supplied part number, if different; providing it is per the BAE Systems drawing
QUALITY ASSURANCE CODE REQUIREMENTS

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/ specification as called out on the purchase order or is compliant to BAE Systems document A71188 (Procurement Guidance for Orderable/Un-orderable Part Numbers). This document can be found on the BAE Systems Electronic Solutions Supplier Center at www.baesystems.com/suppliercenter. The C of C / Packing slip shall also contain the Lot Code(s) / Date Code(s) of the items in the shipment as applicable / available.

The Supplier shall flow this chain of custody requirement to its subcontractors and suppliers at any tier for the performance of this PO. In addition to the above requirement, the Supplier shall also maintain this acquisition traceability documentation for a minimum of 7 years. Packing slips do not require an authorizing name on them unless they are also used as the C of C.

All traceability documentation / authenticity documentation shall be provided with each shipment.

If purchase order is placed through a value add distributor which performs fabrication of OEM parts, the VA distributor shall provide with each shipment a certificate of conformance from the OEM stating they are an authorized distributor to assemble their parts.

187 Software Licensing (EFF DATE: 4-26-2017)

Licensing Agreements for procured software on this order shall be delivered with the product. Upon receipt the licensing agreement will be forwarded to the appropriate configuration manager identified on the PO.

190 Cancelled, Superseded, Obsolete Specification (A86397) (EFF DATE: 2-07-2019)

If a BAE Systems drawing or specification calls out a cancelled, superseded, or obsolete specification, this clause provides direction to suppliers on how to proceed. The supplier shall use Table 2 of document A86397 (which is posted on the BAE Systems Supplier Center web page) to determine what the replacement specification is to be used in the execution of purchase orders containing any of these cancelled, superseded or obsolete specifications. The supplier shall also follow Section 1.1 of A86397 for rules on compliance. This document can be found on the BAE Systems Electronic Solutions Supplier Center at www.baesystems.com/suppliercenter. This clause does not apply to COTS or Mil-Spec type hardware and components.


The following Paragraphs, Appendixes and Tables of ESSTD-003 apply to the Supplier:

Paragraph: 5.2
Suppliers are responsible for providing parts that meet the requirements defined on the drawings, specifications, and/or purchase order terms. In order to allow suppliers to execute purchase orders with BAE Systems drawings that identify the required materials in different manners, the supplier must be able to provide documentation showing that all applicable requirements have been met. For this section, “a supplier” refers to either an external entity who produces items for BAE Systems, or an internal department or division of BAE Systems who produces items for themselves or other internal departments of divisions within BAE Systems.

The following rules shall be followed for proper use of this document:

• Rule #1: If a supplier is able to produce the required item and certify to the specific material part number on the drawing, the supplier shall do so.
• Rule #2: If a supplier is not able to certify to the specific material part number or callout on the drawing, they shall ensure that the applicable requirements of the material such as material type, thickness and the presence or not of adhesive are identifiable on the certification.

ESSTD-003:
  A 4.1 Supplier Material Identification
  A 4.2 Supplier Material Re-Identification
  Table A-1: Example Material Callout Evaluation Criteria.

195 Foreign Object Debris/ Foreign Material Inspection- (EFF DATE: 2-07-2019)
Foreign Object Debris (FOD)/ Foreign Material is an unacceptable condition on the product. The supplier must understand how BAE Systems will accept or reject product for FOD (as per the detection standards below):

Detection Standard

Unless governed by a specific Commercial or Military standard or specifically cited herein, the following shall govern the magnifications used for the detection and identification of FOD during the processing and test of material or hardware:

Lighting Requirement: Inspection shall be performed under a minimum of 100 light lumens.

Nominal Detection – includes all detection activities during assembly/test FOD self-checks, formal in-process and final inspections, and sell-off activities. Unless otherwise specified or guided by industry standards, the magnification power shall be visual (1X) to a maximum of 4X.

Referee Detection – shall be employed when a suspect foreign object has been detected, but not completely characterized as part of the nominal detection process. The referee inspection magnification may range from 4X to 10X.

Additional foreign material identified at the higher, referee magnifications shall not be considered defects unless it is part of the original suspect foreign object or it is critical in nature and poses a threat to product form, fit, or function.

Exceptions
Commercial standards such as IPC 610 and IPC 620 contain a feature size driven criteria for the inspection of subject items. Unless otherwise specified, the inspection criteria specified above supersedes the requirements of these documents when higher magnification limit is allowed. Otherwise, the standards magnification limits shall apply.

IPC620 imposes a connector cleanliness requirement of “No Visual Particulate” on die-electric mating surfaces for RF co-axial connectors. This is extended to all connectors. The maximum allowed magnification (smallest feature specification) under IPC 620 is 10X with a referee magnification of 20X. Connectors shall not be inspected at magnifications beyond these limits.

General industry processes call for cleanliness inspection of the face of fiber optic connectors at up to 200X. Because of the small sizes involved and the possibility of core occlusion, fiber optic connector faces may be inspected at to 200X.

197 Workmanship Acceptability “Guidelines” (RF01447) (EFF DATE: 2-07-2019)
This code establishes BAE Systems interpretation, acceptance criteria and guidelines with respect to workmanship of fabricated mechanical parts and assemblies. In this document workmanship refers to the level of quality imparted onto a finished part or assembly both during and at completion of the manufacturing process. This guideline shall not override or supersede any applicable specification or drawing requirement. This document can be found on the

The supplier shall implement Advanced Product Quality Planning (APQP) methodology compliant to AS9145 IAW BAE Systems Electronic Solutions document B45157 (BAE Systems Supplier PPAP Guide) located at www.baesystems.com/suppliercenter. An output of APQP is the Production Part Approval Process (PPAP). PPAP provides evidence that all BAE engineering design record and specification requirements are properly understood by supplier, and that supplier’s manufacturing process has the potential to produce product that consistently meets all requirements during an actual production run at the required production rate.

These requirements shall be flowed down to any sub-tier suppliers as required by AS9145

The supplier shall submit a completed PPAP Approval Form to BAE Systems Program Quality Engineering, and obtain approval prior to delivery of any product. An example of the PPAP Approval Form may be found at www.baesystems.com/suppliercenter.

APQP / PPAP documents may be required to be sent to the Company Procurement Representative via SharePoint, or equivalent, depending on Security/ITAR restrictions. Data shall be available for review at the supplier’s facility, upon request. Records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract.

200 **Returned Product Failure Analysis Required (EFF DATE: 11-18-2019)**

The products specified on the face of this Purchase Order/Subcontract are required to have Failure Analysis performed by the supplier. The supplier shall coordinate this in advance with BAE Systems. The supplier shall not simply repair, replace or destroy the returned unit or failed components / subassemblies within the unit without written approval from BAE Systems Program Quality Assurance.

207 **Source Witness Acceptance (EFF DATE: 4-26-2017)**

The products specified on the face of this Purchase Order/Subcontract are subject to lot acceptance (LAT) and acceptance testing procedure (ATP) witnessing BAE Systems personnel or their delegate prior to shipment from the supplier’s facility. Supplier shall notify the buyer at least five (5) days in advance of lot acceptance and/or acceptance testing procedure. In order to facilitate the performance of LAT and or ATP witnessing, the seller shall furnish the necessary facilities and equipment, supply data, and perform tests as required by applicable drawings, specifications, and inspection instructions. LAT and/or ATP shall be witnessed by BAE Systems customers.

212 **Shelf Life Material (EFF DATE: 4-26-2017)**

The product(s) specified on the face of this Purchase Order / Subcontract is adversely affected by time. The requirement for the shelf life of this material shall be delineated in the Part Specification / Drawing, Subcontract / Statement of Work, or on the Purchase Order. The requirements shall be flowed to the supplier via: The Subcontract, Statement of Work, SQAP Notes, and / or Quality Material Code 117 (which will define / include the minimum requirements for the supplier to be compliant). The Supplier shall identify on the Certificate of Compliance / Conformance or Packing Slip the manufacture date, expiration date or remaining shelf life of the supplied Material per the PO instructions.
214 First Article Inspect Approval Prior to Ship (EFF DATE: 8-08-2019)

The supplier shall submit the **FAIR ten (10) business days prior to shipping product and obtain approval (AS9102 Form 1 Section 23 signed/stamped as approved) by BAE Systems Program Quality or SQA Engineering prior to shipping of any hardware. The submittal of the FAI documentation shall be posted in IHDS (if supplier has a license) with notification to the buyer that it has been posted for BAE Systems Quality Engineering to review. If the supplier is not licensed to IHDS they shall contact the PO buyer for submittal directions for FAI Approval prior to shipment of any hardware.

Once approved by BAE Systems, the supplier may continue to ship product under the existing FAIR regardless of the PO Number as long as there has not been: a break in production of greater than 24 months, a change in the production process, a manufacturing location change or a revision change to the drawing / specification, and the current / active FAIR IS compliant to “LATEST REVISION” of the B25279 document posted on the Supplier Center. If not the supplier shall generate and submit an updated FAIR with the next delivery. The supplier shall maintain these records for a minimum of seven (7) Years.

** Any new or partial FAIR’s shall be accomplished IAW BAE Systems Electronic Solutions document B25279 (Supplier Requirements for First Article Inspection Reports) located at [www.baesystems.com/suppliercenter](http://www.baesystems.com/suppliercenter). This document breaks down AS9102 for BAE Systems requirements related to AS9102 Forms 1, 2 and 3 and any or all required supporting documentation.

Note; The original FAIR need only to be submitted with the 1st delivery of product unless changes have occurred which could affect product (defined in the B25279 document).

BAE Systems reserves the right to perform a PPVR at the supplier in lieu or in addition to a FAIR.

Data may be required to be sent to the Company Procurement Representative via SharePoint, or equivalent, depending on Security/ITAR restrictions. If Material Certifications or Special Processes are considered proprietary, a certificate of conformance will be attached to the FAI indicating that product conforms to the requirements of the Purchase Order. Data shall be available for review at the supplier’s facility, upon request. Records shall be retained for a minimum of (7) years after completion of the purchase order or subcontract

222 Date Code Restriction (EFF DATE: 7-24-2017)

- Parts with a date code older than 104 weeks, at the date of shipment, shall not be delivered to BAE Systems
- Each delivery of parts shall consist of a single (one) date code

Note: Submit an SVR to BAE Systems Procurement if date code parts are not available to meet this purchase order requirement. If older parts are to be allowed with re-screen, the date of the re-screen shall be identified on the C of C or attribute data sheet for each shipment. The SVR form and instruction can be found at [www.baesystems.com/suppliercenter](http://www.baesystems.com/suppliercenter)


Supplier shall record all delivered lot identification numbers and/or date code(s) on the outside of intermediate
and/or unit packages if available. Multiple lot/date codes shall be individually packaged and labeled. For tape and reel, waffle pack, or JEDEC / Matrix tray packaged parts, only two date codes per reel / waffle pack/ tray is allowed.

237 **No Pure Tin, Bismuth or SAC Alloyed Materials Allowed (EFF DATE: 4-26-2017)**

No pure tin plating allowed. The use of pure unalloyed tin is prohibited in the construction and surface finish of goods required to be delivered to Buyer under this Purchase Contract. Construction and finish include solders and plating. Tin is considered to be pure if it contains less than 3% alloying elements. The critical concentration of bismuth begins in the range of 3 to 5%, so lead finishes with greater than 3% bismuth are not allowed. BGA's and CCGA's are not allowed with Tin, Silver, and Copper (SAC) alloyed Balls.

A separate Certificate of Conformance stating “No pure tin used” shall be supplied with each delivery of material.

275 **Critical Raw Material Report and/or Certificate of Conformance (EFF DATE: 2-07-2019)**

The supplier shall provide a Raw Material Sample (4” by 4”) and a Report or Certificate of Conformance (C of C), with each delivery, for the raw material supplied or used in the parts supplied. The C of C shall be from the original raw material supplier and include original supplier, lot number, material specification, tests conducted and any other relevant information needed to identify the raw material. Acceptable examples include foundry report, mill report, dimension/ description, temper/hardness, alloy and condition. The supplier shall maintain the original mill certification and any secondary independent test laboratory certification(s) if any additional process was done after original mill certification for procured metallic material that shall include physical properties, chemical analysis and lot number(s). For plastics and other “proprietary” materials, a C of C from the OEM / OCM stating the material is proprietary or providing only the material properties and characteristics to that material specification is acceptable.

In addition, material shall meet any other contractual requirements as stated in the Purchase Order, and any applicable DFARs such as Specialty Metals.

Supplier records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract. These requirements shall be flowed down to any sub-tier suppliers.

310 **Purchased Parts Traceability Using Supplier Barcoded Documentation – (EFF DATE: 7-24-2017)**

- Bar Code Information shall be included as document(s) with the required barcode data within the shipping paperwork for all purchased parts, if available and as applicable per B14784 - Purchased Parts Barcoding User Guide. This document can be found on the BAE Systems Electronic Solutions Supplier Center at www.baesystems.com/suppliercenter.

314 **Source First Article Inspect (On Site) (EFF DATE: 4-13-2020)**

**First Article Inspection Readiness Review**

The product specified on this Purchase Order/Subcontract requires the supplier to host a First Article Inspection Readiness Review with BAE Systems Supplier Quality personnel. During the review, the supplier shall present a First Article Inspection Plan (FAI). The plan shall include information such as ballooned drawings, draft AS9102 package, special (inspection) tooling to be used and inspection approach, process documentation, etc. (per AS9102 section 4.2 First Article Inspection Planning). Supplier shall submit the plan to the buyer at least five (5) business days in advance of the first article inspection readiness review at the supplier.

During this time, the supplier shall permit BAE Systems personnel access to witnessing measurements and process documentation used to build the product upon request. The supplier shall present FAI results and documentation
Supplier shall complete the Source Inspection **Request Form 11-054 and e-mail form to es.sir@baesystems.com at least five (5) business days in advance of First Article Inspection Readiness Review.

** Note: on form 11-054 the supplier shall check off in Block 6 “other” and in Block 7 define other as on site FAI approval required.

***Once approved by BAE Systems, the supplier may continue to ship product under the existing FAIR regardless of the PO Number as long as there has not been: a break in production of greater than 24 months, a change in the production process, a manufacturing location change or a revision change to the drawing / specification, and the current / active FAIR IS compliant to “LATEST REVISION” of the B25279 document posted on the Supplier Center. If not the supplier shall generate and submit an updated FAIR with the next delivery. The supplier shall maintain these records for a minimum of seven (7) Years.

** Any new or partial FAIR’s shall be accomplished IAW BAE Systems Electronic Solutions document B25279 (Supplier Requirements for First Article Inspection Reports) located at www.baesystems.com/suppliercenter. This document breaks down AS9102 for BAE Systems requirements related to AS9102 Forms 1, 2 and 3 and any or all required supporting documentation.

Note; The original FAIR need only to be submitted with the 1st delivery of product unless changes have occurred which could affect product (defined in the B25279 document).

Data may be required to be sent to the Company Procurement Representative via SharePoint, or equivalent, depending on Security/ITAR restrictions. If Material Certifications or Special Processes are considered proprietary, a certificate of conformance will be attached to the FAI indicating that product conforms to the requirements of the Purchase Order. Data shall be available for review at the supplier’s facility, upon request. Records shall be retained for a minimum of seven (7) years after completion of the purchase order or subcontract.

After the initial FAI activity per QA Material Code 314 has been completed and approved by BAE Systems; any New FAIR’s against that part, regardless of PO, shall be processed per QA Material Code 214. On site FAI review by BAE Systems is not required and the New FAI shall be submitted and approved prior to shipment, as defined in QA Material Code 214. Exception is when the change is considered by BAE Systems to be a major / critical change then an onsite FAI / PPV assessment may be required.

### 375 Critical Raw Material Report and/or Certificate of Conformance (EFF DATE: 2-07-2019)

The supplier shall have a sample of the Raw Material used in the fabrication of this PO independently tested for composition and properties. This Independent Report shall be provided along with the Report or Certificate of Conformance (C of C) from the Original OEM, for the raw material supplied or used in the parts supplied. The C of C shall be from the original raw material supplier and include original supplier, lot number, material specification, tests conducted and any other relevant information needed to identify the raw material. Acceptable examples include foundry report, mill report, dimension/ description, temper/hardness, alloy and condition. The supplier shall maintain the original mill certification and any secondary independent test laboratory certification(s) if any additional process was done after original mill certification for procured metallic material that shall include physical properties, chemical analysis and lot number(s). For plastics and other “proprietary” materials, a C of C from the OEM / OCM stating the material is proprietary or providing only the material properties and characteristics to that material specification is acceptable. In addition, material shall meet any other contractual requirements as stated in the Purchase Order, and any applicable DFARs such as Specialty Metals.
Supplier records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract. These requirements shall be flowed down to any sub-tier suppliers.

414. **First Article Inspect Report Required from Suppliers who retain Design Authority (EFF DATE: 8-08-2019)**

Suppliers to BAE Systems that retain design authority for their parts shall submit First Article Inspection Reports (FAIR’s) to their revision(s) in effect as of the date of the Purchase Order (PO).

It is acceptable that the FAIR revision level(s) from the supplier be different from the revision(s) defined in the BAE Systems Purchase Order.

Once approved by BAE Systems, the supplier may continue to ship product under the existing FAIR regardless of the PO Number as long as there has not been: a break in production of greater than 24 months, a change in the production process, a manufacturing location change or a revision change to the drawing / specification, and the current / active FAIR is compliant to “LATEST REVISION” of the B25279 document posted on the Supplier Center. If not the supplier shall generate and submit an updated FAIR with the next delivery. The supplier shall maintain these records for a minimum of seven (7) Years.

** Any new or partial FAIR’s shall be accomplished IAW BAE Systems Electronic Solutions document B25279 (Supplier Requirements for First Article Inspection Reports) located at www.baesystems.com/suppliercenter. This document breaks down AS9102 for BAE Systems requirements related to AS9102 Forms 1, 2 and 3 and any or all required supporting documentation.

Note; The original FAIR need only to be submitted with the 1st delivery of product unless changes have occurred which could affect product as defined in the B25279 document.

BAE Systems reserves the right to perform a Production Process Verification Review (PPVR) at the supplier in lieu or in addition to a FAIR.

Data may be required to be sent to the Company Procurement Representative via SharePoint, or equivalent, depending on Security/ITAR restrictions. If Material Certifications or Special Processes are considered proprietary, a certificate of conformance will be attached to the FAI indicating that product conforms to the requirements of the Purchase Order. Data shall be available for review at the supplier’s facility, upon request. Records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract.

514 **First Article Inspect** (one-year requirement) **EFF DATE: 8-08-2019**

Any new or partial FAI’s shall be accomplished IAW BAE Systems Electronic Solutions document B25279 (Supplier Requirements for First Article Inspection Reports) located at www.baesystems.com/suppliercenter. This document breaks down AS9102 for BAE Systems requirements related to AS9102 Forms 1, 2 and 3 and any or all required supporting documentation.

Once approved by BAE Systems, the supplier may continue to ship product under the existing FAIR regardless of
the PO Number as long as there has not been: a break in production of greater than 12 months, a change in the production process, a manufacturing location change or a revision change to the drawing / specification, and the current / active FAIR IS compliant to “LATEST REVISION” of the B25279 document posted on the Supplier Center. If not the supplier shall generate and submit an updated FAIR with the next delivery. The supplier shall maintain these records for a minimum of seven (7) Years.

** Any new or partial FAIR's shall be accomplished IAW BAE Systems Electronic Solutions document B25279 (Supplier Requirements for First Article Inspection Reports) located at www.baesystems.com/suppliercenter. This document breaks down AS9102 for BAE Systems requirements related to AS9102 Forms 1, 2 and 3 and any or all required supporting documentation.

Note; The original FAIR need only to be submitted with the 1st delivery of product unless changes have occurred which could affect product as defined in the B25279 document.

BAE Systems reserves the right to perform a Production Process Verification Review (PPVR) at the supplier in lieu or in addition to a FAIR.

Data may be required to be sent to the Company Procurement Representative via SharePoint, or equivalent, depending on Security/ITAR restrictions. If Material Certifications or Special Processes are considered proprietary, a certificate of conformance will be attached to the FAI indicating that product conforms to the requirements of the Purchase Order. Data shall be available for review at the supplier’s facility, upon request. Records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract.

522 - 5 Year Date Code Restriction (EFF DATE: 2-07-2019)

Parts with a date code older than 5 years, at the date of shipment, shall not be delivered to BAE Systems.

Note: Submit an SVR to BAE Systems Procurement if date code parts are not available to meet this purchase order requirement. If older parts are to be allowed with re-screen, the date of the re-screen shall be identified on the C of C or attribute data sheet for each shipment. The SVR form and instruction can be found at www.baesystems.com/suppliercenter

614 First Article Inspect Approval Prior to Ship (one Year Requirement) (EFF DATE: 8-08-2019)

The supplier shall submit the **FAIR ten (10) business days prior to shipping product and obtain approval (AS9102 Form 1 Section 23 signed/stamped as approved) by BAE Systems Program Quality or SQP Engineering prior to shipping of any hardware. The submittal of the FAI documentation shall be posted in IHDS (if supplier has a license) with notification to the buyer that it has been posted for BAE Systems Quality Engineering to review. If the supplier is not licensed to IHDS they shall contact the PO buyer for submittal directions for FAI Approval prior to shipment of any hardware.

Once approved by BAE Systems, the supplier may continue to ship product under the existing FAIR regardless of the PO Number as long as there has not been: a break in production of greater than 12 months, a change in the production process, a manufacturing location change or a revision change to the drawing / specification, and the current / active FAIR IS compliant to “LATEST REVISION” of the B25279 document posted on the Supplier Center. If not the supplier shall generate and submit an updated FAIR with the next delivery. The supplier shall maintain these records for a minimum of seven (7) Years.
**Any new or partial FAIR’s shall be accomplished IAW BAE Systems Electronic Solutions document B25279 (Supplier Requirements for First Article Inspection Reports) located at www.baesystems.com/suppliercenter. This document breaks down AS9102 for BAE Systems requirements related to AS9102 Forms 1, 2 and 3 and any or all required supporting documentation.

Note; The original FAIR need only to be submitted with the 1st delivery of product unless changes have occurred which could affect product (defined in the B25279 document).

BAE Systems reserves the right to perform a PPVR at the supplier in lieu or in addition to a FAIR.

Data may be required to be sent to the Company Procurement Representative via SharePoint, or equivalent, depending on Security/ITAR restrictions. If Material Certifications or Special Processes are considered proprietary, a certificate of conformance will be attached to the FAI indicating that product conforms to the requirements of the Purchase Order. Data shall be available for review at the supplier's facility, upon request. Records shall be retained for a minimum of (7) years after completion of the purchase order or subcontract.

** Source First Article Inspect (On Site) (one-year requirement) (EFF DATE: 4-13-2020)

First Article Inspection Readiness Review

The product specified on this Purchase Order/Subcontract requires the supplier to host a First Article Inspection Readiness Review with BAE Systems Supplier Quality personnel. During the review, the supplier shall present a First Article Inspection Plan (FAI). The plan shall include information such as ballooned drawings, draft AS9102 package, special (inspection) tooling to be used and inspection approach, process documentation, etc. (per AS9102 section 4.2 First Article Inspection Planning). Supplier shall submit the plan to the buyer at least five (5) business days in advance of the first article inspection readiness review at the supplier.

During this time, the supplier shall permit BAE Systems personnel access to witnessing measurements and process documentation used to build the product upon request. The supplier shall present FAI results and documentation package in accordance with AS9102.

Supplier shall complete the Source Inspection **Request Form 11-054 and e-mail form to es.sir@baesystems.com at least five (5) business days in advance of First Article Inspection Readiness Review.

** Note: on form 11-054 the supplier shall check off in Block 6 “other” and in Block 7 define other as on site FAI approval required.

***Once approved by BAE Systems, the supplier may continue to ship product under the existing FAIR regardless of the PO Number as long as there has not been: a break in production of greater than 12 months, a change in the production process, a manufacturing location change or a revision change to the drawing / specification, and the current / active FAIR IS compliant to “LATEST REVISION” of the B25279 document posted on the Supplier Center. If not the supplier shall generate and submit an updated FAIR with the next delivery. The supplier shall maintain these records for a minimum of seven (7) Years.

** Any new or partial FAIR's shall be accomplished IAW BAE Systems Electronic Solutions document B25279 (Supplier Requirements for First Article Inspection Reports) located at www.baesystems.com/suppliercenter. This document breaks down AS9102 for BAE Systems requirements related to AS9102 Forms 1, 2 and 3 and any or all required supporting documentation.
Note; The original FAIR need only to be submitted with the 1st delivery of product unless changes have occurred which could affect product (defined in the B25279 document).

BAE Systems reserves the right to perform a Production Process Verification Review (PPVR) at the supplier in lieu or in addition to a FAIR.

Data may be required to be sent to the Company Procurement Representative via SharePoint, or equivalent, depending on Security/ITAR restrictions. If Material Certifications or Special Processes are considered proprietary, a certificate of conformance will be attached to the FAI indicating that product conforms to the requirements of the Purchase Order. Data shall be available for review at the supplier’s facility, upon request. Records shall be retained for a minimum of seven (7) years after completion of the purchase order or subcontract.

***After the initial FAI activity per QA Material Code 714 has been completed and approved by BAE Systems; any New FAI’s against that part, regardless of PO, shall be processed per QA Material Code 614. On site FAI review by BAE Systems is not required and the New FAI shall be submitted and approved prior to shipment, as defined in QA Material Code 214. Exception is when the change is considered by BAE Systems to be a major / critical change then an onsite FAI / PPV assessment may be required.

814. First Article Inspect Report Required from Suppliers who retain Design Authority (One Year Requirement) (EFF DATE: 8-08-2019)

Suppliers to BAE Systems that retain design authority for their parts shall submit First Article Inspection Reports (FAIR’s) to their revision(s) in effect as of the date of the Purchase Order (PO).

It is acceptable that the FAIR revision level(s) from the supplier be different from the revision(s) defined in the BAE Systems Purchase Order.

Once approved by BAE Systems, the supplier may continue to ship product under the existing FAIR regardless of the PO Number as long as there has not been: a break in production of greater than 12 months, a change in the production process, a manufacturing location change or a revision change to the drawing / specification, and the current / active FAIR IS compliant to “LATEST REVISION” of the B25279 document posted on the Supplier Center. If not the supplier shall generate and submit an updated FAIR with the next delivery. The supplier shall maintain these records for a minimum of seven (7) Years.

** Any new or partial FAIR’s shall be accomplished IAW BAE Systems Electronic Solutions document B25279 (Supplier Requirements for First Article Inspection Reports) located at www.baesystems.com/suppliercenter. This document breaks down AS9102 for BAE Systems requirements related to AS9102 Forms 1, 2 and 3 and any or all required supporting documentation.

BAE Systems reserves the right to perform a Production Process Verification Review (PPVR) at the supplier in lieu or in addition to a FAIR.

Data may be required to be sent to the Company Procurement Representative via SharePoint, or equivalent, depending on Security/ITAR restrictions. If Material Certifications or Special Processes are considered proprietary, a certificate of conformance will be attached to the FAI indicating that product conforms to the requirements of the Purchase Order. Data shall be available for review at the supplier’s facility, upon request. Records shall be retained for a minimum of 7 years after completion of the purchase order or subcontract.
Product Test Verification – Electronically Tested Parts (PTVE) (EFF DATE: 2-07-2019)

This clause is in addition to any inspection or testing requirements listed within BAE Systems’ procurement control drawings/specifications and is most commonly used when electrically “up-screening” parts. Prior to the performance of a PTVE, the supplier shall have presented to BAE Systems and received written approval of an electrical test plan. The test plan shall describe the pass/fail criteria for each tested characteristic. A 3-piece sample shall be fully inspected and tested according to the applicable BAE Systems’ procurement control drawing specification to ensure all characteristics and notes are within acceptable parameters. A data log for each sample part shall be recorded. A PTVE report shall be created and submitted to BAE Systems for approval by Program Quality Assurance / Program Electrical Engineering or Component Engineering and returned to the supplier prior to shipment to be included with the delivered hardware.

At a minimum, the PTVE Report shall contain the following information (3-piece sample):

1) Date  
2) Organization Name  
3) Supplier Code (assigned by BAE Systems)  
4) Purchase Order (PO) Number  
5) Line Item Number  
6) PO Quality Requirement Codes  
7) BAE Systems Part Number (including dash variant as applicable)  
8) BAE Systems Part Revision Number  
9) BAE Systems Part Description  
10) BAE Systems Drawing Number  
11) BAE Systems Drawing Revision  
12) Baseline or COTS Part Number (as applicable)  
13) Baseline or COTS Revision or Specification Date (as applicable)  
14) Variable Data where applicable (Dimensional or other)  
15) Electrical Test data logs of the sample parts

Additional documentation that supports the conformance to requirements shall also be provided as part of the report package and includes (as applicable), but is not limited to: Material Certifications, Special Process Validations, Certificates of Conformance (C of C) and Traceability Information. If any such documentation is considered proprietary, the supplier shall create a C of C that includes the PO number and describes the specific characteristic as being in compliance. This requirement is in addition to Clause 100.

Where prior written agreements between BAE Systems and the supplier exist that address the retention of records, then the supplier shall have all documentation available upon request according to those agreements that supersede this clause. BAE Systems reserves the right to request documentation as it deems necessary and may conduct periodic audits to ensure proper traceability is being maintained.

A PTVE is not required on subsequent shipments of the same revision unless there has been a break in delivery to BAE Systems of more than 12 months.

Partial or Re-accomplishment of PTVE

The PTVE requirement is in effect for the duration of the BAE Systems Purchase Order. A Partial or Re-Accomplishment PTVE addresses changes from a baseline part. This is applicable to any change invalidating original results of an approved PTVE. A Partial or Re-Accomplished PTVE is submitted for affected characteristics, when any of the following CHANGE(S) occur:

1. Design characteristics affecting form, fit or function of the part (revision level change).
2. The drawing revision changed to add a new part number to the drawing or to make changes to other
part numbers but the hardware revision remained the same, meaning the technical and testing requirements of parts previously screened to an approved PTVE have not changed. If no change to form, fit, or function, submit a partial PTVE only identifying the clerical changes.

3. Numerical control program or translation to another media that can potentially affect form, fit, function or test results. Including changes to ATP, ATE, and associated Software programs affecting product.

4. A natural or man-made event, which may adversely affect the testing process.