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#### REVISIONS

REV	DESCRIPTION	DATE	CM APPROVAL
D	See ECO-181128	11/28/18	Joyce Davis
E	See ECO- 190894	9/04/19	Betty Howard
F	See ECO-230389	3/21/23	Joyce Davis
G	See ECO-231207	1/19/2024	Joyce Davis
H	See ECO-250450	8/1/2025	Kinga Nowak

**DOCUMENT NO. P-900**

## **SUPPLIER QUALITY ASSURANCE MANUAL**

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*Proprietary*

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**DOCUMENT NO. P-900**  
**SUPPLIER QUALITY ASSURANCE MANUAL**

**APPROVAL**

This manual, consisting of pages 1-20, has been prepared in accordance with the policies of Chemring Energetic Devices, and contains the requirements and expectations for all suppliers and sub-tiers within the scope of this manual.

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## 1.0 INTRODUCTION

### 1.1 CED Policy and Vision

It is our policy to select suppliers based on their demonstrated commitment to the following principles:

- Prevention of defects rather than inspecting for quality
- Implementing and controlling processes capable of achieving 100% conforming product
- Thorough and effective root cause correction of problems that prevent 100% quality and on-time delivery performance
- Creating and maintaining a safe and environmentally responsible workplace

This policy establishes the framework upon which we can support Chemring Group's vision to be the leading producer of protection systems and energetic products for the global defense market.

### 1.2 Scope and Purpose

This manual applies to suppliers and sub-tiers who provides products and/or services to CED.

This manual explains the requirements and expectations to ensure we receive parts and materials that meet the product and delivery requirements specified in our purchase orders.

## 2.0 QUALITY MANAGEMENT SYSTEM


We, as well as our customers, prefer suppliers who have demonstrated their commitment to managing quality by investing in a systematic approach that meets essential elements identified by industry. Those elements are documented in the ISO-9001 and AS9100 Quality System Management standards.

Given proven levels of quality, delivery, and acceptable pricing, order preference will be given to key suppliers in accordance with the table below.

Order Preference	QMS Registration Status
1st	Registered to AS-9100
2nd	Registered to ISO-9001
3rd	"Self-certified" to either of the above. (CED may audit Supplier)
4th	Compliant to MIL-I-45208. . (CED may audit Supplier)
5th	Neither registered nor "self-certified." . (CED may audit Supplier)

When required, CED will specify on the purchase order to implement a quality management system.

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### 3.0 INTERNATIONAL TRAFFIC IN ARMS REGULATIONS (ITAR)

ITAR is a set of United States government regulations that control the export and import of defense-related articles and services on the United States Munitions List (USML).

We require suppliers that receive ITAR Restricted drawings to be ITAR registered with the United States Department of State.

### 4.0 BRIBERY AND CORRUPTION

CED will not transact business with any suppliers suspected of bribery, “kickbacks”, or other such unethical behaviors. See CED Document P-201 Terms and Conditions. The Supplier Code of Conduct is automatically attached to every Purchase Order.

Suppliers shall not engage in any action that may reasonably be termed “bribery” or “corruption” and shall immediately notify CED Purchasing if the supplier becomes the target of such investigations.


### 5.0 GOVERNING DOCUMENTS

In the course of business with CED, you may find the documents listed below to be helpful. In addition to this manual, each of these documents is located on our website on the Supplier page:

[www.chemringenergeticdevices.com](http://www.chemringenergeticdevices.com)

Document title	Purpose
<ul style="list-style-type: none"> <li>Q-208 Approved Processor</li> </ul>	<p>Lists processors approved by CED for the indicated services. If a processor is not listed in the document, the processor is not approved for use on a CED purchase order.</p> <p>As needed, our purchase orders will specify when processors approved by <i>our</i> customers (e.g. Boeing, Lockheed Martin) are required.</p>
<ul style="list-style-type: none"> <li>Form 477 Supplier Waiver Request</li> </ul>	<p>This form must be used if you want CED to consider accepting nonconforming conditions.</p>
<ul style="list-style-type: none"> <li>P-201A CED General Terms and Conditions for Subcontracts POs on Government Contracts (Rev. 2.21)</li> <li>P-201B CED General Terms and Conditions for Commercial Purchase of Goods and Services (Rev. 3.21)</li> </ul>	<p>This document lists basic contract provisions that flow down to subcontractors and suppliers. Additional terms and provisions that may apply are defined in the P202</p>
<ul style="list-style-type: none"> <li>P-202 Additional Terms and Provisions to Purchase Orders</li> </ul>	<p>This document lists additional terms and provisions that CED purchasing may include on purchase orders.</p>
<ul style="list-style-type: none"> <li>P-900 Supplier Quality Manual</li> </ul>	<p>This manual provides an explanation of CED’s policies regarding important issues of supplier quality.</p>

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## 6.0 APPROVAL PROCESS OF A NEW SUPPLIER

### 6.1. Initial Evaluation

After the Director of Supply Chain and the Supplier Quality Manager complete the initial evaluation and recommend a new supplier, all potential suppliers and processors directly involved in the production of end-items (excluding commercial off-the-shelf items) must submit a completed Self-Assessment document (current revision of Form 582) – Potential Supplier Evaluation, along with any required supporting documents, to the Supplier Quality Manager. Once this step is completed, the buyer places two initial purchase orders. The supplier is then added to the Approved Supplier List as NEW VEND in the Purchase Pool of the Vendor record.

### 6.2. Set-up Inspection

Once the supplier prepares the set-up pieces, they notify the buyer and the Supplier Quality Manager. An on-site process inspection may be conducted to approve the first pieces, which are inspected thoroughly against the respective drawings, Op drawings (if available) and inspection procedures. If the first production piece is rejected, the supplier must submit another piece(s) for re-inspection.

### 6.3. Periodic Evaluation of the Processes

For large purchase order quantities and high-cost items, the Supplier Quality representative ensures periodic part inspections within an assigned timeframe by either visiting the supplier's site (recommended for local suppliers) or reviewing their inspection results submitted by electronically for conformity, ensuring parts are inspected within a reasonable timeframe

### 6.4. Manufacturing and Verification

Upon successful completion of the setup, in-process, and final inspections, the supplier ships the manufactured quantities specified in the purchase order to CED. The receiving inspection then verifies the parts to ensure they conform to the drawing requirements. This process is repeated for both initial purchase orders.

### 6.5. Receiving Inspection

If both parts pass CED's receiving inspection, the Supplier Quality Manager schedules and conducts an on-site audit of the supplier. If the parts do not pass inspection, the supplier must remake or rework the parts (if feasible) by following steps 2, and 3 before resubmitting them for approval.

### 6.6. On-Site Audit

If the supplier successfully meets the audit criteria per Form 582, the Purchasing Manager may add the supplier to the approved supplier list in D365.

### 6.7. Ongoing Orders

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Once approved, the Purchase Pool is changed from NEW VEND to the applicable category (ex. Machining, Custom-Mfg., etc.). Then buyers can issue production purchase orders to the supplier.

#### 6.8. Larger or High-Cost Orders

Steps 2, and 3 may also be applied to purchase orders for larger quantities of high-cost parts, even after the supplier has been approved. This clause also applies to a grandfathered supplier when machining a new part for the first time.

### 7.0 APPROVAL PROCESS FOR A VENDOR AS A SOURCE INSPECTION SUPPLIER

7.1. The Supply Chain team selects suppliers for Source Inspection based on performance criteria such as on-time delivery (OTD), quality, purchase order (PO) volume and service.

7.2. Evaluate and qualify the supplier's inspection, machining and technical capabilities using the check list Form-605.

7.3. After completing the initial evaluation and receiving approval, proceed with the 'Source Inspection Procedure' (Q-257) and complete Checklist Form-603.

### 8.0 REQUESTS FOR QUOTE (RFQ)

We may request quotes from a supplier based on our needs, and assessment of supplier's capability and/or quality and delivery history. If we request a quote from a supplier, as early as practical, we will provide...


- Complete technical information in pdf drawings, and possibly 3D IGS model files
- Processing requirements
- Quantity needed and desired delivery date
- Inspection data requirements
- Flow-down requirements from our customers
- Applicable Defense Federal Acquisition Regulations (DFARs) citations
- Access to CED governing documents
- CED contact information

If supplier accepts our RFQ, they agree to provide a timely quote of their best price and to deliver 100% on-time and 100% conforming parts.

### 9.0 AWARD OF PURCHASE ORDERS

We understand that often there is a correlation between the best quality and delivery and the highest unit price. We also understand that the lowest unit price might results in significant

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additional costs of poor quality. We will issue purchase orders based on a combination of the following:

- Our assessment of one supplier's capability compared to others
- Best quality and delivery history
- Best price and/or delivery
- Regulatory requirements from our customers

Your acceptance of our purchase order is your explicit agreement to:

- To use a competent staff to deliver 100% conforming parts on the agreed date for the agreed price,
- Deliver product that can perform to its designed or intended purpose without causing unacceptable risk of harm to persons or damage to property,
- Ensure that persons / employees are aware of their contribution to product or service conformity, their contribution to product safety, and the importance of ethical behavior,
- To flow down to sub-tier supplier the applicable requirements in the purchasing documents, including key characteristics,
- Be responsible for lost or damaged product,
- Prevent the use of counterfeit parts.

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## 10.0 CHANGES TO PURCHASE ORDERS

If we need to change our purchase order, we will immediately contact the supplier. We understand changes may require us to pay more and/or accept a later delivery date. When accepted by the supplier, our revised purchase order becomes the requirements against which the supplier's performance will be measured.

If the supplier wants to make a change to our purchase order, the interested party needs to immediately contact us. Depending on the reason, the supplier is requesting the change, we reserve the right to 1) accept the change outright with no financial penalty or negative metric or 2) to assess a financial penalty and/or record a negative metric.

## 11.0 RIGHT OF ACCESS

We reserve the right to...

- Send to the supplier's facility a source inspector to verify that our order meets our criteria to be released for shipment. Release by our source inspector does not limit our right to return parts determined to be nonconforming by our receiving inspectors.
- Perform audits of your quality management system, especially those processes and procedures related to our purchase orders.

We will notify the supplier of our intention to perform source inspection or an audit and work with a supplier to make mutually acceptable arrangements.


All orders are subject to be reviewed by CED and/or authorized customer and/or government representatives and Regulatory Authorities. Unless you are otherwise notified, inspection or release of product prior to shipment from the supplier's company is not required. A copy of the purchase order will be furnished upon request.

The supplier and sub-tiers shall allow the Government and Regulatory Authorities access to their facilities, personnel and safety program documentation. The supplier and sub-tiers shall allow authorized Government representatives to evaluate safety programs, implementation, and facilities.

## 12.0 APPROVAL OF SPECIAL PROCESSES

Unless otherwise specified on the purchase order, all special processing shall be performed by CED approved processors as listed in the current revision of CED Document Q-208.

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## 13.0 CERTIFICATIONS

### 13.1 Certificate of Conform (CofC) Requirements

#### 5.1 Certificate of Conform (CofC) Requirements

When required by the PO, a CofC with applicable specifications shall be submitted with shipment of all orders. Separate certifications are required for each lot. The certificate of conformance should include the following information as applicable:


1. Name and address of manufacture,
2. Name and address of customer,
3. Purchase order number,
4. Packing list number,
5. Contractors lot/job number,
6. Complete part number and quantity,
7. CED Drawing number and revision (as applicable, e.g. many paint, adhesives, etc. utilize Supplier/Vendor only drawing or P/N's),
8. Specification and revision (as applicable),
9. Manufacture's lot, heat batch, date code, and/or serial number (as applicable),
10. Indicate if goods are customer furnished,
11. Sub-tier certification/ lot/batch number,
12. Signature,
13. Title,
14. Date.

### 13.2 Material, Processing, Inspection/Imaging, and Test (MIPT) Requirements

MIPT obligations will be specified on CED PO's or included on drawings/documents referenced from P.O. Below is a listing of common MIPT efforts.


- Production of raw materials such as metals, propellants, paints, adhesives, etc.,
- Part and material nondestructive inspection such as penetrant, magnetic particle, spectrochemical, ultrasonic, x-ray, neutron radiography, etc.,
- Metal joining such as brazing, welding, etc.,
- Heat treatment of materials/parts at mills and secondary Vendors,
- Surface conditioning treatments such as cleaning, passivate, electropolishing, etc.,
- Application of surface coatings such as anodizing, chemical conversion coating, painting, plating, solid film lubricant application, etc.,
- Imaging efforts such as x-ray, neutron radiography, and CT scans,
- Testing such as mechanical testing, functional testing,

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Less common MIPT efforts not identified above shall be managed in a similar manner unless otherwise directed by the P.O.

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To ensure consistency and quality, MIPT callouts generally reference military and industry specifications. While various governing agencies oversee specification details, CED callouts most often require compliance with “aerospace-grade” documents, such as MIL-STD’s, AMS documents, ASTM documents, and others.

While it is primarily the responsibility of the Supplier (or its Subcontractor) to obtain authorized copies of referenced specifications, CED can aid as needed.

### 13.2.1 MIPT Vendor Prerequisites & Selection

Vendors selected by the Supplier for MIPT efforts shall comply with the following prerequisites:

- Compliance:

Meets the classification requirements outlined in the technical data (e.g. drawings, specifications) including compliance with CUI (Controlled Unclassified Information), ITAR (International Traffic in Arms Regulations) or EAR (Export Administration Regulations).

If handling potential CUI, ensure proper safeguarding, encryption, and access controls to remain compliant with Department of Defense (DoD) and NIST cybersecurity requirements.

- Notification:

Should the Supplier have concerns Vendor base availability could affect product quality, CED should be notified per the requirements of Document P-900 Para 22.0

- Material Vendors:

Materials shall be manufactured at an original source that are qualified to manufacture the applicable material per requirements of the referenced spec(s).

CED does not maintain an approved Vendor list for raw material Suppliers such as steel mills, paint manufacturers, and similar. Unless otherwise directed by the applicable P.O, it is the responsibility of the Supplier to select a suitable material vendor and to assure the original source is compliant and qualified for such material.

- Processing, Inspection/Imaging, and Test Vendors:

CED maintains a list of processing, inspection/imaging, and test Vendors in Document Q-208. Should a required process not be listed in Q-208, the Supplier shall identify a capable source themselves.

Occasionally, CED will require Vendors to be approved by a CED Customer such as Boeing, Lockheed, NASA or similar. When necessary, this process approval requirement will be specified in the terms/conditions of the applicable CED P.O. and CED’s Purchasing Department will provide the Supplier a list of approved Vendors. CED Customer approval of Vendors do not require Q-208 approval.

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### 13.2.2 Quality Control

All MIPT physical efforts shall be examined for acceptability by Supplier. If any item is suspected of being nonconforming based on visual, dimensional, or other review, the Supplier shall contain the item(s) then proceed per the requirements of Document P-900 Para 16.0 (Nonconforming Product).

### 13.2.3 Cert Documentation Requirements & Review

MIPT efforts require documentation by the performing Supplier or Vendor as applicable to certify acceptance.

The cert should, at a minimum, include the following:

- Header information (cert title, company name and contact information),
- Material, inspection, process, or test identification (grade, specification, standards, batch/lot, size, weight, or other relevant details),
- Compliance standards (specify all applicable standards (e.g. MIL, AMS, Fed Std),
- Results (detailed chemical, mechanicals, and similar),
- Certification statement,
- Authorized signature and title,
- Other information defining the process required by the governing spec or standard practice.
- Imaging & test only: findings shall be reported on applicable forms and shall include the name of the reader or test personnel and the signature/title of an authorized facility representative.

It is the responsibility of the Supplier to fully review all cert documentation for acceptability including accuracy, clarity, and completeness. Any issues identified shall be corrected by the Supplier prior to any transmittal of documentation to CED. Any discrepant or superseded cert shall be archived/disposed by the Supplier/Vendor and not transmitted to CED.

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### 13.3 E-cert Only Requirements

E-certs shall comply with the following requirements.

- Certs shall be digitized in Adobe Portable Document Format (PDF).
  - PDF Resolution should be a minimum of 300 DPI for clarity.
  - Black & White or Grayscale Preferred unless color is necessary for clarity.
  - Avoid Password-Protected Files: All submitted PDFs must be accessible without restrictions. In no instance will CED change/edit the E-Cert main body.
  - A Single File for all required certs is preferred. If sending multiple PDF files, a single compressed zip file may be used.
- The PDF E-cert file set shall be reviewed by the Supplier for acceptable image quality and that the document is fully captured: No cut-off edges or incomplete scans.
- File Naming shall include the CED P.O., and part number listed on the applicable P.O. P.O. dash no. suffixes such as -1, -2, etc. can be omitted. A file name example is: PO123456\_ (6132401) Certs.pdf.

### 13.4 Documentation Transmittal

Unless otherwise specified on the P.O., CofC's, MIPT certs, and any quality control documentation (completed Form 477 deviation/waivers or similar) shall be transmitted to CED when either physical or digital products (including radiographs) are delivered or after completion of testing or other efforts not requiring product delivery.

Certs from any CED provided materials must be included by the Supplier in their transmittal package. If imaging forms are physically delivered, two (2) legible and reproducible copies of the report must accompany the submittal.

It is recommended that certs be submitted electronically via email, but CED will accept submittal of paper certs if Supplier preferred. Paper and E-certs shall be reproducible and compliant with Para. 13.1 or 13.2.3 as applicable. E-certs shall additionally comply with Para. 13.3

### 13.5 E-Cert Transmittal/Submission Process

- Timely Submission: Unless otherwise requested, E-Certs shall be transmitted to CED prior to or along with the shipment arrival to prevent processing delays.
- All E-Certs files required for acceptance shall be included in a single submittal.


Electronically submit all certs including FAIs to the designated **FileCloud** folder created for document transfer to CED's assigned Quality and Engineering team.

- Subject line should include PO number and Supplier name and "Cert Transmittal" (e.g., PO12345 - ABC Supplier – Cert Transmittal).

### 13.6 Cert Retention

The Supplier shall retain original CofC's, MIPT spec records and/or digitized copies of original records. The records must be stored in a controlled, accessible location. and

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made available to CED upon request. Unless otherwise specified in the applicable P.O., the required retention period is a minimum of ten (10) years after original spec transmittal date.

#### 14.0 QUALITY INSPECTION REQUIREMENTS/ FAI REPORT

The supplier shall maintain a Quality Inspection System that will assure that items produced will meet the latest drawing, specification and purchase order requirements. This shall include having a First Article Inspection performed and documented per the requirements of the most current revision of AS9102. Note that this includes a bubbled drawing with all characteristics accounted for including all dimensions, itemized tables, figures, and notes. In addition to the requirements of AS9102, CED also requires that the method of measurement or verification of each characteristic be recorded. The first article part and report shall be packaged and properly labeled to identify it as a first article. The FAIR may be sent digitally to the Supplier Quality Engineer and Manager for review and approval. This may be a Delta FAIR per the guidelines of AS9102 if there is a full baseline First Article Inspection report on file.

A copy of AS9102 may be obtained from the CED Purchasing Department, or the Internet at <http://www.sae.org/technical/standards/AS9102>. Full or partial FAI is required when any of the following occur:

- 14.1 First time production.
- 14.2 A print revision changes.
- 14.3 A change in the design affecting, form fit or function of the part.
- 14.4 A change in manufacturing source(s), inspection methods, location of manufacture, tooling or materials that can potentially affect fit, form or function.
- 14.5 A natural or man-made event, which may adversely affect the manufacturing process.
- 14.6 A lapse in production for two years or as otherwise specified.

#### 15.0 MEASURING AND TEST EQUIPMENT CALIBRATION


Suppliers measuring and testing equipment calibration/verification systems shall be able to produce documentation verification that ensures an established system and records of calibration traceable to National Institute of Standards and Technology (NIST).

#### 16.0 NONCONFORMING PRODUCT

Supplier shall immediately notify the buyer/ Supplier Quality with the pertinent facts if supplier becomes aware or suspects that items delivered to CED were nonconforming. Seller shall segregate and positively control suspect nonconforming material until properly dispositioned.

CED approval is required for dispositions of use-as-is or repair for acceptance of nonconforming products. The supplier is required to fill out form 477 (Request or Deviation or Wavier) and must be approved by CED prior to shipping product that does not meet CED's requirements. Any deviation is your responsibility, and the high costs associated with a "Use-As-Is" or "Repair" will be borne by you. Under exceptional circumstances and on a case-by-case basis, CED will consider a waiver request, but is under no obligation to approve the request or to accept nonconforming conditions. All approved waivers must be shipped along with the shipment. The supplier score card may be impacted. Typically, CED does not have MRB authority. When nonconformances are identified, the supplier or sub-tier may be required to respond to an external

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corrective action when requested. Initial containment action at the supplier or sub-tier location is required upon notification.

## 17.0 EXTERNAL CORRECTIVE ACTION REQUESTS (ECARs)

It is vital to remember that, while corrective actions are not wholly unexpected, they are a large source of poor-quality costs. As such, it is crucial to take full advantage of the time and effort expended to correct a problem.

Normally, we request corrective action for:

- Repetitive nonconformities for the same issue
- Expensive, single occurrence nonconformities
- Nonconformities that suggest serious flaws in the supplier's quality management system

Upon receipt of an ECAR, we expect the supplier to:

- Expected to respond within 48 hours from the time of notification with a containment plan.  
Conduct thorough investigation and analysis of the root cause(s) of the problem.
- Within thirty days, implement a plan to eliminate the root cause(s). Legitimate extensions will be granted if requested well within the thirty-day period.
- Any procedural changes, documented process improvements, or Quality Manual changes should be attached to the response.
- Increased inspections, verbal instructions/warnings or responses that do not address items specifically as they are listed on the SCAR may be rejected.

When done properly, corrective action decreases the likelihood of future problems and provides insight that may be leveraged on other processes or products to *prevent* problems.


## 18.0 RECORD RETENTION

Records shall be maintaining verifiable objective evidence of all inspections and test performed, results obtained and dispositions of non-conforming articles. These records shall be identified to associated articles, including heat and lot number of materials, unit or lot serialization, and made available to customer and/or Government Representatives upon request and shall be retained in a safe, accessible location for a period of ten (10) years after date of delivery.

## 19.0 STATISTICAL TECHNIQUES

Unless specified on the purchase order the use of statistical techniques for products acceptance and related instructions for acceptance by the organization is not required. When statistical techniques are required, Evidence must be provided to CED those key characteristics on this purchase order be statistically controlled to a  $Cp_k$  and  $Cp > 1.33$ .

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## 20.0 COUNTERFEIT PARTS OF MATERIALS AND TRACEABILITY

\_\_\_\_\_The supplier and sub-tiers shall prevent the use of counterfeit parts (see the AS9100D / ISO 9001 standard).

Under no circumstances shall the supplier and/or sub-tiers furnish or cause to be furnished counterfeit or suspect counterfeit parts or materials. Suppliers and/or sub-tier suppliers shall only purchase parts and materials used to satisfy the CED purchase order through the Original Component Manufacturer (OCM) or Original Equipment Manufacturer (OEM) or through an OCM/OEM Authorized Distributor chain. Parts and materials shall not be acquired from independent distributors or brokers unless approved in advance and in writing by CED. Suppliers shall flow down the contents of this requirement to sub-tier suppliers of parts and materials used to satisfy the CED purchase order.

Affidavit to manufacturer, lot and or date codes shall be maintained, as specified in this document for Certificates of Conformance, for all parts, whether electronic or mechanical, and materials.

This requirement applies whether or not the exact paragraphs are called out on the purchase order. Seller shall immediately notify the buyer with the pertinent facts if seller becomes aware or suspects that items delivered in accordance with the purchase order are or contain suspect or confirmed counterfeit items. Counterfeit, or suspect counterfeit, parts shall be controlled to prevent reentry into the supply chain.

## 21.0 FOREIGN OBJECT DEBRIS CONTROL PROGRAM

Foreign Object Damage: The supplier shall develop and maintain a Foreign Object Debris/Damage (FOD) Prevention Program for manufacturing areas to prevent introduction of foreign objects into any item delivered under this purchase order using NAS412 as a guide. The supplier shall employ appropriate housekeeping practices to assure timely removal of residue/debris generated, if any, during manufacturing operations and/or normal daily tasks.

The supplier shall determine if sensitive areas that may have a high probability for introduction of foreign objects should have special emphasis controls in place appropriate for the manufacturing environment. The supplier shall determine the need for and implement FOD prevention awareness programs. When applicable, the Supplier's FOD control program shall include controls to preclude FOD or contamination at the supplier's sub-tier sources.


## 22.0 PROCESS CHANGE NOTIFICATIONS

The supplier shall notify CED in advance if work is outsourced to other manufactures to produce any line item on a P.O. The supplier shall provide in writing of any change(s) to tooling, facilities, materials, or processes at the supplier or supplier's sub-tier that could affect CED's contracted product. This includes, but not limited to fabrication, assembly, handling, testing, facility, or new sub-tier suppliers.

## 23.0 PREVENTIVE MAINTENANCE

Supplier will develop a planned preventive maintenance program for Critical tooling and equipment utilized to affect form, fit, function, quality of subsequent manufacturing

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operations or items affecting safety or Government regulations. Records of maintenance performed will be retained and readily available.

## 24.0 CONTINUOUS IMPROVEMENT PROGRAMS

Supplier will develop a continuous improvement plan to include:

- a. Comprehensive plan as it relates to quality, service and price
- b. Develop specific action plans to address the largest variation
- c. Establish product characteristics and process parameter metrics
- d. Optimize the target value and conduct activities that reduce the variation around that value

Examples of continuous improvement may be reducing unscheduled machine down-time, machine set-up time, cycle time, scrap and rework, customer complaints, or key dimensional variation (improving Cpk's).

## 25.0 DESIGN APPROVAL

If required, the purchase order will specify the needs of any required test specimens, coupons inspections, verifications, investigation, or auditing for design approval.

## 26.0 HANDLING, PRESERVATION, PACKING, SHIPPING

26.1. Suppliers shall assure that materials are packaged in a manner that will prevent damage, deterioration, corrosion and preclude moisture, foreign matter or contamination damage.

26.2. All components, subassemblies, and assemblies identified as ESD will be treated as Class 1 per ANSI/ESD S20.20. Electrostatic Discharge Sensitive components or assemblies that contain ESD sensitive components shall be packaged in approved protective packages and labeled with the ESD caution symbol. Appropriate ESD controls must be used by the supplier in every handling/storage element of their operation, from material receipt through fabricating, testing, packaging, and shipping.

## 27.0 QUALITY, AND ON-TIME DELIVERY REPORTS

\_\_\_\_\_ Each month, CED will report to each key supplier on the previous month's KPIs.

- Percentage of conforming parts/lot
- Percentage of on-time deliveries

(Key suppliers are those suppliers that together supply at least 90% of all of the machined parts we order).

We expect each supplier to track this same information and understand that there may be small differences in the results due to differences in such things as tracking tools, assumptions, and time periods. We will work with the supplier to address significant differences and, to the

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extent practical, establish metrics based on the same tracking tools, assumptions, and time periods.

Although supplier development actions may be taken for “Yellow” performance, if, a supplier’s quality or delivery performance is on “Red” as defined by the table below, the supplier shall be contacted by whatever means deemed best to encourage better performance, including issuing an External Corrective Action Request, a letter of warning, monthly report cards, or a reduction in the scope of business.

We expect all key suppliers to maintain, at minimal, an average of >95% for Quality rate, >85% On-Time Delivery and an overall combined performance >85%.

Color	Supplier Performance Average
Preferred	> 95% Quality and > 85% for OTD, Overall combined performance >85%
Acceptable	90% to 95% Quality and 80 to 85% for OTD, Overall combined performance 75% to 85%
Not Acceptable	<90% Quality and <80% OTD, Overall combined performance <75%

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