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1.0 Purpose

This SQR document is the Supplier’s guide to understanding L-3 Communications Systems-West (CSW) (hereinafter referred to as “Buyer”) quality requirements. This document forms a part of the Purchase Order (P.O.), and contains both general information and specific quality requirements that shall be met by CSW Suppliers. Where there is a conflict between the SQR and the P.O., the requirements of the P.O. shall take precedence.

1.1 Requirements Sources

This SQR has two primary sources that define Buyer requirements, which are used together to identify the complete set of quality requirements for all deliverable products and services procured by Buyer:

General Requirements - This source identifies minimum quality requirements applicable to all purchase orders, regardless of commodity type. These can be accessed in the General Requirements Section of this document.

Commodity Specific Requirements - This source includes commodity specific quality requirements. Supplier shall determine the category for the product to be delivered, and using Table 1, access the specific quality requirements necessary for the product. In the event the Supplier is unable to determine the commodity category for the product to be delivered, they should contact their CSW Procurement Representative for guidance.

1.2 Definition of key terms and acronyms

- **Commercial Item**: Any item or supply (including construction material) other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes. The item has been sold, leased, or licensed to the general public; or has been offered for sale, lease, or license to the general public.
- **COTS: Commercially Available Off the Shelf**: A Commercial Item sold in the commercial marketplace and offered to the Buyer without modification in the same form in which it is sold in the commercial marketplace.
- **Quality Management System (QMS)**: The managing structure, responsibilities, procedures, processes, and resources to effectively achieve the quality and overall objectives of an organization, in order to satisfy customer needs and expectations.
- **NADCAP**: National Aerospace and Defense Contractors Accreditation Program
- **Supplier**: Organization or person that provides a good or service. For the purposes of this document, organizations that receive purchase orders and/or letters of subcontract are defined as suppliers

1.3 Language

The Supplier’s submissions of records, reports, specifications, drawings, inspection and test results, and other documentation shall be in English.
2.0 Website Links and Forms

L-3 CSW has established a web portal on the Internet to provide Suppliers quick access to required documents.

Link to Supplier Web Portal – provides electronic versions of various Buyer documents

Link to SQR document – provides an electronic version of this document

Link to Workmanship and Specifications Manual (WSM) - refer to Section 4.1 below

Link to Change/Information Request – refer to Section 5.2 below

Link to Supplier Non-Conformance Report - refer to Section 5.3 below

Link to Supplier Repair Report - refer to Section 5.21 below

Link to Supply Service Terms and Conditions - provides an electronic version of P.O. Terms & Conditions
### Table 1: Applicable Quality Requirements by Commodity Designator Matrix*

<table>
<thead>
<tr>
<th>Commodity Designator</th>
<th>Description</th>
<th>Commodity Specific Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed Circuit Boards</td>
<td>Item that mechanically supports and electrically connects electronic components using conductive tracks, pads and other features etched from copper sheets laminated onto a non-conductive substrate. Also referred to as Printed Wiring Boards (PWB) and base boards.</td>
<td>SQR-PCB</td>
</tr>
<tr>
<td>Circuit Card Assemblies</td>
<td>A PCB populated with electronic components.</td>
<td>SQR-CCA</td>
</tr>
<tr>
<td>Castings and Forgings</td>
<td>Parts made through the pouring of liquid material into a mold or the shaping of metal via the use of compressive forces; including any required post-processing (e.g. machining).</td>
<td>SQR-Castings-Forgings</td>
</tr>
<tr>
<td>Composites</td>
<td>Low-weight &amp; high performance fiber-reinforced structures such as reflectors, yokes, covers, radomes, etc.</td>
<td>SQR-Composites</td>
</tr>
<tr>
<td>Electrical Components</td>
<td>Electronic components (i.e., resistors, capacitors, diodes, transistor, integrated circuits, resistor arrays, logic gates, etc.)</td>
<td>SQR-Electrical Components</td>
</tr>
<tr>
<td>Machined Parts and Assemblies</td>
<td>Parts that are fabricated from sheet metal, bar stock, etc. through metal forming/blanking/chemical milling operations, i.e. stampings, stretch form, brake form, routing, punch press, drop hammer, joggling, hand forming, hydro forming. Includes those that have minor assembly work such as installation of bushings or bearings or have been welded.</td>
<td>SQR-Machined Parts</td>
</tr>
<tr>
<td>Raw Materials</td>
<td>Metallic (ferrous and non-ferrous) or non metallic materials that are controlled by a material specification, i.e., sheet, bar/plate/round stock, ingots, extrusions, tubing, bare wire, fiberglass, graphite, Kevlar, plastics, rubber sheets, etc.</td>
<td>SQR-Raw Materials</td>
</tr>
<tr>
<td>Electro-Mechanical Assemblies</td>
<td>Assemblies/sub-assemblies that usually require acceptance/functional testing (ATP), i.e. LRUs, amplifiers, power supplies, slip rings, etc.</td>
<td>SQR-E-M Assemblies</td>
</tr>
<tr>
<td>Cables</td>
<td>Item comprised of one or more wires running side by side and bonded, twisted, or braided together to form a single assembly, the ends of which can be connected to two devices, enabling the transfer of electrical signals from one device to the other.</td>
<td>SQR-Cable Assemblies</td>
</tr>
<tr>
<td>Brazed and Welded</td>
<td>Items joined by either adding filler metal via heating and capillary action, or by melting the work pieces causing coalescence.</td>
<td>SQR-Brazed-Welded</td>
</tr>
<tr>
<td>Antenna Assemblies</td>
<td>Specialized electro-mechanical assembly typically consisting of a reflector surface mounted on a motorized platform, in addition to other assemblies.</td>
<td>SQR-Antennas</td>
</tr>
<tr>
<td>Software</td>
<td>Contract deliverable software.</td>
<td>SQR-Software</td>
</tr>
<tr>
<td>Commercial Off The Shelf</td>
<td>Items sold by supplier through catalog listings.</td>
<td>No Unique Requirements</td>
</tr>
<tr>
<td>Special Processes</td>
<td>Anodize, paint, plating, welding, chemical milling, heat treat, Non-Destructive Test (NDT).</td>
<td>SQR-Special Process</td>
</tr>
<tr>
<td>Hybrid Microcircuits</td>
<td>A microcircuit consisting of elements that are a combination of film circuitry and semiconductor and/or integrated circuit die (or dice), or a combination of one or more of these into a sealed unit.</td>
<td>SQR-Hybrids</td>
</tr>
<tr>
<td>Hybrid Piece Parts</td>
<td>Any inner component of a hybrid such as a micro die, resistor chip, capacitor chip, or metalized substrate. Does not generally include packages and lids.</td>
<td></td>
</tr>
</tbody>
</table>

* Commodities requirements not identified in Table 1 above may be addressed by additional quality requirements outlined in the drawing, purchase order, or statement of work.
4.0 CSW Technical Specifications And Standards

4.1 Workmanship and Specifications Manual (WSM)
This manual invokes CSW Workmanship Standards (WS), Internal Specifications (IS), and miscellaneous Engineering Specifications as required design, manufacturing, and acceptance criteria when identified on the Purchase Order, Product Definition Data Set (Drawing, Parts List, CAD model, etc.), or Statement of Work. Examples include:

Drawing example: Workmanship and Marking per item S01
Parts List example: Item: S01 Part Number: WSM

The WSM is also applicable to all CSW procurements unless otherwise specified in the Purchase Order, Drawing, or Subcontractor Statement of Work (SSOW).

4.1.1 Internal Specifications
These specifications describe allowable technical variations or alternates to drawings, external specifications and/or workmanship requirements. These variations are global in nature, take precedence over CSW released drawings, and shall be utilized, as applicable, when determining workmanship requirements and assuring compliance to requirements.


Note: CSW uses and imposes IPC-A-610, IPC/WHMA-620, and J-STD-001 standards, as applicable. CSW does not provide these standards as part of the CSW WSM. They are copyright protected and the responsibility of the supplier to obtain, when required.

4.1.2 Workmanship Standards
The intent for Workmanship Standards is to establish minimum quality requirements by which product should be built, inspected and tested for manufacture of electronic and mechanical assemblies. Workmanship Standards have been established as separate documents to provide minimum acceptance criteria when CSW design authority drawings are silent on unique characteristics. The acceptance criteria established in the WS are not intended to define design intent, nor are they intended to authorize repair/modification or design change. The WS is a collection of visual acceptability requirements for product designed by CSW.

Note: CSW has identified the applicable workmanship and internal specifications within each commodity requirements document for ease of reference. The WSM does not apply to COTS material.

4.2 Engineering Supplemental Documents
These documents are used to provide additional design detail to CSW manufacturing drawings. They may be called out on the face of the drawing as notes, or as reference documents (R01) on the Parts List. They may also provide general information about CSW drawings to help answer common questions. Engineering Supplemental Documents can be used to help reduce repetitive items typically used or called out on different types of drawings.

4.3 Material Type Specifications
These documents define groups of parts (Material Stocks and Commercial Parts) that are allowed under the Material Type Groups. Usage of the Material Types is subject to Internal Specification “IS-013 Substitution of Alternate Size and Shape Materials”.

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Hard copy uncontrolled. Compare revision/date to on-line version
5.0 GENERAL REQUIREMENTS

The requirements in this section apply to all commodity types.

5.1 Quality Management System (QMS) Requirements

The Supplier shall implement and maintain a QMS which complies with the applicable standard or specification listed in Table 2. Any exceptions to these requirements may be approved by L-3 CSW Supplier Quality Engineering (SQE), through the CSW Procurement Representative.

<table>
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<tr>
<th>Product/Service</th>
<th>Minimum Required QMS</th>
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</thead>
<tbody>
<tr>
<td>Manufacturer with Design Authority, Manufacturer Build to Print, or Value Added Distributor</td>
<td>ISO 9001 (or equivalent), AS9100 Preferred</td>
</tr>
<tr>
<td>Inspection and Test Services</td>
<td>ISO 9001 (or equivalent), AS9003, AS9100 Preferred</td>
</tr>
<tr>
<td>Pass Thru Distributor</td>
<td>AS9120</td>
</tr>
<tr>
<td>Special Processing</td>
<td>NADCAP AC7004 Preferred</td>
</tr>
<tr>
<td>Commercial Services</td>
<td>ISO 9001 (or equivalent)</td>
</tr>
<tr>
<td>Calibration Services</td>
<td>ISO 17025 or ANSI-Z540-1</td>
</tr>
<tr>
<td>Catalog Items</td>
<td>As specified by contract or Purchase Order</td>
</tr>
<tr>
<td>Customer Directed, Engineering Directed or Sole Source of proprietary parts or Program Justified Source</td>
<td>Supplier’s recognized quality system imposed. Exempt from SQR requirement to be 3rd party certified.</td>
</tr>
</tbody>
</table>

Note: Certification to the most current version of the cited standards is expected, and acceptance of certification to equivalent standards is at the discretion of CSW Supplier Quality Engineering. L-3 CSW reserves the right to perform independent audits, or accept 3rd Party Certifications in determining compliance to QMS Requirements above.

5.2 Change in QMS Certification Status

The Supplier’s QMS is subject to review and audit by CSW SQE. Any changes to the Supplier’s registration, such as a change in certification status (e.g. update, withdrawal, or disapproval) or registration body, must be forwarded to the Purchasing Representative within 30 days via Change or Information Request (CIR) form SLC-9012.

A change in Supplier name, ownership, or facility location will subject the Supplier’s System and Processes to reevaluation by Buyer. The Supplier shall notify their Procurement Representative of any of these changes in writing within 60 days prior to the change occurring.

5.3 Nonconforming Material Control
The Supplier shall maintain a documented system for controlling nonconforming material. Nonconforming material must be identified, documented, evaluated, segregated (where practical), and dispositioned to prevent its unintended release or use.

a) The Supplier does not have Material Review Board (MRB) authority for CSW/Customer Designed Items unless authorized in writing by the Buyer for specific part numbers. When a nonconformance results in a noncompliance to Purchase Order Requirements, the Supplier may request CSW Preliminary Review of nonconforming material by submitting a Supplier Non-Conformance Request (SNR) form. The Supplier shall not ship nonconforming material, nor deviated material without an approved SNR. If the Supplier is approved to ship nonconforming material for preliminary review by Buyer, then a copy of the SNR shall be submitted with the material.

Note: Any MRB action performed as a result of the nonconformance may require the Supplier to reimburse Buyer for the costs associated with processing the nonconforming material.

b) The Supplier may not scrap CSW supplied product or material without authorization from the CSW MRB, via SNR through the CSW Procurement Representative.

c) The Supplier’s QMS system shall provide for timely reporting (no later than 5 days after confirmation of the non-conformance) that may affect already delivered product. Notification to the Buyer shall be submitted on Supplier letterhead and include a complete description of the discrepancy against the specified requirement, as well as, all applicable identification and traceability information. Detailed Root Cause Analysis and Corrective Action shall be provided by the Supplier within 30 days.

d) The Supplier shall ensure that their quality management system has the capability to report nonconformance(s) on Critical Safety Items (CSI) in full compliance with Defense Federal Acquisition Regulation Supplement (DFARS) 252.246-7003.

e) Records pertaining to all nonconformance information shall be made available to Buyer upon request.

f) The Supplier shall participate in the Government Industry Data Exchange Program (GIDEP) program in accordance with the requirements of the GIDEP S0300- BT-PRO-010 and S0300-BU-GYD-010.

The Supplier shall be responsible for monitoring and reporting GIDEP Alerts for impact to items delivered to Buyer, and shall take action to eliminate or mitigate any negative effect to an acceptable level.

The Supplier shall generate the appropriate failure experience data report(s) (GIDEP ALERT, GIDEP SAFE-ALERT, GIDEP Problem Advisory) whenever failed or nonconforming items are discovered during the course of the P.O.
5.4 Certificate Of Conformance

The Supplier shall provide a Certificate of Conformance (C of C) certifying that product conforms to the requirements of the Purchase Order. The C of C shall accompany each shipment on the P.O. and shall provide:

- The Supplier’s name and address
- Part Number and Revision Level (of the product or service being delivered)
- L-3 Purchase Order number and quantity shipped
- Serial Number or other unique identification information, as applicable
- Traceability information to the Original Equipment Manufacturer, if different than supplier
- Any exceptions to L-3 requirements must be clearly documented on the C of C (prior approval of shipment with noted exceptions must be in writing by the Buyer and a copy must accompany the shipment. Reference paragraph 5.3)

The C of C may be a separate document or included on the packing sheet. The Supplier’s Quality Representative or authorized delegate shall sign and/or stamp this document (an electronic signature is acceptable).

The Supplier shall provide a complete Inventory List when delivering kits of parts.

5.5 First Article Inspection

a) The Supplier shall conduct First Article Inspection that meets the requirements of AS9102 for any parts built to Buyer’s specifications, including modifications to COTS parts. The Supplier shall use a representative item from the first production run of a new product to verify that the production processes, production documentation, and tooling have the capability to produce products that meet established requirements. This is defined as one or more parts that are the result of a planned process designed to be used for future production of these same parts. This process shall be repeated, when changes occur that invalidate the original results (e.g., engineering changes, manufacturing process changes, tooling changes, lapse in production for 2 years).

Unless required in the PO, this requirement does not apply to:

- Development and prototype parts that are not considered as part of the first production run
- Unique single run production orders, not intended for ongoing production (e.g., out-of-production spares)
- Procured standard catalogue items, COTS, or deliverable software

Note: Forms other than those contained in the AS9102 Appendix may be used; however they must contain all “Required” and “Conditionally Required” information and have the same field reference numbers.

b) The Supplier shall include a copy of the FAI report with the delivery of the PO line item.

5.6 Acceptance Test Report

If the Supplier performs acceptance testing in fulfillment of PO requirements, then the Supplier shall include a copy of the Acceptance Test Report with the delivery of the PO line item.
5.7 Change or Information Request (CIR)

If the Supplier has difficulty with a technical issue or interpretation of requirements during the manufacturing process, or with the contractual requirements of the P.O., a Change or Information Request (CIR), Buyer Form SLC-9012 can be initiated by the Supplier to request assistance. CIRs are not to be used to disposition, or request disposition of, nonconforming material. CIR Forms are accessible via the CSW Supplier website, and can also be obtained from your CSW Procurement Representative.

5.8 No Changes Without Approval

Changes in materials, processes, procedures, design interfaces, or software which affects the form, fit, function, safety, reliability, maintainability, testing, weight, or any other requirement or specified/implied/advertised characteristic of the product or service being delivered shall not be made without prior written approval from the Buyer. Supplier shall submit approval requests to the Buyer using Change/Information Request form SLC-9012.

5.8.1 Relocation/Transfer of Work

The location of manufacturing shall be the Supplier’s facility address referenced on Buyer’s P.O. The Supplier shall not subcontract for the design, fabrication, or procurement of the whole or any substantial part of the work specified in the P.O. without the prior written approval of CSW. The Supplier shall notify their Procurement Representative in writing within 60 days prior to the change occurring. Relocation of this work to a different facility, division, affiliate, or subsidiary of the Supplier’s company shall be submitted for approval to L-3 CSW Supplier Quality Engineering prior to relocation of the work. In the event of a relocation/transfer of work, requalification of processes may be required.

5.9 Right of Entry

Buyer, its customer, and/or their authorized inspection agency or regulatory authorities shall have the right to send representatives to the Supplier’s and its subcontractors facilities on a non-interference basis to determine product and/or process compliance with requirements of the P.O. or this SQR document.

Without additional charges, the Supplier and/or their subcontractor shall make their facility and applicable records available for these activities and provide all reasonable support for the safety and convenience of these representatives during their stay at the Supplier’s and/or their subcontractor’s plants and facilities. This includes accommodations for any inspection and product acceptance activities at the supplier’s and/or their subcontractor’s plants and facilities.

5.10 Product Release

Buyer inspection requirements are stated in the P.O. and consist of the following types:

a) Receiving Inspection at Buyer’s Facility
Deliverable product(s) are subject to Buyer inspection and acceptance upon receipt at Buyer’s facility.

b) Government Source Inspection
Deliverable product(s) are subject to U.S. Government and Buyer inspection and acceptance during the performance of the purchase order prior to shipment.

c) Government Surveillance
The U.S. Government and the Buyer reserves the right to perform surveillance of a Supplier’s quality and/or manufacturing operation during the performance of the Purchase Order at the Supplier’s facility.

d) Buyer Source Inspection
Deliverable product(s) are subject to Buyer source inspection and acceptance at the Supplier’s facility. Unless otherwise specified in the contract, the Supplier shall notify their Procurement Representative and Supplier Quality via form SLC-9020-1, Source Inspection Request, at least three weeks in advance of scheduled “in process” or “final” source inspection date.

All shipping documentation and documentation provided to show evidence of conformity to purchase order and SQR requirements shall be made available at the time of source inspection.

Note: Verifications and inspections accomplished by Buyer, its customer or the Government shall neither be used as evidence of effective control of quality by the Supplier nor shall they preclude subsequent rejection by the Buyer.

5.1 Records

The Supplier shall control and retain all required records as objective evidence of conformance to requirements of both the Purchase Order and this SQR document. The Supplier shall make records available to Buyer upon request within three business days and at no additional cost. Records shall be retained for a period of 7 years from the time of final P.O. payment.

Where practical, the preferred medium for records is in electronic format. Correction or alternation of records may be made providing the corrections are clearly identified, such as single line strikethrough that is signed/dated by an authorized individual (e.g. do not use white out, correction tape).

Records shall include traceability information from procured material to manufacturing, assembly, and tests and inspections of product delivered to CSW necessary to determine authenticity and conformance to P.O. requirements.

5.12 Corrective and Preventive Action

The Supplier shall maintain a documented system for managing Continuous Process Improvement and determining Root Cause and Corrective Action, where required.

The Supplier shall respond to all Buyer Supplier Corrective Action Requests (SCAR), to include containment, impact to delivered product, Root Cause, Corrective Action, and measured effectiveness of actions taken, within the timeframe identified on the SCAR. Failure to respond within the allotted timeframe or an unacceptable response may impact both Supplier’s rating and approval status.

5.13 Foreign Object Debris/Damage (FOD)

To preclude introduction of foreign objects into any deliverable item, the Supplier shall maintain a documented FOD prevention program appropriate to the commodity provided to CSW. This program shall follow NAS 412 as a guide.

As part of a comprehensive FOD prevention program, it is expected that the Supplier includes operations designed to verify removal and accountability of all items used for masking (e.g. tape, cap, or other masking material) in their work sequence/planning processes.
5.14 Supplier Sub-tier Control

The Supplier is responsible for ensuring items procured from its subcontractors conform to all requirements of the Buyer purchase order, and shall ensure all applicable provisions of this document are flowed to its subcontractors, including copies of the latest process specification revision(s), records retention, QMS, counterfeit parts, Special Processes, No changes without approval, and FOD prevention, at a minimum.

The Supplier is responsible for ensuring items procured from its subcontractors conform to all requirements of the applicable Buyer commodity requirements. Sub-tier special process and calibration service suppliers shall be compliant to the requirements of Paragraph 5.1 above.

5.15 Calibration System, Measuring and Test Equipment (M&TE)

The Supplier shall provide and maintain gages and other measuring and testing devices necessary to assure that product(s) conform to the technical requirements. Inspection and test equipment shall be calibrated and maintained in accordance with a nationally or internationally recognized standard (i.e. ISO 17025, ANSI NCSL Z540 or ISO 10012). When required, the Supplier’s measuring and test equipment shall be made available for use by the Buyer’s representative to determine conformance of product(s) with P.O. requirements. In addition, if conditions warrant, the Supplier’s personnel shall be made available for operation of such devices and for verification of their accuracy and condition. Control and calibration of tooling and M&TE furnished by the Buyer shall be the responsibility of the supplier.

5.16 Shelf Life Control

If the Supplier provides material subject to shelf life control, then the Supplier shall submit shelf life information including manufacturer’s lot/batch number or date code and expiration date with their PO delivery.

If the Supplier utilizes shelf life material subject to degradation or deterioration over time, the supplier shall establish a shelf life and storage control program to ensure that no material which has exceeded its shelf life is used in the assembly of L-3 product.

5.17 Packaging, Preservation, and Storage

Finished parts shall be adequately protected in accordance with best commercial practices to prevent damage during handling, shipment, and storage. Parts shall be individually wrapped, bagged, or otherwise protected to prevent part-to-part contact/damage when packaged within a larger pack. Special handling, shipping, and storage requirements will be delineated in the applicable Procurement documents. ESD precautions shall apply, as applicable by commodity being provided.

Anti-Static and Static Dissipative packing material must comply with the Contact Corrosivity Testing in accordance with MIL-STD-3010 Method 3005 (formerly Federal Standard 101, Method 3005). This anti-static and static dissipative packing material may not be used in direct contact with Optics and Polycarbonates.

5.18 Tooling Requirements

Special tooling (supplier manufactured or CSW furnished) critical to process or used as a media of inspection, must be described in the Supplier’s process. Process tooling shall be subject to periodic
inspection to ensure it is still capable of producing conforming product. The tools used for inspection must be controlled as part of the supplier’s calibration system prior to use in production.

5.19 Incorporation of Commercial Item

When incorporating a Commercial Item into L-3 CSW delivered hardware, the Supplier shall ensure the hardware’s technical, design, construction, and licensing requirements are verified and validated.

5.20 Identification Marking

Identification marking (also called part marking) is required for all products being delivered to CSW. Where the drawing clearly specifies the pertinent part marking requirements, the Supplier shall mark the parts in accordance with the drawing; otherwise identification marking shall be as described below:

a) Products Manufactured To CSW Engineering Drawings (e.g. build-to-print).

Parts described by these drawings shall be marked with the following minimum information:

- Design activity CAGE code (06401)
- Part number with suffix (e.g. 60090485-000)
  Note: The “-000” suffix format is from part numbers assigned in CSW legacy system. Newer CSW part have no suffix (e.g. 1000402017).
- Serial number or other traceability number, as applicable
- Part revision letter
- The letters “MFR” followed by the manufacturer’s CAGE code, entered on a line below the other required information

Example Marking Label:

```
06401 60090485-000 SN 001 Rev. B
MFR - XXXXX
```

b) Products Manufactured To CSW Control Drawings (e.g. supplier retains design authority). These are identified with the word “Control” above the title block (e.g. Vendor Control, Source Control, or Procurement Control).

Parts described by these drawings shall be marked with the following minimum information:

- Part number with suffix (e.g. 60090485-000)
  Note: The “-000” suffix format is from part numbers assigned in CSW legacy system. Newer CSW part have no suffix (e.g. 1000402017).
- Serial number or other traceability number, as applicable
- Part revision letter

Example Marking Label:

```
60090485-000 SN 001 Rev. B
```
When products cannot be marked due to lack of marking space or the marking would have a deleterious effect on the product, the marking shall be applied to a supplemental container (i.e. bag, box, etc.), or via an attached tag. This marking will contain the same nomenclature as shown above if it is the only means of providing product identification.

5.21 Counterfeit Part Mitigation

The Supplier shall maintain a Counterfeit Part risk mitigation process internally, and with its suppliers, using SAE AS5553 as a guide. Supplier shall provide evidence of their risk mitigation process upon request.

The Supplier shall provide unique traceability identifiers (i.e. Date Code / Lot Code, Serial numbers) for all items delivered to L3 which contain an item procured from sources other than Original Equipment Manufacturer or Original Component Manufacturer or their Authorized Distributors.

The Supplier shall not provide electronic components, or assemblies containing electronic components, procured from Independent Distributors without prior approval from Buyer. When prior approval is issued by the Buyer, only L-3 CSW authorized independent distributors may be used. Completion of L-3 CSW prescribed counterfeit risk mitigation testing will be required prior to the use of all products from independent distributors.

5.22 Maintenance, Repair and Overhaul (MRO)

The Supplier shall evaluate, diagnose, effect repairs required from Buyer, and conduct all necessary inspections and tests to correct the reported functional failure for each item that is returned.

The Supplier shall provide a complete Diagnosis & Repair Report that fully describes the following:
- all evaluation and troubleshooting steps
- all work performed
- results of all inspections and tests undertaken

Should the Supplier be unable to duplicate/confirm the reported functional failure they shall contact the Procurement Representative to establish a dialog with a program technical representative for further direction prior to returning the item. If Buyer agrees to have the item returned as Could Not Duplicate (CND), the Supplier shall note the CND condition on the Diagnosis & Repair Report.

5.23 Prohibited Materials

Unless otherwise specified on the drawing or P.O., the use of zinc, cadmium, mercury, or pure tin (>97% Sn) is expressly prohibited.
### Revision Record

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Primary Change Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>07-28-2010</td>
<td>Initial Release</td>
</tr>
<tr>
<td>01</td>
<td>10-12-2011</td>
<td>Added clarification to several sections. Added Incorporation of Commercial Product to Section 2. Added Lead-Free finishes to section 2.15. Added record to section 2.17c. Added Counterfeit parts to section 2.20. Updated date for AS9100/ISO 9001 registration in section 2.1. Modified Table numbers and placements. Modified Specifications and Standards. Changes are indicated with blue text.</td>
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<tr>
<td>02</td>
<td>11/8/2011</td>
<td>Modified Section 3.3. Changes are indicated with blue text.</td>
</tr>
<tr>
<td>03</td>
<td>08/28/2012</td>
<td>Modified several sections throughout. Changes are indicated with blue text.</td>
</tr>
<tr>
<td>04</td>
<td>12/6/2012</td>
<td>Updated oversight and requirements for special processes. Changes are indicated with blue text.</td>
</tr>
<tr>
<td>05</td>
<td>02/03/2015</td>
<td>Modified and updated to coincide with SAP</td>
</tr>
<tr>
<td>06</td>
<td>01/07/2016</td>
<td>Complete rewrite and reformatting</td>
</tr>
<tr>
<td>NA</td>
<td>01/17/2017</td>
<td>Updated hyperlinks throughout and removed reference to SLC-3892 in section 5.3.a. No revision upgrade necessary.</td>
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