

Work Instruction

Procedure Number: **WI-02-01-02**

Subject: **Counterfeit Part Risk Mitigation Plan**

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Issued By: Director of Quality Assurance

Approved By: Signed Original on File Effective: 02/17/10
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Approved By: Signed Original on File Effective: 02/17/10
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Issued By: Counterfeit Parts Subject Matter Expert

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NOTICE: *This document may be one of the select L-3 Electrodynamics' Quality Management System documents residing on our website. Please take this consideration accordingly when updating this procedure.*

1.0 Purpose

The purpose of this work instruction is to document the necessary avoidance, detection, mitigation, and disposition processes to prevent counterfeit parts, especially active or passive electronic components (A/PECs), from entering into our customers' supply stream, thereby enabling the fulfillment of our customers' requirements, and continued customer satisfaction.

This work instruction establishes and documents counterfeit parts risk mitigation methods to enable:

- a. Maximizing the availability of authentic parts,
- b. Procuring parts from reliable sources,
- c. Avoiding / mitigating the risks associated with procuring parts from independent distributors,
- d. Assuring authenticity and conformance of procured parts,
- e. Controlling parts identified as counterfeit, and
- f. Reporting counterfeit parts to other potential users and Government investigative authorities.

This procedure was developed and promulgated in support of L-3 Communications Corporate Material and Quality Operating Procedure, [MOOP-001](#) (Counterfeit Parts Risk Mitigation), SAE AS5553 (Counterfeit Electronic

Parts; Avoidance, Detection, Mitigation, and Disposition), Federal Aviation Administration (FAA) Advisory Circular [AC 21-29](#) (Detecting and Reporting Suspected Unapproved Parts), and [WI-02-01-03](#) (FAA Requirements Compliance Plan).

Furthermore, this work instruction complements L-3 EDI's existing third-party, certified AS9100 Quality Management System procedures as documented in [6008725](#), specifically in support of L-3 EDI's [QOP-02-01](#) (Development of Quality Plans) as a methodology to be used to facilitate achieving customer expectations and satisfaction per [QOP-03-06](#) (Customer Satisfaction).

2.0 Scope

While L-3 EDI's Quality Management System (QMS) procedures serve to satisfy the prevention and detection of counterfeit parts in general, in recent years, the increased levels of effort and sophistication of electronic part counterfeiters has, in particular, plagued the aerospace and defense electronics industry and their contractors, such as L-3 EDI. To counter this elevated risk to L-3 EDI and our customers, this procedure was written to primarily elevate L-3 EDI's QMS procedures regarding the counterfeit electronic part threat plaguing our industry.

This procedure shall be used when procuring A/PECs that are later sold to our customers either as-is or incorporated into an end-item/finished good (a.k.a. Production Part per [QOP-06-01](#) and [QOP-06-02](#)), regardless whether such parts are procured as discrete items, or as integrated into electronic assemblies or equipment from independent distributors or contract manufactures (a.k.a. subcontractor manufacturers), respectively.

While the primary focus of this procedure is mitigating the risk to acceptable levels in relation to counterfeit A/PECs, this shall not preclude this procedures usage and tailoring to manage the risk of counterfeit parts of other commodities from entering into L-3 EDI's customers' supply chain.

It is beyond the scope of this procedure to cover the guidance and requirements material found in existing industry, military, federal, or regulatory publications; however, this procedure was developed to support and supplements such publications. Consequently, it is incumbent on the reader, as may be appropriate, to perform their due diligence and become adequately versed in the content of the documents cited herein. In addition to the FAA documents cited in [6.0](#) (Requirements), the following counterfeit part related documents may be of general interest on this subject matter:

- [AC 20-62](#) Eligibility, Quality, and Identification of Aeronautical Replacement Parts
- [Order 8120.2](#) Production Approval And Surveillance Procedures
- [Order 8120.16](#) Processing Reports of Suspected Unapproved Parts

3.0 Responsibility and Authority

- **Design and Development** - Pursuant to L-3 EDI's design and development process as documented in [QOP-04-01](#) (Design Control) and [QOP-04-04](#) (Sustaining Engineering), and especially as documented in [WI-04-01-02](#) (Reliability, Maintainability, and Safety Management Plan Guidelines), [WI-04-01-07](#) (Parts Management Plan), and [WI-04-01-08](#) (Parts Obsolescence Management Program), the Components and Systems Product Groups' Design Engineers supported by SPG Components Engineering are responsible to select A/PECs for the intended application with a primary consideration being given to select A/PECs that have a sufficient product life-cycle remaining in support of production and customer demands.
- **Post-Design Stage Life-Cycle Management** - The SPG Reliability or Component Engineers are responsible to proactively manage the life-cycle of A/PECs and alert the affected functions within L-3 EDI of potential Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.
- **Supplier Approval** - The Supplier Quality Manager is responsible to survey suppliers, approve suppliers, and to monitor their performance, especially, in the context of this procedure, electronic Independent Distributors, electronic sub-contract manufacturers and equipment manufacturers who procure their own A/PEC's, and electronic component test service providers, in accordance with this procedure and [QOP-06-01](#) (Supplier Selection, Approval and Monitoring).
- **Purchase Order Counterfeit Part Flow-Down Requirements** - The applicable product line or program Quality Assurance Engineers as documented in [WI-09-01-05](#) (Procedure for Part Maintenance in Visual) are responsible to specify for flow-down the applicable counterfeit-part-related quality requirements to suppliers of L-3 EDI's "Production Parts".
- **Procurement** - The Product Group Manufacturing Managers and their Buyers are responsible for procuring items or services. Especially in the context of this procedure, procurements from electronic Independent Distributors, electronic sub-contract manufacturers and equipment manufacturers who procure their own A/PEC's, and electronic component test service providers, shall be in accordance with this procedure and [QOP-06-02](#) (Purchase Order Generation).
- **Quality Planning** - The Quality Assurance Engineers (QAEs) are primarily responsible for the generation of Inspection and Test Procedures as specified in [WI-10-01-11](#) (Inspection Procedures) and [QA-182](#) (Test Procedure Document, Generation, Release and Management), respectively. As such, the QAEs shall initiate these documents in such a manner that will maximize the potential for detecting counterfeit parts and thereby minimizing the potential risk of counterfeit parts from entering our customers' supply chain.

- **Inspection and Test** - Inspection and test personnel are responsible to initiate and execute the necessary inspection and test procedures to prevent A/PEC counterfeit parts from entering into L-3 EDI's customers' supply stream. Specifically in the context of this procedure, this includes A/PEC's and assemblies containing A/PEC's procured from electronic Independent Distributors, and electronic sub-contract manufacturers and equipment manufacturers who procure their own A/PEC's in accordance with this procedure and [QOP-10-01](#) (Inspection and Testing). The responsibility for detecting suspect parts/counterfeit parts and preventing them from entering our customers' supply chain primarily lies with Receiving Inspection, and secondarily with manufacturing inspection and test personnel.
- **Counterfeit Part Subject Matter Expert (CP SME)** - See [6.3](#).

4.0 Referenced Documents

The following documents are directly associated with the application of this work instruction . They form a part of this document to the extent specified herein, or provide relevant information. For dated references or those identified with a specific revision, only the edition cited applies. For un-dated references, the latest edition of the document, including any amendments, applies unless otherwise specified by contract, purchase order, or other authorizing document.

The requirements of this document are intended to supplement the requirements of L-3 EDI's AS9100 Quality Manual, [6008725](#). They are not intended to stand alone, supersede, or cancel requirements found in other L-3 Communications Corporate, or L-3 EDI subordinant procedures, such as Quality Operating Procedures (QOPs) or Work Instructions (WIs), or requirements imposed by contracting authorities, or applicable laws and regulations, unless an authorized exemption/variance has been obtained.

4.1 Government and Regulatory

4.1.1 Federal Aviation Administration (FAA)

AC 00-58	Voluntary Disclosure Reporting Program
AC 20-62	Eligibility, Quality, and Identification of Aeronautical Replacement Parts
AC 21-29	Detecting and Reporting Suspected Unapproved Parts
Form 8120-11	Suspect Unapproved Parts Report
Order 8120.2	Production Approval And Surveillance Procedures

4.1.1 Military Standards

MIL-STD-202	Test Method Standard for Electronic and Electrical Component Parts
MIL-STD-750	Test Method Standard for Semiconductor Devices

MIL-STD-883

Test Method Standard for Microcircuits

MIL-STD-1580

Destructive Physical Analysis for Electronic, Electromagnetic, and Electromechanical Parts

4.2 Industry

4.2.1 [IDEA](#)

IDEA-STD-1010

Acceptability of Electronic Components Distributed in the Open Market

4.2.2 [JEDEC](#)

JESD22-B107

Marking Permanency

JESD31

General Requirements for Distributors of Commercial and Military Semiconductor Devices

4.2.3 [SAE](#)

AS5553

Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition

AS9100

Quality Systems - Aerospace - Model for Quality Assurance in Design, Development, Production, Installation and Servicing

AS9120

Quality Management Systems - Aerospace Requirements for Stockist Distributors

4.3 L-3 Communications

4.3.1 L-3 Communications Corporate

[Form R & C](#)

Annual Supplier Representations and Certifications

[Fo-000254](#)

L-3 Supplier Questionnaire

[Fo-000255](#)

Standard Supplier On-Site Survey Form

[Fo-000260](#)

Counterfeit Mitigation Assurance Form

[MQOP-001](#)

Material and Quality Operating Procedure - Counterfeit Part Risk Mitigation

None

[Critical Supplier Financial Risk Assessment](#)

None

[Supplier Capabilities & Risk Assessment](#)

[Policy No. 703](#)

Hiring or Using Debarred or Suspended Individuals or Entities

4.3.2 L-3 EDI

[Form 0208](#)

Counterfeit Risk Mitigation Procurement Plan (CRiMPP)

[Form 1002](#)

Supplier Quality Assurance Requirements (SQARs)

[QA-027](#)

Inspection History Folder Description Use and Execution

[QA-064](#)

Workmanship Elements

QA-182	Test Procedure Document, Generation, Release and Management
QOP-02-01	Development of Quality Plans
QOP-03-01	Contract Review - Components Products Group
QOP-03-02	Contract Review - Systems Products Group
QOP-03-06	Customer Satisfaction
QOP-04-01	Design Control
QOP-04-04	Sustaining Engineering
QOP-06-01	Supplier Selection, Approval and Monitoring
QOP-06-02	Purchase Order Generation
QOP-08-01	Product Identification and Traceability
QOP-09-01	Process Control
QOP-09-04	Work Environment
QOP-10-01	Inspection and Testing
QOP-13-01	Control of Nonconforming Product
QOP-14-01	Corrective and Preventive Action
QOP-15-01	Handling, Storage, Packaging, Preservation, and Delivery
QOP-16-01	Control of Quality Records
QOP-17-01	Internal Quality Audits
QOP-18-01	Training
QOP-19-01	Warranty
TC-02-001	WI-02-01-02 Counterfeit Parts Training Course
WI-02-01-03	Federal Aviation Administration Requirements Compliance Plan
WI-04-01-02	Reliability, Maintainability, and Safety Management Plan Guidelines
WI-04-01-07	Parts Management Plan
WI-04-01-08	Parts Obsolescence Management Program
WI-06-01-01	Supplier Performance Assessment
WI-06-01-02	Supplier Approval and Maintenance
WI-06-02-02	SQAR Application Guidelines
WI-06-02-03	Creating Purchase Requisitions and Purchase Orders in ERP
WI-09-01-05	Procedure for Part Maintenance in Visual
WI-10-01-11	Inspection Procedures
6008725	Quality Manual

5.0 Definitions and Acronyms

- **“Approved Parts”** – In the context related to the FAA, see FAA [AC 21-29](#) (Detecting and Reporting Suspected Unapproved Parts) for its definition.
- **A/PEC** – Active or Passive Electronic Component
- **Active Electronic Component (a.k.a. Active Electronic Device or Active Device)** - An Active Electronic Component is any type of *Electronic Component* that has the ability to electrically control electron flow (e.g., that have gain or directionality). Components that typically fall in this category are Integrated Circuits (ICs). Electronic components incapable of controlling electron flow are called *Passive Electronic Components*.
- **Authorized Distributor** - A distributor, reseller or aftermarket supplier who is franchised or authorized by the *Original Component Manufacturer (OCM)* or *Original Equipment Manufacturer (OEM)* via contractual bond between the OCM/OEM and the distributor. In contrast to an *Independent Distributor*, an Authorized Distributor typically receives the product for resale directly from the OCM/OEM. An Authorized Distributor is also known as a Franchised Distributor.
- **Broker** - See *Independent Distributor*.
- **Commercial and Government Entity (CAGE) Code** - A [CAGE Code](#) is a five (5) position code that identifies companies doing or wishing to do business with the Federal Government.
- **Counterfeit Part (CP)** - For purposes of the context as described herein, a counterfeit part is an A/PEC that is a copy or a substitute part without the legal right or authority to do so; or a part whose material, performance, or characteristics are knowingly misrepresented by the supplier or subcontract manufacturer.

Examples of counterfeit parts include, but are not limited to:

- Parts which do not contain the proper internal construction (die, manufacturer, wire bonding, etc.) consistent with the ordered part.
- Parts which have been used, refurbished or reclaimed, but represented as new product.
- Parts which have different package style or surface plating/finish than the ordered parts.
- Parts which have not successfully completed the OCM's/OEM's full production and test flow, but are represented as completed product.
- Parts sold as up-screened parts, which have not successfully completed up-screening.
- Parts sold with modified labeling or markings (e.g. OCM/OEM part number & logo, date code, etc.) intended to misrepresent the part's form, fit, function, or grade as defined per Government, industry-accepted or OCM/OEM published specifications, or national consensus standards.

- In the context related to the FAA, parts made or altered to imitate or resemble an "Approved Part" without authority or right, and with the intent to mislead or defraud by passing as original or genuine.

Parts that are not generally considered counterfeit are those whose characteristics or specifications have been modified, but not knowingly misrepresented, such as refinished, up-screened, or up-rated parts.

NOTE

It is a recommended practice to NOT use the term "counterfeit" by itself unless the OCM/OEM of the A/PEC states that they have determined the product is counterfeit in writing. Instead condition the term "counterfeit" with the word "suspect", meaning that based on the expertise that resides within L-3 EDI and/or with 3rd party evaluators, it is suspected that the part may indeed be counterfeit. (See "Suspect Part").

- **Counterfeit Part Subject Matter Expert (CP SME)** - See [6.3](#).
- **DMSMS** - Diminishing Manufacturing Sources and Material Shortages.
- **ERAI** - [Electronic Reseller Association International](http://www.era.com) is an international trade association/service organization that maintains a global database of counterfeit and substandard parts. This service organization also works with distributors and their customer community to educate and implement processes to prevent counterfeit practices. ERAI performs the following duties:
 - monitors, investigates, reports and mediates issues affecting the global supply chain,
 - unites OCMs/OEMs, CMs, Distributors (mostly non-franchised to date), government and other industry associations,
 - provides risk mitigation on substandard and counterfeit parts, suppliers and customers,
 - screens Bills of Materials (BOM) for counterfeit and/or substandard parts, and
 - screens distributors for any counterfeit delivery issues.

L-3 Communications has a corporate membership with ERAI. The website is: <http://www.era.com>. The Membership ID is: **L-3Com** and the Password is: **CPT**. Neither is case sensitive.

- **Electronic Component** - An electronic component is a basic electronic element usually packaged in a discrete form with two or more connecting leads or metallic pads. Components are intended to be connected together, usually by soldering to a printed circuit board, to create an electronic circuit with a particular function (for example an amplifier, radio receiver, or oscillator). Components may be packaged singly (resistor, capacitor, transistor, diode etc.) or in more or less complex groups as integrated circuits (operational amplifier, resistor array, logic gate etc.).

Electronic components are typically sub-typed as either an *Active Electronic Component* or a *Passive Electronic Component*.

- **Franchised Distributor** – See *Authorized Distributor*.
- **GIDEP** - [Government-Industry Data Exchange Program](#) (GIDEP) is a cooperative activity between government and industry participants seeking to reduce or eliminate expenditures of resources by sharing technical information essential during research, design, development, production and operational phases of the life cycle of systems, facilities and equipment.
- **IDEA** - The [Independent Distributors of Electronics Association](#) (IDEA) is a non-profit trade association representing quality and ethically oriented independent distributors of electronic components. The purpose of IDEA is to promote the independent distribution industry through a media advocacy campaign, to improve the quality of products and services through a quality certification program, educational seminars, and conferences, and to promote the study, development, and implementation of techniques and methods designed to improve the business of independent distributors.
- **Independent Distributor** – In contrast to an Authorized Distributor (a.k.a., a Franchised Distributor), an Independent Distributor (a.k.a. Broker) is a distributor that does not typically have limiting contractual agreements or obligations with OCMs/OEMs.

Independent Distributors generally operate as follows:

- Purchase excess inventories from end users with the intention to sell and redistribute back into the market. End users are typically OCMs/OEMs, contract manufacturers or other independent distributors at locations all over the world, and
- Subsequently sell (re-distribute) the parts from these excess inventories to fulfill inventory shortages of hard-to-find, obsolete, and competitively-priced parts.
- **Original Component Manufacturer (OCM)** – For purposes of the context as described herein, the electronic business entity that originally made the A/PEC or its succeeding business entity in the case where the original entity was purchased. Dependent upon the part type, the OCM name, logo, or CAGE code, or other distinguishing feature is typically observable on the A/PEC. Sometimes as a misnomer an OCM may be referred to as an OEM or Original Equipment Manufacturer, which is typically synonymous with OCM.

- **Original Equipment Manufacturer (OEM)** – For purposes of the context as described herein, see *Original Component Manufacturer (OCM)*.
- **Passive Electronic Component (a.k.a. Passive Electronic Device or Passive Device)** – A Passive Electronic Component is any type of *Electronic Component* that does NOT have the ability to control electron flow (e.g., via gain or directionality). Resistors, capacitors, inductors, and transformers are all considered Passive Electronic Components. (Note: Electronic Components capable of controlling electron flow are called Active Electronic Components).
- **Production Item** – Raw materials, discrete parts (a.k.a. piece parts), assemblies (i.e., sub-assemblies and final assemblies), or finished goods/product that is included in an end item, in whole or in part (regardless of the form/state in which that it was originally procured in comparison to which it is sold in), which is sold to a customer. This includes such items as: plastic or metal stock material, adhesives, paint thinner, thread locking compound, adhesion promoting solutions (the type not washed away), welding rods, solder, flux, printed wiring boards (PWB), PWB/circuit board assemblies, conformal coating, screws, castings, electronic components, labels, etc. This typically excludes such items as manufacturing/shop supplies: cleaners, gloves, stirring sticks, etc.
- **Substandard Part** – Reclaimed scrapped components and materials. May actually be the part ordered that has been previously used and installed in other equipment misrepresented by the supplier.
- **Suspect Part (SP)** – A part in which there is an indication by visual inspection, testing, or other information that it may not conform to legal, established government or industry-accepted specifications or national consensus standards, or one who's documentation, appearance, performance, material, or other characteristics, in part or collectively in whole, may have been misrepresented by the supplier or OCM/OEM.

For the purpose of this procedure, this also includes the FAA's term Suspect Unapproved Part Part (SUP).

- **Suspect Unapproved Part (SUP)** – In the context related to the FAA, see FAA [AC 21-29](#) (Detecting and Reporting Suspected Unapproved Parts) for its definition.
- **Unapproved Part** – In the context related to the FAA, see FAA [AC 21-29](#) (Detecting and Reporting Suspected Unapproved Parts) for its definition.

6.0 Requirements

6.1 General

The requirements below shall compliment and support L-3 EDI's existing third-party certified AS9100, bid and proposal, design and development, procurement, inventory management, production, nonconforming material control, and sustainment documented processes.

The most effective approach to mitigate the risks associated with counterfeit parts is to implement and execute proactive methodologies such as appropriate avoidance, detection, mitigation, and disposition methodologies as those specified below.

6.2 L-3 Communications Corporate Counterfeit Parts Policy and Webpage

To facilitate L-3 Communications divisions to deploy adequate Counterfeit Part Risk Mitigation policies and procedures, L-3 Communications Corporate has:

- Developed [MQOP-001](#) (Counterfeit Parts Risk Mitigation), that is mandatory compliance for all L-3 Communications divisions,
- Created a Counterfeit Parts Team consisting of Subject Matter Experts (SME's) from various L-3 Communications divisions, and
- Developed an [Intranet Counterfeit Parts Website](#) consisting of useful and timely information regarding Counterfeit Parts, such as:
 - A list of Independent Distributors that have been reviewed and approved by L-3 Communications divisions based upon surveys and/or historical data. This list contains critical information on each distributor that includes contact information, certifications, survey status, risk mitigation processes, test facilities used for part authenticity, test facility capabilities, etc. (Please note that use of these distributors does not guarantee pristine parts; precautions listed in this procedure must still be followed).
 - Presentations and industry information on the counterfeit problem.
 - Lessons learned from counterfeit experiences across L-3 Communications divisions.
 - Inspection and Test risk mitigation methods and procedures.
 - Counterfeit Parts Prevention Model that illustrates L-3 Communications procurement flow and risk mitigation flow to prevent counterfeit parts.
 - Contact information for L-3 Communications subject matter experts on Counterfeit and Substandard Parts.

The L-3 Communications [Intranet Counterfeit Parts Website](#) may be accessed from the Material Management or Quality Management homepages. Since counterfeit parts is an ever growing industry and L-3 concern, this website is updated frequently to try to stay a step ahead on this issue, therefore it is recommended that this website be saved to one's Microsoft ® Internet Explorer *Favorites* and periodically checked for updates and developments.

6.3 L-3 EDI Counterfeit Parts Subject Matter Expert

L-3 EDI shall have a designated Counterfeit Parts Subject Matter Expert (CP SME). As of the promulgation of this procedure, a representative from SPG Components/Reliability Engineering has been designated as L-3 EDI's CP SME.

The primary responsibility of L-3 EDI's CP SME(s) shall be:

- to maintain currency on the FAA's [Suspect Unapproved Parts \(SUP\) Program](#), and its related procedures and [Unapproved Parts Notifications \(UPN's\)](#);
- to maintain currency on CP-related matters in industry;
- to provide information to L-3 EDI's management and affected process owners and stakeholders regarding current /emerging CP matters;
- to facilitate the development and execution of L-3 EDI's risk mitigation strategies, especially pursuant to new and/or emerging CP threats;
- to establish the necessary CP-related training materials and/or courses;
- maintain a centralized repository of CP-related documents for reference purposes, and
- to ensure adequate CP training of process owners and stakeholders.

Currency in industry CP matters may be maintained via such actions as:

- Reviewing current CP articles and presentations from such sources as other prime defense contractors; quality and/or reliability trade publications; government investigative authorities, law enforcement, statutory and regulatory (e.g., the FAA) agencies; L-3 Communications [Intranet Counterfeit Parts Website](#), etc.
- Actively participating in L-3 Communications corporate-sponsored Counterfeit Parts Team and/or other industry or customer CP forums, and
- Having membership in and/or periodically reviewing pertinent information and notifications published by [IDEA](#), [ERAI](#), [GIDEP](#), and the [FAA](#).

6.4 Bid and Proposal Process

During L-3 EDI's bid and proposal development process as documented in [QOP-03-01](#) (Contract Review - Components Products Group) and [QOP-03-02](#) (Contract Review - Systems Products Group), adequate consideration by the responsible parties as specified herein should be given and incorporated into L-3 EDI's bid or proposal, as may be applicable.

6.5 Part Selection and Part Availability Management

The information contained in this document does not contain "technology" as defined by the General Technology Note in Export Administration Regulations (EAR) Supplement number 2 to Part 744 and is therefore considered as publicly released as defined in Part 734.7(4).

L-3 EDI shall proactively select A/PECs and manage their Diminishing Manufacturing Sources and Material Shortages (DMSMS) in accordance with [WI-04-01-07](#) (Parts Management Plan), and [WI-04-01-08](#) (Parts Obsolescence Management Program) during all phases of L-3 EDI's product life cycle, as applicable, including, but not limited to:

- a. Design and development,
- b. Production, and
- c. Post-production / sale.

6.6 Product Identification and Traceability

Product identification and traceability shall be in accordance with [QOP-08-01](#) (Product Identification and Traceability).

6.7 Supplier Selection, Approval and Monitoring

In accordance with [QOP-06-01](#) (Supplier Selection, Approval and Monitoring) and [WI-06-01-02](#) (Supplier Approval and Maintenance) and as further detailed in [Figure 1](#) and herein, L-3 EDI shall conduct a supplier survey of the Electronics Independent Distributor, and electronic assembly/ equipment manufacturers providing items (e.g., circuit card / printed wiring /tabbing board assemblies or other electronic equipment) where the electronic components are procured by the subcontractor or the subcontractor's sub-tier suppliers.

When approving Electronics Distributors, L-3 EDI shall give preferential consideration to approved OCM/OEM-Authorized/Franchised Distributors. As may be necessary due to such situations as DMSMS, L-3 EDI may approve an Electronics Independent Distributor as shown in [Figure 1](#). If this is the case, then L-3 EDI shall give preferential consideration to approved [L-3 Approved Electronics Independent Distributors](#).

6.7.1 Electronic Independent Distributor Screening

The Electronic Independent Distributor, and when known, part number, shall be screened through second or third party entities, prior to supplier approval to identify any counterfeit or substandard part occurrences, or debarment actions. Such entities include, but shall not be limited to:

- [Excluded Parties Listing System \(EPLS\)](#) pursuant to Corporate Policy No. [703](#) (Hiring or Using Debarred or Suspended Individuals or Entities),
- [ERAI](#),
- [IDEA](#),
- [GIDEP](#),
- L-3 Communications [Intranet Counterfeit Parts Website](#), which contains a list of Independent Distributors that have been reviewed and approved by L-3 Communications divisions based upon surveys and/or historical data. This list contains critical information on each distributor that includes

contact information, certifications, survey status, risk mitigation processes, test facilities used for part authenticity, test facility capabilities, etc.

6.7.2 A/PECs Supplier Survey

L-3 EDI shall conduct a supplier survey of the Electronic Independent Distributor, and electronic assembly/ equipment manufacturers providing items (e.g., circuit card / printed wiring /tabbing board assemblies or other electronic equipment) where the electronic components are procured by the subcontractor or the subcontractor's sub-tier suppliers, and electronic component test service providers.

The type of survey(s) to be conducted shall be dependent upon a number of factors, such as, but not limited to:

- the parts criticality in its application and its associated price,
- the suppliers counterfeit part performance history available in the public domain (e.g., [GIDEP](#), [ERAI](#), [IDEA](#)) or L-3 Communications Intranet Counterfeit Parts Website,
- the Electronic Independent Distributor's membership in trade associations such as [ERAI](#) or [IDEA](#), with rigorous ethical, business, and quality standards specifically structured to avoid the acquisition and resale of counterfeit parts,
- the suppliers quality management system (e.g., AS9100 Quality Systems - Aerospace - Model for Quality Assurance in Design, Development, Production, Installation and Servicing, ISO 9001 (Quality Management System Requirements), AS9120 (Quality Management Systems – Aerospace Requirements for Stockist Distributors), JESD 31 (General Requirements for Distributors of Commercial and Military Semiconductor Devices)).
- the subcontractor's/equipment manufacturer's Counterfeit Part Risk Mitigation Plan based on AS5553 (preferred).

[Figure 4](#) and [Table 1](#) provide tools to facilitate assessing the level of risk and developing a commensurate supplier approval risk mitigation strategy which may include:

- Conductance of an on-site quality survey using [Fo-000255](#) (Standard Supplier On-Site Survey Form)
- Conductance of a [Supplier Capabilities & Risk Assessment](#),
- Conductance of a [Critical Supplier Financial Risk Assessment](#),

- Conductance of a Supplier Questionnaire using [Fo-000254](#) (L-3 Supplier Questionnaire) and/or,
- Conductance of a Electronics Independent Distributor Survey using [Fo-000260](#) (Counterfeit Mitigation Assurance).

Upon approval, the supplier shall be entered into L-3 EDI's Approved Supplier register per [WI-06-01-02](#) (Supplier Approval and Maintenance).

6.8 Electronics Procurement Process

6.8.1 General

The Procurement Process shall be in accordance with [QOP-06-02](#) (Purchase Order Generation) and [WI-06-02-03](#) (Creating Purchase Requisitions and Purchase Orders in ERP), and as further detailed in [Figure 2](#) and herein.

The Product Groups' purchasing functions shall only procure A/PECs and assemblies and equipment containing A/PEC's (e.g., circuit card/printed wiring/tapping board assemblies or electronic equipment) from L-3 EDI Approved Suppliers.

The Product Groups' purchasing and material management functions shall provide preferential consideration to procure A/PECs from the OCM/OEM, or from an OCM/OEM-Authorized Distributor to ensure:

- OCM/OEM warranty provisions,
- Product integrity via proper handling, storage and shipping procedures,
- Failure analysis and corrective action support, and
- Traceability via Certificates of Conformance (CofC's) and acquisition traceability.

Due to the ever-changing OCM/OEM and Authorized Distributor relationships, it is the responsibility of Purchasing to ensure that an item is procured from an L-3 EDI Approved Supplier, and specifically in the context of this procedure that the A/PEC is not procured from a source that can be classified as an Electronic Independent Distributor. Purchasing shall:

- a. Provide preferential consideration to procure A/PECs from the OCM/OEM or from an OCM/OEM-Authorized Distributor.
- b. Consult with the OCM/OEM or Authorized Distributor to confirm the candidate L-3 EDI Approved Distributor is authorized or franchised by the OCM/OEM to sell the specific item being procured.
- c. When necessary, procure A/PECs from an Electronic Independent Distributor. The procurement process shall be in accordance with [QOP-06-02](#) and as further detailed herein.

NOTE

In contrast to [6.8.1a](#), [6.8.1c](#) is the riskier alternative of the two. Consequently, it is essential that (a) adequate due diligence is exercised to confirm that there is no authorized distributor procurement alternatives, and (b) proper planning and risk mitigation (see [6.8.2](#)) is employed to prevent counterfeit parts from being procured and entering into the L-3 EDI's customers' supply stream.

6.8.2 Procurement Process

6.8.2.1 Quality Assurance Requirements Assignment and Flowdown

Quality Assurance Engineering is responsible to ensure the flowdown of the applicable quality requirements in accordance with [WI-09-01-05](#) (Procédure for Part Maintenance in Visual).

To facilitate the flowdown of quality assurance requirements, L-3 EDI's [Form 1002](#), Supplier Quality Assurance Requirements (SQARs), has pre-established Counterfeit Part requirements, as follows:

- a. SQAR Clause 1A, 1B, or 1C, as applicable, contains L-3 EDI's Suspect/Counterfeit/Substandard Parts/Items general requirements, including requiring electronic subcontract/equipment manufacturers who are procuring their own A/PECs to have a Counterfeit Risk Mitigation Plan modeled after AS5553 (preferred) for L-3 EDI's review and approval.
- b. SQAR Clause 3A requires OCM/OEM CofC and distributor's CofC to be supplied with shipment unless otherwise authorized in writing by L-3 EDI.

NOTE

SQAR Clauses 1A, 1B, or 1C, and 3A are designed to be specified on each production part purchase order as specified in [WI-06-02-02](#) (SQAR Application Guidelines).

6.8.2.2 Purchasing Risk Assessment Initiation

The Buyer shall:

- a. Perform the necessary due diligence to confirm the A/PEC is obsolete, or not readily available in support of L-3 EDI's required quantity, quality, delivery, and/or cost targets from the OCM/OEM and/or OCM/OEM-Authorized distributor(s).
- b. To mitigate the risks inherent in the procurement of discrete electronic components, assemblies, and equipment containing electronic components (e.g., circuit card / printed wiring /tabbing board assemblies or electronic equipment), [Form 0208](#) (Counterfeit Risk Mitigation Procurement Plan (CRiMPP)) shall be initiated for approval prior to PO's being placed in accordance with [QOP-06-02](#) (Purchase Order Generation) for the following types of suppliers:

- i. Distributors of electronic components, where the distributor is NOT an authorized or franchised distributor by the OCM/OEM for the item being procured,
- ii. Contract manufacturers, sometimes also referred to as subcontractors or subcontract manufacturers, where the manufacturer is procuring electronic components or assemblies in support of their internal assembly process,

--- OR ---

- iii. Equipment manufacturers, where the manufacturer is procuring electronic components or assemblies in support of their internal assembly/manufacturing process.
- c. Complete [Form 0208](#) (Counterfeit Risk Mitigation Procurement Plan (CRIMPP)) and provide to Supplier Quality Assurance and SPG Component/Reliability Engineering Risk Assessment for review, approval, and the development of a commensurate Risk Mitigation Strategy to mitigate the risks associated with the procurement by identifying / providing information such as the following, but not limited to:
- i. the justification for the procurement,
 - ii. the availability of the OCM/OEM CofC,
 - iii. the OCM/OEM manufacturer, part number, and date code/lot no.,
 - iv. the subcontractor or equipment manufacturers Counterfeit Part Risk Mitigation Plan based on AS5553 (preferred).

6.8.2.3 Component / Reliability Engineering and Supplier QA Risk Assessment and Mitigation Strategy Initiation

Component / Reliability Engineering and Supplier QA shall conduct a Counterfeit Part Risk Assessment, which should include, but not be limited to:

- a. Confirmation that the OCM/OEM was qualified to produce the electronic component at the time of the date code(s) of the A/PECs intended to procure, as applicable.
- b. Screen supplier and PN for any reported CP incidents in sources such as, but not limited to:
 - i. [EPLS](#)
 - ii. [ERAI](#) (Log In ID: L-3Com; Password: CPT),
 - iii. [IDEA](#),
 - iv. [GIDEP](#),
 - v. FAA [UPN](#) database, and/or
 - vi. L-3 Communications [Intranet Counterfeit Parts Website](#).
- c. Evaluate Supplier Performance data obtained via [WI-06-01-01](#) (Supplier Performance Assessment).

- d. Develop a commensurate Risk Mitigation Strategy, which shall include, but not be limited to:

Typical Risk Mitigation Strategies including:

- i. Requiring distributor and OCM/OEM CofC's for electronic parts purchased thru distribution unless otherwise authorized in writing by L-3 EDI.
- ii. Requiring distributor compliance with L-3 EDI's Counterfeit / Substandard Parts requirements.

Additional Risk Mitigation Strategies including:

- iii. Obtaining pictures or samples of parts for L-3 EDI review prior to shipment.
 - iv. Requiring additional inspection and/or testing by distributor or third-party test facility prior to shipment.
 - v. Requiring additional inspection and/or testing by L-3 EDI prior to (preferred) or post shipment. See [Figure 3](#) for L-3 EDI's Inspection and Test Risk Mitigation Model.
 - vi. Establishing an escrow service thru [ERAI](#).
- e. Document L-3 EDI's Risk Mitigation Strategy on [Form 0208](#) (Counterfeit Risk Mitigation Procurement Plan (CRiMPP)), and approve. Form shall be routed for additional approvals, such as Program Management, Product Group Director, and Quality Assurance Director, as applicable. Upon all the necessary approvals being obtained, [Form 0208](#) shall be distributed to applicable actionees and parties, such as but not limited to:
- i. Purchasing,
 - ii. Receiving Inspection,
 - iii. SPG Component/ Reliability Engineering,
 - iv. Product Assurance,
 - v. Engineering, and/or
 - vi. Manufacturing.

NOTE

Product Assurance shall ensure compliance to any customer specific requirements regarding the usage of Independent Distributors and/or Counterfeit Parts by consulting the applicable Quality Plan developed in accordance with [QOP-02-01](#) (Development of Quality Plans) and/or the customer's contract/purchase order.

6.8.3 Purchasing Procurement Process

After receipt of approved [Form 0601](#) (Purchase Requisition), Buyer executes directions as specified in [Form 0208](#) (Counterfeit Risk Mitigation Procurement Plan (CRiMPP)) and places order in accordance with [QOP-06-02](#) (Purchase Order Generation) and [WI-06-02-03](#) (Creating Purchase Requisitions and Purchase Orders in ERP):

- a. Flows down applicable requirements as specified on [Form 0208](#) (Counterfeit Risk Mitigation Procurement Plan (CRiMPP)).
- b. Flows down the following [Form 1002](#) Supplier QA Requirements (SQARs), as applicable, pursuant to assignment as specified in [WI-09-01-05](#) (Procedure for Part Maintenance in Visual):
 - i. SQAR Clause 1A, 1B, or 1C, as applicable, which contains L-3 EDI's Suspect/Counterfeit/Substandard Parts/Items general requirements.
 - ii. SQAR Clause 3A which requires OCM/OEM CofC and distributor's CofC to be supplied with shipment unless otherwise authorized in writing by L-3 EDI.
- c. Coordinates with appropriate parties the receipt of any required testing and test data requirements that may have been requested for L-3 EDI's review and approval, as applicable.
- d. Procures CP testing services, when required, from L-3 EDI Approved Suppliers.

NOTE

A List of Component Test Services is available on [L-3 Communications Intranet Counterfeit Parts Website](#) and the [IDEA](#) website.

6.8.3 Quality Planning

Quality Assurance Engineers (QAEs) shall generate Inspection and Test Procedures as specified in [WI-10-01-11](#) (Inspection Procedures) and [QA-182](#) (Test Procedure Document, Generation, Release and Management), respectively, in such a manner that will maximize the potential for detecting counterfeit parts and thereby minimizing the potential risk of counterfeit parts from entering our customers' supply chain.

6.8.5 Receiving Inspection

Upon receipt of shipment, Receiving Inspection shall execute the directions, and any required testing, as specified in [Form 0208](#) (Counterfeit Risk Mitigation Procurement Plan (CRiMPP)) in accordance with [QOP-10-01](#) (Inspection and Testing) and [QA-027](#) (Inspection History Folder Description Use and Execution).

Inspection Procedures and Test Procedures shall be executed as specified in [WI-10-01-11](#) (Inspection Procedures) and [QA-182](#) (Generation, Release and Management of Test Procedures), respectively.

The information contained in this document does not contain "technology" as defined by the General Technology Note in Export Administration Regulations (EAR) Supplement number 2 to Part 744 and is therefore considered as publicly released as defined in Part 734.7(4).

Counterfeit Part visual inspection workmanship criteria shall be as specified in [QA-064](#) (Workmanship Elements). [QA-064](#) addresses the following SP/CP authenticity-related elements:

- a. Documentation of visual inspection criteria, and
- b. A/PEC external visual inspection criteria, inclusive of:
 - i. component body,
 - ii. leads, and
 - iii. marking.

The following documents and sources can be useful in determining the acceptability of A/PECs:

- IDEA–STD-1010 Acceptability of Electronic Components Distributed in the Open Market.
- [L-3 Communications Intranet Counterfeit Parts Website](#)
- A free website named [ic photos](#) provides photographs of A/PECs that can be used for authentication comparison purposes.

6.9 Production

The stocking and handling of items shall be in accordance with [QOP-15-01](#) (Handling, Storage, Packaging, Preservation, and Delivery).

Manufacturing activities shall be in accordance with [QOP-09-01](#) (Process Control).

Material handling personnel and production operators shall be vigilant and report any noted anomalous/suspect part conditions to their supervisor for appropriate actioning.

Inspection Procedures and Test Procedures shall be executed by Inspection and Test personnel as specified in [WI-10-01-11](#) (Inspection Procedures) and [QA-182](#) (Generation, Release and Management of Test Procedures), respectively.

Counterfeit Part visual inspection workmanship criteria shall be as specified in [QA-064](#) (Workmanship Elements).

6.10 SP/CP Control and Reporting

SPs/CPs shall be processed as nonconforming items in accordance with [QOP-13-01](#) (Control of Nonconforming Product).

When an SP/CP has been determined to have been delivered to a customer, consult [QOP-13-01](#) (Control of Nonconforming Product) for the applicable customer notification process.

NOTE

For affected customer-delivered products where L-3 EDI is an FAA Production Approval Holder (PAH), also consult FAA [AC 00-58](#) (Voluntary

Disclosure Reporting Program), and [WI-02-01-03](#) (FAA Requirements Compliance Plan) for specific actions.

Corrective actions shall be processed in accordance with [QOP-14-01](#) (Corrective and Preventive Action).

Any part determined to be a SP/CP shall be:

- a. Impounded by L-3 EDI as specified in [Form 1002](#) SQAR 1A, 1B, or 1C,
- b. Identified and processed as nonconforming,
- c. Dispositioned as scrap,
- d. Physically rendered unusable to prevent SPs/CPs from re-entering the supply stream pursuant to [QOP-13-01](#) (Control of Nonconforming Product),
- e. Reported to:
 - i. [ERA](#) *
 - ii. [IDEA](#) *
 - iii. [GIDEP](#) *
 - iv. [L-3 Communications Intranet Counterfeit Parts Website](#) **
 - v. the FAA via submission of FAA [Form 8120-11](#) (Suspect Unapproved Parts Report) as specified in FAA [AC 21-29](#) (Detecting and Reporting Suspected Unapproved Parts) for those products where where L-3 EDI is an FAA Production Approval Holder (PAH)**
 - vi. the applicable agency(ies) or other interests as may be specified in the applicable governing statutory or regulatory regulations or policies, and/or the customer's governing contract/purchase order **

Legend: * Recommended; ** Required.

NOTE

Product Assurance shall ensure compliance to any customer specific requirements regarding the dispositioning or reporting of SPs/CPs by consulting the applicable Quality Plan developed in accordance with [QOP-02-01](#) (Development of Quality Plans) and/or the customer's contract/purchase order.

6.11 Sustaining Engineering

Sustaining engineering activities shall be as specified in accordance with [QOP-04-04](#) (Sustaining Engineering).

6.12 Audits

L-3 EDI's Counterfeit Parts Risk Mitigation Plan shall be subjected to periodic audits in accordance with [QOP-17-01](#) (Internal Quality Audits).

6.13 Warranty and Post-Delivery Support

L-3 EDI's warranty policy and post-delivery support shall be as specified in [QOP-19-01](#) (Warranty).

6.14 Training

The appropriate L-3 EDI functional departments shall be trained in their roles and responsibilities regarding Counterfeit Parts in accordance with [QOP-18-01](#) (Training) and Training Course, [TC-02-001](#).

6.15 Records

Records shall be maintained in accordance with [QOP-16-01](#) (Control of Quality Records).

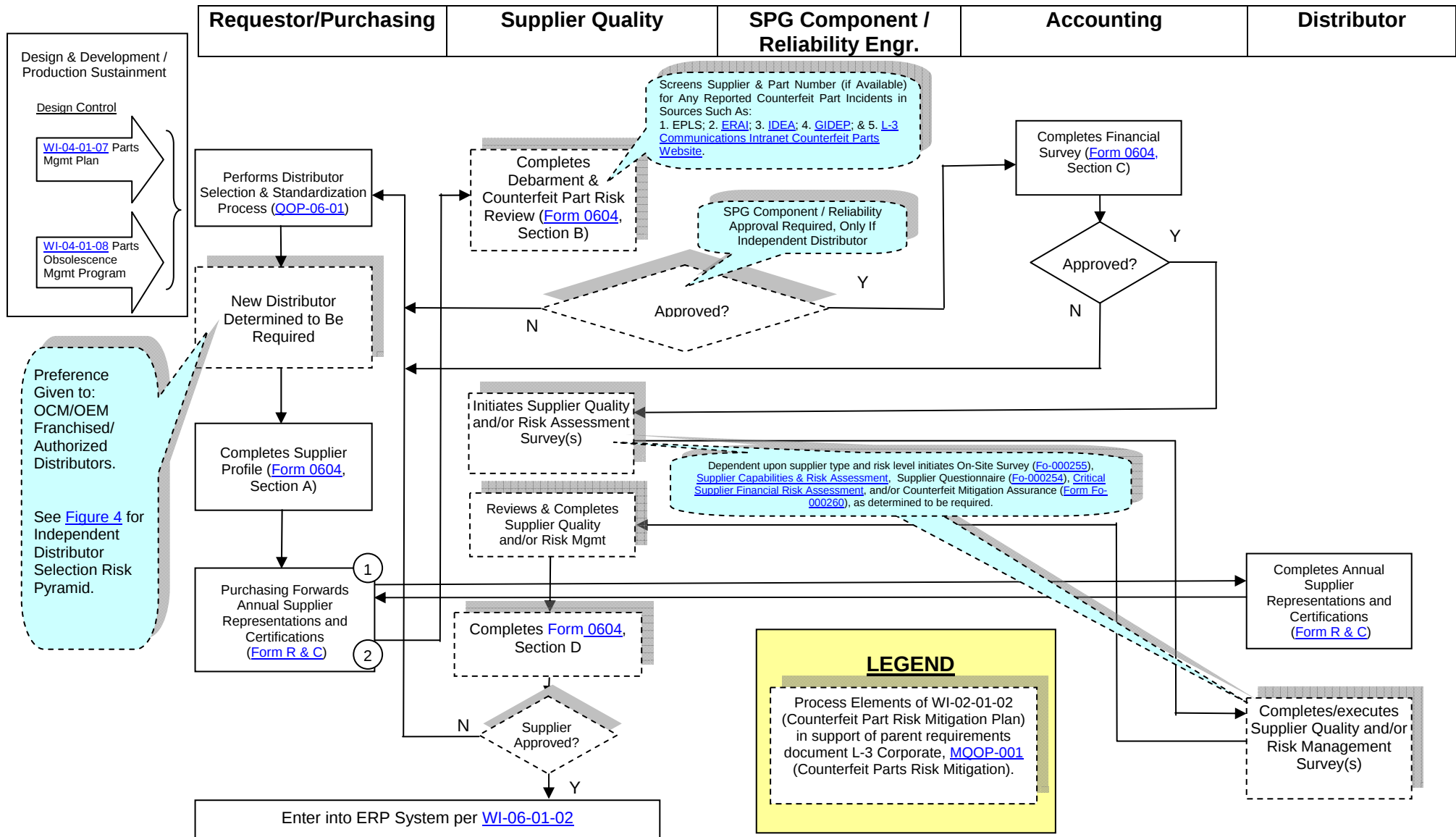


Figure 1. Independent Distributor Approval Process.

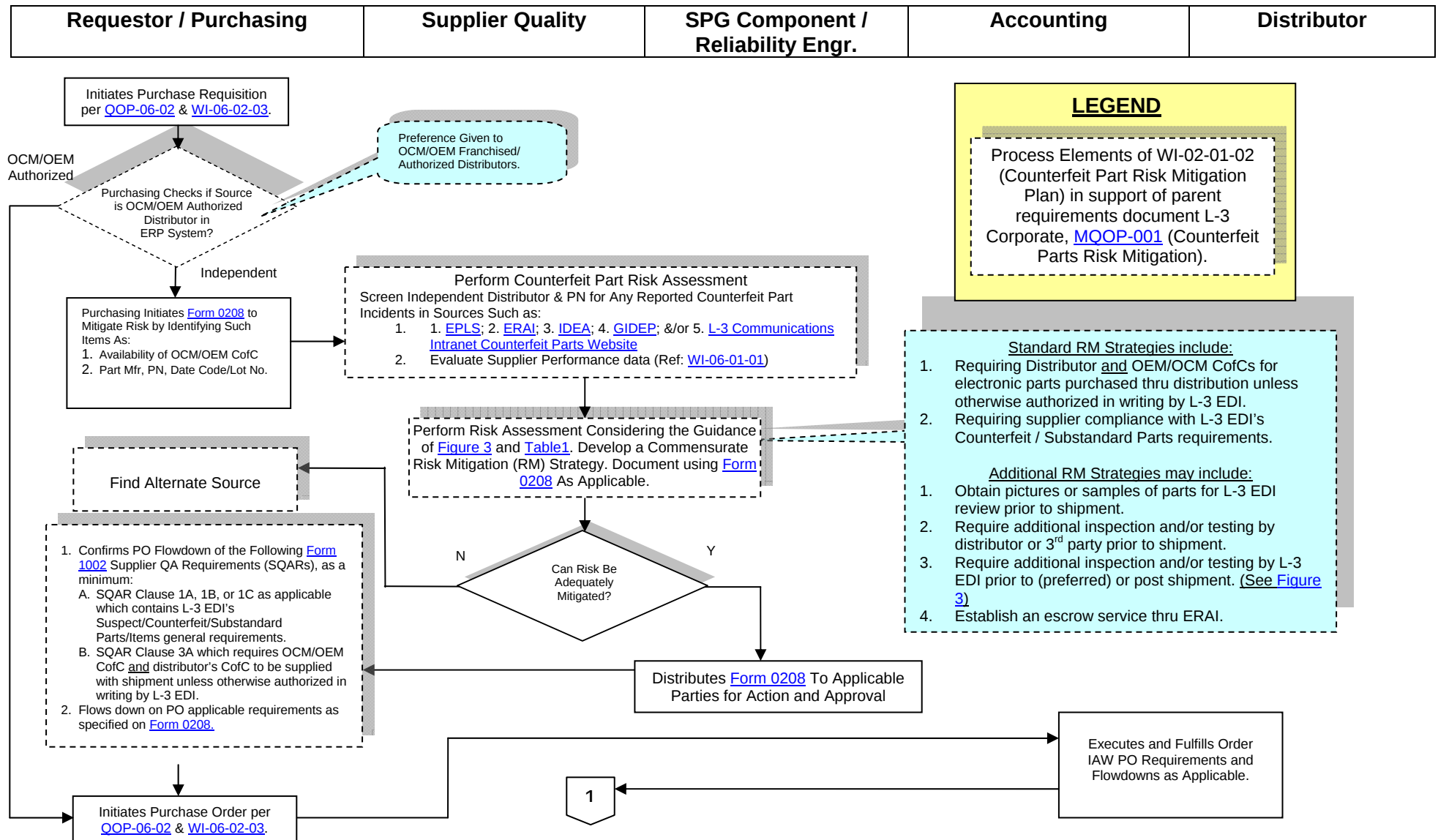
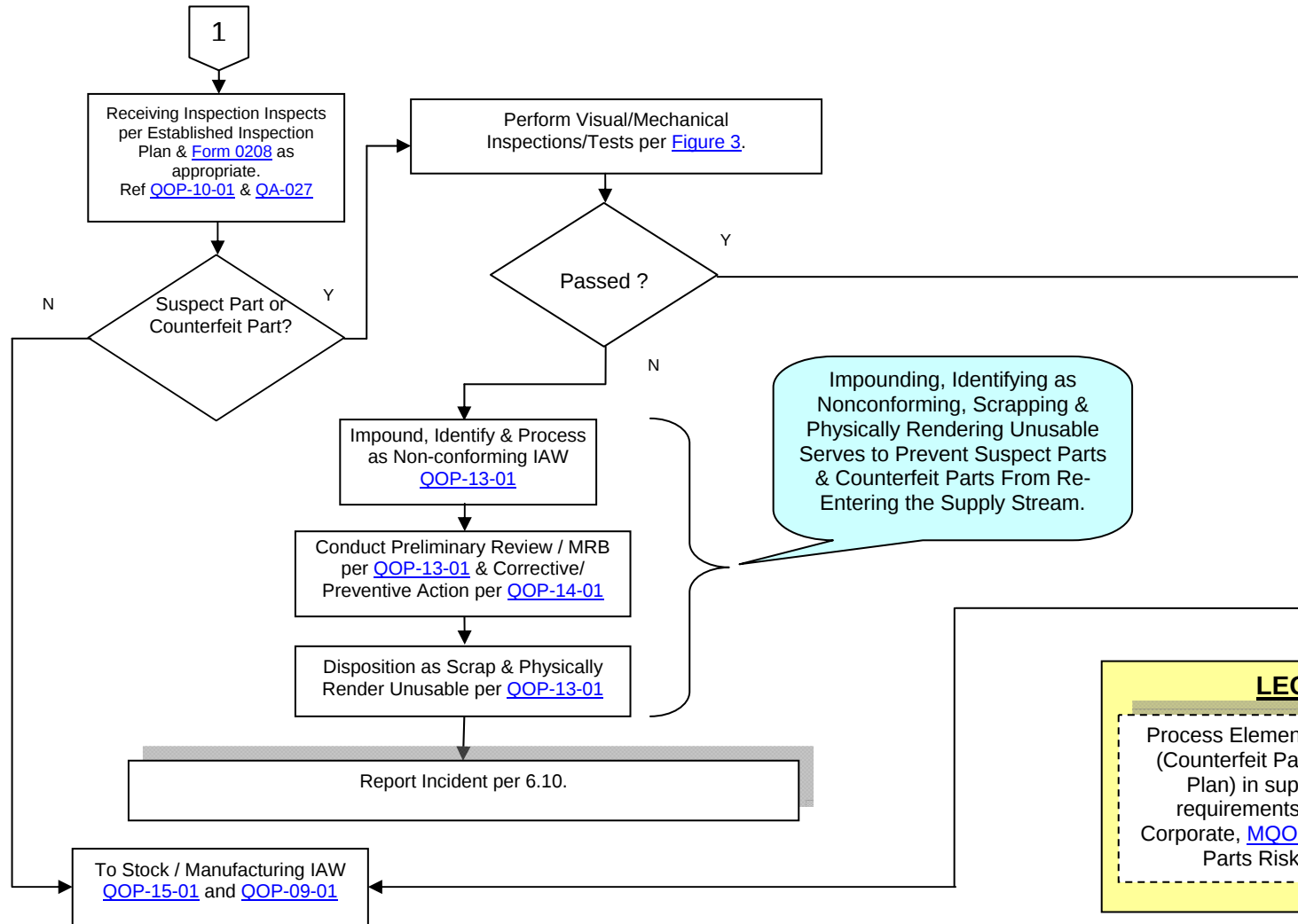


Figure 2. Independent Distributor Procurement Process.

Requestor / Purchasing	Supplier Quality	SPG Component / Reliability Engr.	Accounting	Distributor
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LEGEND

Process Elements of WI-02-01-02 (Counterfeit Part Risk Mitigation Plan) in support of parent requirements document L-3 Corporate, [MQOP-001](#) (Counterfeit Parts Risk Mitigation).

Figure 2. Independent Distributor Procurement Process - CONTINUED.

VISUAL / MECHANICAL INSPECTIONS/TESTS ⁽¹⁾

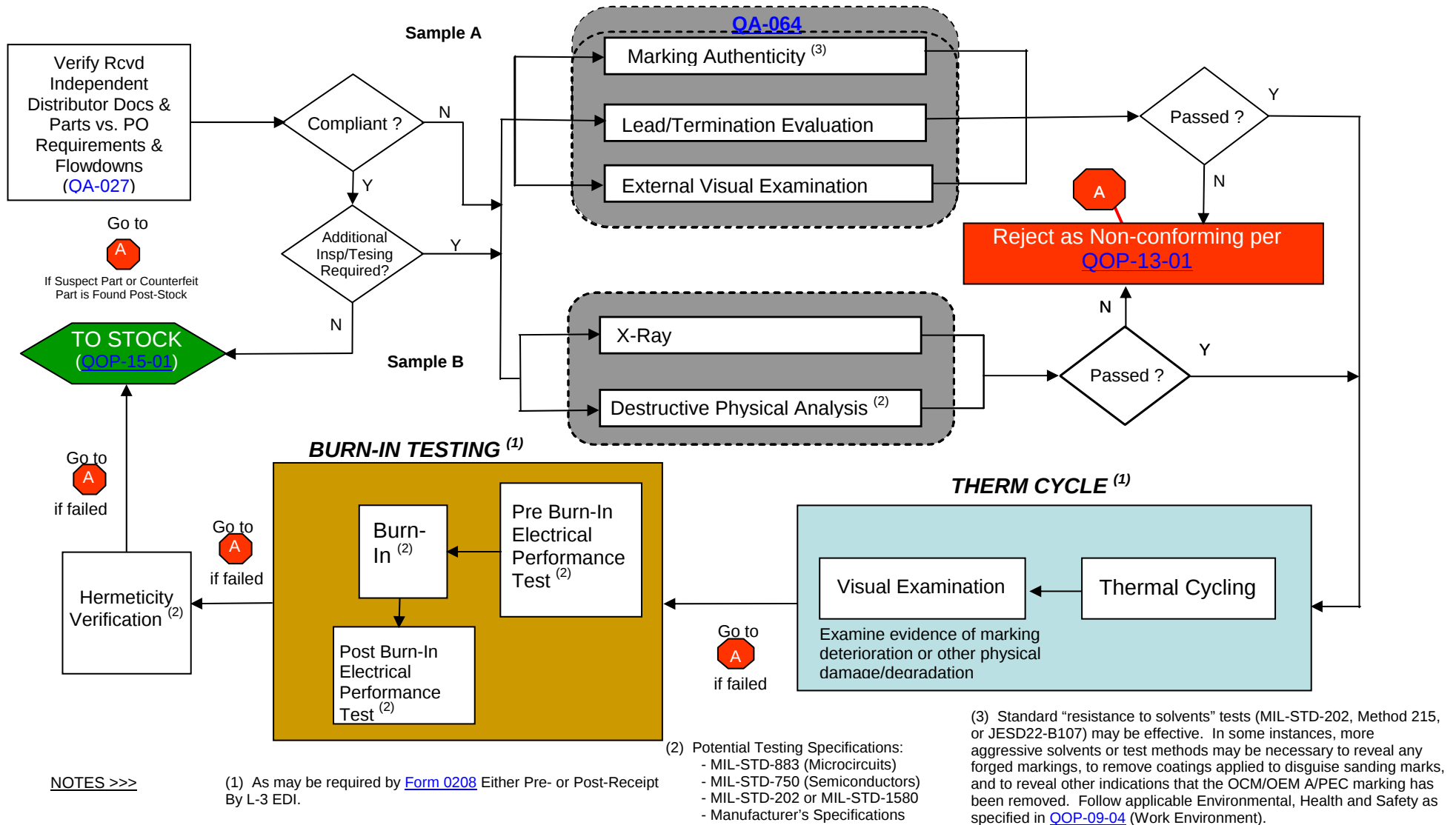


Figure 3. Inspection & Test Risk Mitigation Model.

Risk Level

Low



High

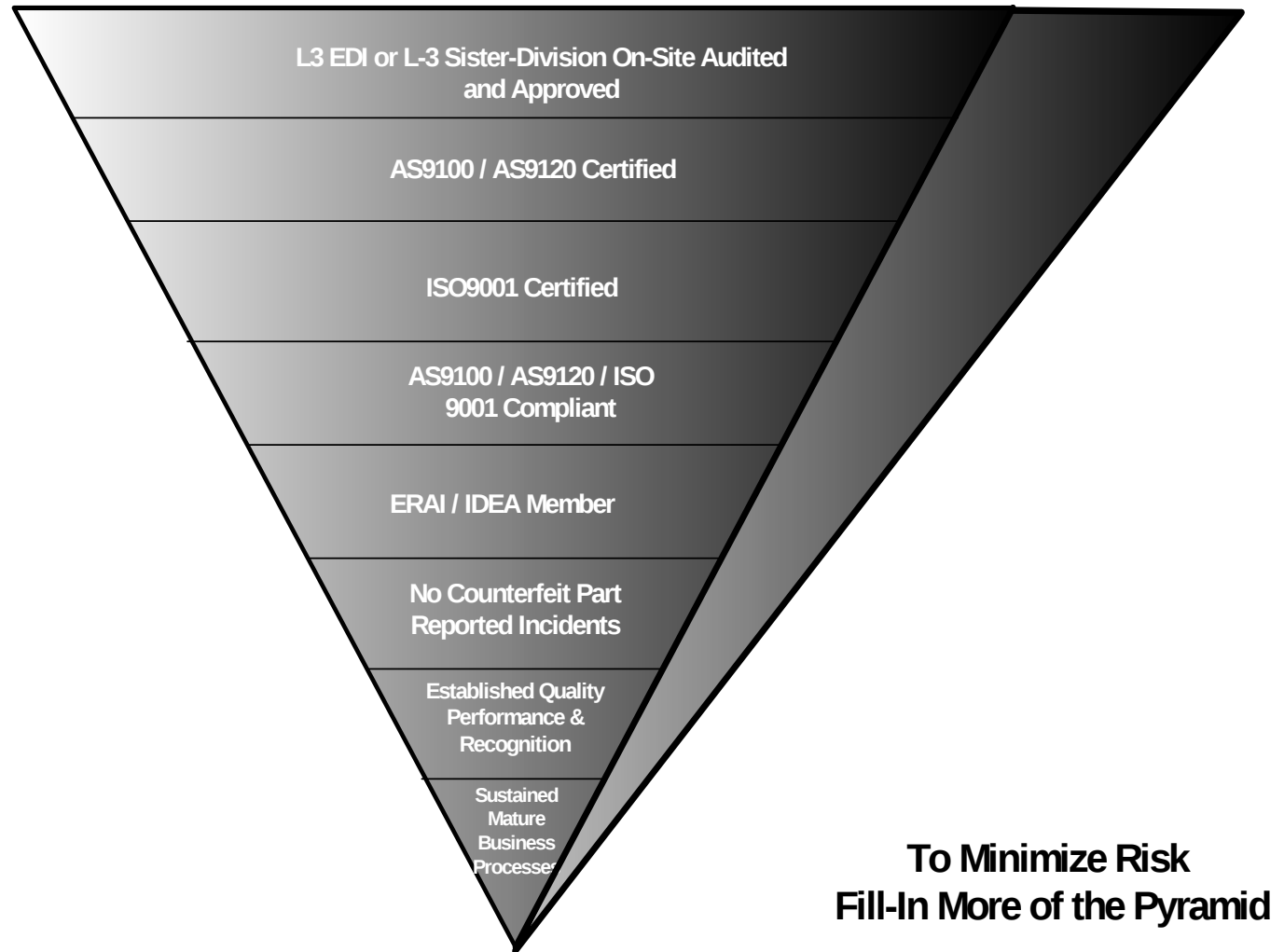


Figure 4. Independent Distributor Selection Risk Pyramid.

Table 1. Risk Assessment Tool.

		Individual Discrete Scenarios										
		OCM/OEM & Ind Dist Test Data Available?	OCM/OEM CofC Available?	Part Marking Condition (Visual Insp)	Part “Newness” Condition (Visual Insp)	Ind Dist CP Incidents?	Part No. CP Incidents?	Ind Dist CP Incidents for PN?	Ind Dist IDEA / ERA Member?	Part Criticality	Part Availability	Part Price
Risk Level	High	NA	NA	Incorrect / Not Resistance to Solvents	Gross Degradation / Evidence of Installation	NA	NA	Yes	NA	High	Low	High
	Medium High	NA	No ↑	Correct But Well-Faded / Suspect	Moderate Degradation (e.g. Leads Well Bent) / Suspect	Yes ↑	Yes ↑	↑	No ↑	Moderately High	Moderately Low	Moderately High
	Medium	NA	↑	Correct But Semi-Faded / Semi- Suspect	Slight Degradation (e.g. Leads Slightly Bent)	↑	↑	↑	↑	Moderate	Moderate	Moderate
	Medium Low	No	Yes ↓	Correct & Slightly Nondistinct	Like New (e.g. commensurate w/typical handling)	↓	↓	↓	↓	Moderately Low	Moderately High	Moderately Low
	Low	Yes	NA	Correct & Distinct	New (e.g., no degradation)	No ↓	No ↓	No ↓	Yes ↓	Low	High	Low

Purpose & Instructions: To provide a relative baseline regarding the levels of perceived risk associated with various individual discrete scenarios that may be encountered at L-3 EDI. Each individual scenario that may be encountered is along the x-axis at the top of the table. Enter the table based on the scenario encountered and go down until you reach the “condition” identified for that scenario, then go across to the left to determine the approximate risk level. Repeat for each scenario. Based upon each scenario encountered and the relative risk associated with each, one should be able to gauge the level of risk for that procurement to facilitate determining a commensurate level of risk countermeasures to attempt to minimize the overall risk to an acceptable tolerant level based upon the set of circumstances and constraints present. Of course, the goal is to achieve a “low” risk level for each scenario; however, this is not