Procedure for Avoiding, Detecting, Mitigating, and Disposition of Counterfeit Electronic Parts

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Approval:
Current/Acting Quality Manager

Note: Approval signatures on file.

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Description of Change: Added details of how to prevent material identified as counterfeit to re-enter the supply chain.
Reason for Change: Ensure full compliance to AS5553.
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Purpose

This plan was created in response to a significant and increasing volume of counterfeit electronic parts entering the supply chain, posing significant performance, reliability and safety risks to our organization and to its customers. It incorporates several of the procedures from the company’s AS9100 certified Quality Management System.

This plan was also created to adopt the guidelines of SAE Publication AS5553 and incorporate such guidelines into Vectron’s QMS.

Scope

This plan creates an overview of the documented procedures used by Vectron International to eliminate the receipt and unintentional delivery of counterfeit parts. It is designed to:

- Assist purchasing in procuring parts from reliable sources,
- Assure authenticity and conformance of procured parts,
- Control parts identified as counterfeit,
- And report counterfeit parts to other potential users and Government Investigative authorities.

Application

While the standards expressed in this plan are also represented throughout several of the organization’s documented procedures, this plan will provide a concise, customer-friendly overview of Vectron International’s counterfeit mitigation processes.
Definitions

Suspect Part. A part in which there is an indication by visual inspection, testing, or other information, that it may have been misrepresented by the supplier or manufacturer and may meet the definition of counterfeit part provided below (See SAE Publication AS5553 Sec. 3.1)

Counterfeit Part. A suspect part that is a copy or substitute without legal right or authority to do so or one whose material, performance, or characteristics are knowingly misrepresented by a supplier in the supply chain. Examples of counterfeit parts include, but are not limited to:

- Parts which do not contain the proper internal construction 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 full production and test flow, but are represented as completed product.
- Parts sold as upscreened parts, which have not successfully completed upscreening.
- Parts sold with modified labeling or markings intended to misrepresent the part’s form, fit, function or grade
- Parts which have been refinished, upscreened, or uprated and have been identified as such, are not considered counterfeit (See SAE Publication AS5553 Sec. 3.2).

Purchasing

When purchased material has an impact on product or service quality, the suppliers of the material or services are evaluated and selected based on (a) their ability to supply product or services that (a) meets requirements and (b) their risk of supplying counterfeit parts. Vectron is responsible for the quality of all products or services purchased, including those from customer designated sources. Parts are to be purchased, whenever possible, directly from OCMs or from manufacturer’s authorized suppliers. Independent distributors are used only after consideration of alternate parts and a reasonable search for material from franchised/authorized sources has been conducted and approval has been obtained from the Quality Manager and Supply Chain Manager.

The company uses customer approved sources when such sources are required by the customer or indicated on the customer’s purchase order.
If the customer designates processes that it deems to be special processes (for example, if a customer requires product to be plated by an outside facility), they will provide a list of authorized organizations to perform the process. The company will select a source from the approved list. Absent such list, Vectron International may choose whomever it deems adequate pursuant to its approved supplier procedure.

Vectron’s supply chain maintains a register of approved suppliers within its ERP system.

Procurement assurance processes for avoiding counterfeit product begins prior to the tendering of a contract for a product. The extent of these processes is commensurate with risks related to the sources of supply and criticality of customer’s requirements’. Assurances, at minimum, include use of Approved Supplier List.

Buyers should investigate independent distributors through reporting sources such as IDEA and ERAI in advance of procurement activity to ensure suspect counterfeiting incidents have not occurred. **When independent distributors are used, special precautions** must be taken. These precautions must be approved by the Vectron Quality Manager and may include, but not limited to:

- Sample AQL electrical inspection
- DPA/de-cap analysis
- Marking inspection

Buyers request from supplier supply chain traceability to the OCM that identifies the name and location of all of the supply chain intermediaries from the part manufacturer to the direct source of the product for the seller. If this traceability is unavailable or the documentation is suspected of being falsified, Vectron may, with customer’s consent, purchase parts after conveying such information to the customer, discontinue efforts to procure the part or, at the customer’s request, deliver to the customer a documented risk assessment (as described in Appendix C – Supply Chain Traceability – SAE Publication AS5553)

Supplier’s approval and source selection considerations include:

- The supplier is AS9100 or ISO 9000 registered – may be automatic approval Based on the criticality of the supplied component.
  - Quality reviews a copy of their certificate.

- The supplier is on the Customers/Government QPL list with the specific material or item or provides C of C’s for product or service- automatic approval.
• Length of time the supplier has been in business - consideration

• The sources demonstrated adherence to applicable provisions of AS5553 - consideration

• Membership in associations with rigorous business, ethical, and quality standards intended to avoid acquiring and reselling counterfeit goods (e.g. IDEA)

• Samples of the material or items are provided for inspection and test, with satisfactory results - automatic approval

  (1) The sales representative documents the sample size required and the inspection and test to be performed on the purchasing documents.

  (2) Completed inspection and test records show the criteria for acceptance and the actual results. If they are acceptable, the sales representative includes them in the sales order packet and communicates such acceptance to the Head of Purchasing who then adds the supplier to the approved supplier list and authorizes the purchasing of the product.

Purchasing places a trial order. Purchasing orders the material or item, receiving inspects the material and measures the results. If the results are not acceptable, the product is controlled according to the control of nonconforming product procedure (QSP-91300).

If the results are acceptable, they are documented and kept in the Evaluated Supplier’s folder located on the Company’s network.

Supply chain and quality management perform periodic evaluation of suppliers to assure that approved/ongoing sources of supply are maintaining effective processes for mitigating the risks of supplying counterfeit electronic parts and to evaluate overall performance against criteria. Criteria include:

• Meeting specifications
• On time delivery
• Correct quantity
• Quality and condition (including absence of counterfeit evidence)
• Competitive pricing

When a product or service provided does not meet the requirements of the order, purchasing or quality may initiate a Supplier Corrective Action Request, (SCAR).

• The SCAR is tracked via our Oracle ERP system.
• Purchasing or Quality sends a copy of the SCAR to the supplier for follow-up.
• All follow-up information received from the supplier will be added to the SCAR form.

Purchasing prepares a summary of the suppliers for management review. Management will review the summary at management review, following the Management Review Procedure.

Purchasing documents specify contract/purchase order requirements to minimize the risk of being provided counterfeit parts. These documents may contain, where or when appropriate:

• Requirements for approval of product, procedures, processes, services, and equipment.
• Quality Management System requirements
• Catalog number, item number or other accurate description of the item, any applicable issues of specifications, drawings, process requirements, inspection instructions and other relevant technical data.
• Requirements for design, test, examination, inspection and related instructions for acceptance by the company.
• Requirements for test specimens
• Requirements for supplier notification to the company of nonconforming product and any arrangements for approval of supplier nonconforming material
• Requirements for the supplier to notify the company of changes in product or process definition, and to obtain approval where required.
• Right of access by the company our customer and regulatory authorities to all facilities involved in the order as well as to all applicable records
• Requirements for the supplier to flow down to sub-tier suppliers the applicable requirements in the purchasing documents, including key characteristics where required.
• Quantity
• Required delivery date,
• Any specific quality requirements such as approval or qualifications
• Signature and date indicating review and approval of purchase order
• Product Traceability, when applicable
• Acceptance of financial responsibility, when applicable
• Penalties associated with fraud

Purchasing staff reviews the information to make sure it is complete, and reviews the Approved Supplier List to make sure the specified supplier has been evaluated and accepted. If not evaluated and accepted, the supplier cannot be used unless the Supply Chain Manager decides to initiate a trial order pursuant to the above section.
Verification of Purchased Product

Purchased product is verified before use to assure detection of counterfeit parts prior to formal acceptance. The rigor of the verification process shall be commensurate with product risk. Product risk is determined by the criticality of the part and the assessed likelihood of receiving a counterfeit part. Receiving checks the order against purchasing documents to verify the identification, quantity and condition of the items in the order.

Verification may include:

- Obtaining objective evidence of the quality of the product from suppliers through documentation, certificate of conformity, test reports etc.
- Inspection or audit at the suppliers premises
- Review of required documentation
- Visual inspection of products upon receipt (QR-37123)
- XRF verification (all electrical components)
  - Other components may be specified on their SCD
- Delegation of verification to the supplier or supplier certification.
- X-ray, non-destructive evaluation and destructive testing
- Receiving personnel labeling the receiving documents to indicate acceptance.
- Where specified in the contract the customer or their representative is given the right to verify subcontracted product at the supplier's premises.

Verification by the customer is not used as evidence of effective control by the supplier. Vectron is responsible to provide acceptable product, and does not preclude subsequent rejection by the customer.

Material Control

If material is identified to be counterfeit, Vectron will contact the supplier/vendor furnishing the material and provide any Vectron’s data supporting the counterfeit nature of the material. Vectron will discuss options with the supplier for disposition of the affected material in order to prevent re-entry into the supply chain. This may include:

- Upon mutual agreement, destruction of the material by Vectron to render it unusable in any form and documentary evidence provided to the supplier.
- Return material to the supplier and request evidence of disposition to prevent re-entry into the supply chain.
- Reporting the incident to any agencies/bodies (e.g. GIDEP) about the incident in order that other users at large may become aware of the existence of the material in question and review their own supply chain for any risks as applicable.
All identification, segregation and disposition will be documented in accordance with Vectron’s Control of Nonconforming Product Procedure, QSP-91300.

**Reporting**

All occurrences of counterfeit parts are reported, as appropriate, to internal organizations, customers, government reporting organizations, industry supported reporting programs (e.g. ERAI, GIDEP, etc), and criminal investigative authorities.

**Inspection Training**

All incoming inspectors are to use IDEA-1010 as a guideline when determining whether or not parts are potentially counterfeit or suspect. Any suspicions should be immediately brought to the attention of their supervisor.

By December, 31, 2012 all Vectron Incoming Inspectors will be required to be certified to IDEA-ICE-3000.

**Forms and Records**

Supplier Corrective Preventative Action Request  
Approved Supplier List  
Supplier Evaluation Survey