

Instruction: VI-QFD-002	Page 1 of 3
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Supplier Counterfeit Control Requirements

1. PURPOSE

Provide additional requirements for VACCO Subcontractors specific to the identification and control of counterfeit parts.

2. RESPONSIBILITIES

When imposed by VACCO Purchase Order (PO), the supplier shall adhere to the requirements of the section(s) of this document referenced on the PO in addition to the requirements of VI-QFD-001, Section 6.25. The requirements shall be flowed down to sub-tier suppliers as required in the applicable section(s).

3. REFERENCES

- **MIL-HDBK-5** – Metallic Materials and Elements for Aerospace Vehicle Structures
- **SAE AS5553** – Fraudulent/Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposal
- **SAE AS6081** – Counterfeit Electronic Parts; Avoidance Protocol, Distributors
- **SAE AS6496** – Fraudulent/Counterfeit Electronic Part; Avoidance, Detection, Mitigation and Disposition – Authorized/Franchised Distribution
- **VI-QFD-001** – VACCO Quality Flow-Down Instruction

4. DEFINITIONS

- **Approved Supplier** – Assessed supplier that has been determined to provide acceptable fraudulent/counterfeit parts risk mitigation process. Approved Suppliers will be identified in the Register of Suppliers (ROS) and maintained in IQS per VI-PQD-001.
- **Authorized Distribution** – Transactions conducted by an OCM-Authorized Distributor distributing product with the terms of an OCM contractual agreement. Contractual agreement terms include, but are not limited to, distribution region, distribution products or lines, and warranty flow down from the OCM.
- **Certificate of Conformance (CoC)** – A document provided by a supplier formally declaring that all buyer purchase order requirements have been met. The document may include information such as manufacturer, distributor, quantity, lot batch, lot date code, inspection date, etc., and is signed by a responsible party for the supplier.
- **Counterfeit Part** – A fraudulent part that has been confirmed to be a copy, imitation, or substitute that has been represented, identified, or marked as genuine, and/or altered by a source without legal right with intent to mislead, deceive, or defraud.
- **Fraudulent Part** – Any suspect part misrepresented to the Customer as meeting the Customer's requirements.
- **Original Component Manufacturer (OCM)** – An organization that designs and/or engineers a part and is pursuing or has obtained the intellectual property rights to that part.

- a. The part and/or its packaging are typically identified with the OCM's trademark.
- b. OCMs may contract out manufacturing and/or distribution of their product.
- c. Different OCMs may supply product for the same application or to a common specification.
- **Original Equipment Manufacturer (OEM)** – A company that manufactures products it has designed and manufactured (directly or by a third party) from purchased components and sells those products under the company's brand name.
- **Supplier** – Within the context of this document, a blanket description of all sources of supply for a part.
- **Suspect Part** – A part in which there is an indication that it may have been misrepresented by the supplier or manufacturer and may meet the definition of fraudulent part or counterfeit part.

5. Raw Materials

Raw materials purchased by the supplier and sub-tier suppliers shall be accompanied by the results of non-destructive testing, chemical and physical tests. When specified by the VACCO PO, the supplier shall provide test coupon material and test records for the product lot delivered to VACCO as part of the records retention database. Titanium shall not be exposed to or processed in halogenated solvents.

With the exception of wrought raw metals, all materials shall be procured from the Original Equipment Manufacturer (OEM) or a franchise distributor for the OEM with full documented traceability back to the OEM (e.g., adhesives, composites, fasteners etc).

If fasteners are not procured from an OEM or a franchise distributor, then the supplier shall have third party independent testing performed by a VACCO approved test house in order to verify fastener strength properties.

All wrought raw metals shall be procured directly from a Mill or shall show full traceability from the Mill, that produced the final product size, through any subsequent processing steps, including mechanical/chemical test reports and/or inspection reports as required by the material specification. All of the intermediate processing steps shall show form/size and mechanical property test reports for each intermediate step in order to show appropriate work put into the material, and mechanical property test reports for final form/size at delivery.

If full traceability is not available, then the supplier shall have third party independent testing performed by a VACCO approved test house, on the final "as delivered" material form/size to the material's specification requirements.

Where full traceability is not available on material for safety critical, fatigue critical and/or fracture critical applications, additional testing shall be performed to verify that the material fatigue and fracture properties meet the minimums specified in MIL-HDBK-5 or other specified design standard.

All metallic raw stock and metallic parts require the following documentation:

- Heat lot certification
 - From mill
 - Number traceable through all additional processing performed
- Form for each certification
 - Ingot, billet (intermediate form), final form, form delivered
 - Each certification should indicate size on it

- Form delivered should match final conversion/processing form
- Material property certifications that show compliance with specification
 - Chemistry
 - Mill test or retested
 - Mechanical properties for final size, as delivered
 - Orientations tested
 - Size of material tested
 - Heat treatment certifications
 - Form of material when heat treated
 - Heat treatment schedule
 - Test results required by heat treatment specification verifying post heat treat properties
 - Passivation and other metal finishing processes
 - Certification of process to required specification showing Supplier part number and quantity
 - Test results required by metal finishing specification, if any, verifying post finishing properties
 - NDT inspection certifications, as required by specification
 - At what stage was the inspection performed

Additional testing documentation for specific materials:

- Titanium
 - Hydrogen content
 - Mill test
 - Final form test
 - UT if required by specification
 - Microstructure requirements
 - Fracture toughness if required by specification
- Stainless steels (other possible required documentation if specified)
 - Microstructure, grain size, intergranular corrosion requirements, flareability, pressure test, UT, bend capability

6. Electronic Parts

Electronic parts shall be provided by approved suppliers. Suppliers performing authorized distribution shall use a process to control avoidance of counterfeit parts in compliance with SAE AS6496. If the supplier is performing distribution without a distribution agreement in place, then the supplier is not performing authorized distribution and shall use a process to control avoidance of counterfeit parts in compliance with SAE AS6081, which applies to independent distributors/brokers.

The supplier shall maintain a method of item supply chain traceability that ensures tracking of the supply chain back to the manufacturer of all Electrical, Electronic, and Electromechanical (EEE) parts included in assemblies and subassemblies being delivered per the VACCO PO. This supply chain traceability method shall clearly identify the name and location of all the supply chain intermediaries from the manufacturer to the direct source of the product for the supplier, and shall include the manufacturer's batch identification for the item(s) such as date codes, lot codes, serializations, or other batch identifications. If this supply chain traceability is unavailable or the documentation is suspected of being falsified, a documented risk assessment in compliance with SAE AS5553 is required.