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1.0 Purpose

To define Smith & Co.'s supplier's quality requirements when incorporated into a purchase order (PO) or subcontract.

2.0 Scope

Applicable to all programs and projects within scope of the Quality Management System (QMS). All other programs and projects are encouraged to utilize this handbook for consistency.

Smith and Co.'s suppliers must adhere to this handbook, and all flown down requirements. To the extent an inconsistency exists between Smith & Co.'s General Terms & Conditions (T&Cs), any item outlined herein, or any outlined in a PO or subcontract, the PO/subcontract takes precedence.

3.0 Users

Quality is responsible for:

- Maintaining this handbook.
- Following up with suppliers and sub-tier suppliers as needed.
- Working with purchasing/subcontracts to ensure suppliers understand and adhere to this handbook.

Purchasing/Subcontracts are responsible for:

- Verifying requirements and this handbook are flown down within the PO or subcontract.
- Working with Quality to ensure suppliers understand and adheres to this handbook.

Suppliers and sub-tier suppliers are responsible for:

- Reviewing and understanding flown down requirements.
- Using the latest standard and specification revision unless otherwise noted in the PO or subcontract.
- Contacting Smith & Co.'s respective representatives to resolve conflicts.

4.0 Key Terms

Term	Definition
Commercia Off-The-Shelf (COTS)	Commercially available items without any modifications.
Counterfeit Part	An unauthorized copy, imitation, substitute, or modified part, which is knowingly misrepresented as a specified genuine part of the original manufacturer, or a previously used electrical, electronic, and electromechanical part which has been modified and is knowingly misrepresented as new.
Item(s)	Parts, components, articles, supplies, and goods, including, without limits, part numbers, model numbers, and any descriptor within a PO/subcontract must also include all delivered software or hardware.
Material	An item used to create products such as raw material, plastics, elastomers, adhesives, epoxies, and the like.
Material Review Board (MRB)	Designated persons responsible for reviewing, evaluating, and dispositioning suspect or known nonconforming products or services to include suspect or known counterfeit items.
Purchasing Order (PO)	Contract vehicle for procuring products, processes, and services from a supplier.
Purchasing Representative	Agent of Smith & Co. within the authority to enter legally binding commitments on behalf of Smith & Co. as specified on the PO.
Repair	A customer-approved action that makes an item or service useable without eliminating the nonconformance and may not meet design requirements.
Rework	An approved action taken to correct a nonconformance thus bringing an item into full conformance to the design requirements.
Service	Supplier labor, performance, or effort under a PO such as machining, fabricating, installing, designing, repairing, reworking, maintaining, consulting, where cost are separate from and does not include the item's price.
Special Process	Processes where the resulting output cannot be verified by subsequent monitoring and measuring.
Subcontract	Agreement between a supplier and their sub-tier supplier, vendor, or subcontractor.

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Subcontractor	An organization that supplies services, items, or other material to Smith & Co.
Supplier	A legal entity that supplies an item or provides a service per PO to include its employees, officers, agents, and sub-tier suppliers acting on behalf of the supplier.
Supplier Communication	Process of collecting nonconformances, deviations, and changes such as support request, deviation request, and other information request.

5.0 Supplier Quality Management Requirements

5.1 General

When required, suppliers must obtain and maintain an AS9100, ISO 9001, NADCAP, ISO/IEC 17025 certificate, or other Smith & Co. approved QMS certificate. The supplier must notify Smith & Co. within 24 hours of certification suspension or revocation, no exceptions. A non-disclosure agreement (NDA) shall be in place at each required supplier level prior to placement of a PO.

Suppliers shall maintain QMS ensuring all furnished products, processes, and services conform to and comply with PO and subcontract requirements. Suppliers must perform and require their sub-tier suppliers to perform all inspections and tests to demonstrate conformance to all requirements—drawings, specifications, flown down, and PO/subcontract. Supplier requirements will be flown down as outlined in Purchasing and Receiving (QOP 8.4).

Suppliers and sub-tier suppliers must maintain and retain evidence and make it readily available by Smith & Co. and/or their customers for review. When a supplier, at any level, does not conform to or comply with requirements one or more of the following actions will occur:

1. Issuance of nonconformance and corrective action.
2. Onsite supplier audit (may include the customer).
3. Suspension of PO/subcontract.
4. Revocation of PO/subcontract.

5.1.1 Qualification and Monitoring

Initially, suppliers are qualified by completing a *Supplier Quality Survey (F-032)* as outlined in Supplier Audit Program (PGM 8.4). An onsite visit may occur based on the supplier, product, process, or service provided, which its outcome documented on a *Supplier Audit Report (F-031)*. Suppliers are expected to maintain qualification throughout the product or service lifecycle along with maintaining the following key performance indicators (KPIs):

- On-time delivery (OTD) of products and services (≥98%)
- Quality performance (≤ 2 NCRs monthly)

In the event a supplier makes a change to its QMS, relocates, processes, or key personnel, re-qualification may be required. As soon as the supplier is aware of any of these conditions, written notice is required within 72 hours.

Advanced Product Quality Planning (APQP) and Production Part Approval Process (PPAP) must be implemented when directed by the PO/subcontract. An APQP and PPAP drive focus on resources during upfront quality planning and product capability analysis.

Submitted APQP packages should include:

- Key characteristics and critical items
- Revision control
- Quality and production control plans
- Monitoring and measuring analyses.
- First Articles Inspections per AS9102
- Short- and long-term capability analysis

A supplier's QMS must plan for and formally document contingencies through the duration of the PO/subcontract and product and service lifecycle. The formal document must identify and mitigate all risks and opportunities along with implementing required changes that ensure all requirements are met and continually improved. Within 72 hours of a disruption to the supply chain and delivery of products and services, Smith & Co. must be notified in writing to include actions being or will be taken.

5.2 Supplier Change Management

During execution of a PO/contract, a need may arise for a supplier to transition work from one of its facilities to another or offload work to a sub-tier supplier. Should this need materialize, ensure requirements are met as outlined in the subsections below.

5.2.1 Material, Service, and Process Change

A system shall be in place to document and manage all material, service, and process changes. No change in design, manufacturing, or location is allowed during, or periods between, a PO/subcontract by a supplier or their sub-tier supplier without advanced written approval from Smith & Co.'s purchasing representative. Design and manufacturing changes may alter form, fit, function, reliability, sustainability, weight, or a process to include but not limited to special processes, assembly, fabrication, finishes, marking, handling, storage, packaging, preservation, delivery, and programming (machine and coordinate measuring machine).

Prior to any change listed above, the supplier and its sub-tier supplier must have advanced approval from Smith & Co. to allow for evaluation by Smith & Co. and its impacted customer(s). Prior to any of the above changes, a minimum 30 calendar day notice shall be provided.

Expressed commitment by the supplier is required to:

1. maintain a sound product quality process,
2. ensure conformance with and compliance with requirements, and
3. provide for adequate implementation of all requirements.

The supplier and its sub-tier suppliers must maintain written communication with Smith & Co.'s purchasing representative. No verbal changes or approvals are allowed.

5.2.2 QMS Change

A change to the supplier or its sub-tier supplier QMS from a revision, loss, suspension, revocation, probation, and withdrawal from a third-party registrar requires written notice.

5.2.3 Relocation, Change in Ownership, and Work Transfer

Rebranding, change in owner(s), and transfer of manufacturing location subjects the supplier and its sub-tier supplier to a re-evaluation as noted in 5.1.1 Qualification and Monitoring.

Suppliers and sub-tier suppliers must submit a Validation and Control Plan that includes impacted open POs, unfinished product, processes, and services, inventory on hand, etc. Written notice of these changes shall be provided to Smith & Co. within 45 days change occurring.

A risk mitigation plan for any transferred work must be submitted to the purchasing representative 45 days prior to the transfer occurring. No work transfer is allowed until receipt of approval from the purchasing representative. Re-qualification of equipment and the process may be required after completion of the re-location and/or transition.

5.3 Supplier Notification

Notifications such as those mentioned above are vital to ensure product quality and OTD is not impacted. Also, notification regarding design concerns, obsolescence, suspect or known counterfeit parts, suspect or known nonconformities, deviations, process, and facility changes, etc. ensure product quality and OTD. Therefore, suppliers and their sub-tier suppliers shall communicate with the purchasing representative within the above timelines.

Any work or product the supplier or its sub-tier supplier becomes aware of, or suspects are subject to recall or a nonconformity, product safety concern, GIDEP alert, or any other known or received alert must be immediately communicated to the purchasing representative with undue delay. No work may be performed or continue without written authorization to do so. Any product or service received by Smith & Co. without written authorization is subject to return at the supplier's and its sub-tier supplier's expense.

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5.4 Supplier Conformance

The supplier is responsible for product safety and product quality up to and including delivery of the PO's product or service to include conformance with requirements and compliance with all statutory and regulatory requirements unless otherwise stated in a modified PO.

As noted in Smith & Co.'s General T&Cs, PO acceptance and delivery of products and services certify each line item, and its delivery meets requirements to include any item received from a sub-tier supplier. Additionally, the supplier is obligated to flow down to its sub-tier suppliers:

- All applicable specifications and standards requirements to sub-tier suppliers.
- Requirement to be aware of their contribution to product safety.
- Requirement to be aware of the importance of ethical behavior.
- Ensure through inspections and tests that all PO requirements have been met.

Inspection and testing of raw material, work in progress (WIP), and the end item must be described using complete engineering drawings and/or manufacturing instructions to include acceptance and rejection criteria. Suppliers and their sub-tier supplier shall remain responsible for all requirements of the PO even after Smith & Co. and its customer complete source inspection.

The supplier's and their sub-tier supplier's quality system shall be designed to promote and ensure completed products and services are tested and/or inspected. When any characteristic cannot be verified at final inspection and testing, in-process verifications shall be employed. If an item is reworked, any characteristic impact must be verified to ensure it conforms to the requirements through testing or inspection methods. Any rework or repair not conforming to the drawing or specification is not allowed unless authorized by the purchasing representative in writing. All items deemed to be acceptable shall be clearly identified, controlled, and traceable to its inspection and test records.

When requested, a certificate of conformance must accompany each ship and include the following:

- Company name and address
- Shipment date
- PO number and line item
- Quantity shipped
- Item number and revision
- Any other traceable identification such as serial number, lot, batch, and/or date code
- Name and signature of supplier's authorized representative
- Statement certifying all material and items are complete and conform with the PO
- Any traceable information to the original equipment manufacturer (OEM) or original component manufacturer (OCM)

All nonconformances impacting OTD shall be immediately communicated to the purchasing representative. The communication must include traceability information.

5.5 Audits and Right of Access

Smith & Co., its customers, and all regulatory and statutory agencies have full right of access to its suppliers and their sub-tier supplier sites to conduct audits, surveillance, investigations, and inspections with prior coordination to determine conformance and compliance with PO requirements.

5.6 Corrective and Preventive Action (CAPA)

The supplier and its sub-tier suppliers shall report any nonconformance affecting delivered products and services to Smith & Co. and its customers. Each shall take the appropriate correction and corrective action without undue delay and retain evidence of effective implementation aimed at preventing recurrence.

The CPAR must address items as follows:

- Containment of impacted product and service in no more than two (2) business days
- Root cause analysis and action(s) to prevent recurrence.
- Expected timeline to complete each CAPA phase.
- Performance of a read-across to mitigate a systemic nonconformances.

For source-inspected products and services where a CAPA is required, the supplier must coordinate all actions with Smith & Co. and the customer source inspection representative prior to shipment. Failure to act in the defined timeframe or any unacceptable/inadequate response may adversely impact product quality and OTD ratings.

5.7 Measuring and Monitoring Resources

The supplier is responsible for validating and maintaining accurate and in-calibration measuring and monitoring equipment such as calipers, CMM, surface plate, gage blocks, go/no-go gages, and the like. A register must be maintained and include equipment type, unique identifier, location, calibration or verification method, frequency, and acceptance criteria. All calibration certificates must document the as-found and as-left condition.

At a minimum, calibration records shall show the industry traceable standard(s), current due date, next due date, who performed the calibration, where performed, and when performed. These records shall be retained for a period of the life of contract plus 7 years.

Control, calibration, and traceability of equipment, tooling, and gages, including those furnished by Smith & Co. and its customer, are the responsibility of the supplier. Periodic inspections of each item shall be conducted, documented, and made available upon request. The supplier shall have a recall mechanism in place in the event any monitoring and measuring resource is suspected or found to be out of calibration.

5.8 Nonconforming Products, Processes, and Services

The supplier is responsible for maintaining a method to control suspect or known nonconforming products, processes, and services. A defined process for identifying, segregating, and dispositioning nonconforming products, processes, and services must be maintained and evidence of training retained. Nonconforming items must be conspicuously identified, segregated, and controlled to prevent inadvertent processing. All disposition requests shall be communicated as outlined in Section 5.3 Supplier Notification.

Written approval for any disposition must be given prior to progressing a product, process, or service to its next stage. The supplier shall take immediate action(s) to prevent recurrence of nonconformity.

No supplier shall scrap any supplied item or material without authorization from Smith & Co. and its customer unless in writing as outlined in Section 5.3 Supplier Notification. Product dispositioned as scrap must be conspicuously and permanently marked, or positively controlled, until it can be rendered unusable. Suppliers are not authorized to re-purpose or resell products dispositioned as scrap.

At no time does a supplier or their sub-tier supplier have material review board (MRB) authority without written authorization from Smith & Co. and its customer to include dispositions such as “repair,” “use as is,” and “scrap.”

5.9 Counterfeit Part Prevention and Detection

All supplier levels must have a documented counterfeit preventive and detection program and train personnel on how to prevent and detect counterfeit products to eliminate entry into the supply chain. Examples of counterfeit products include false identification of grade, serialization, date/lot/batch code, and performance characteristics. Only new and authentic materials and products can be received by Smith & Co., and no suspect or known counterfeit item is allowed to be shipped with conforming product.

Products should only come from one of the following source types:

- Original Equipment Manufacturer (OEM) – An organization that manufactures and assembles items designed from purchased materials and components and then sells those items under the organization’s brand name.
- Original Component Manufacturer (OCM) – An entity that designs a part and holds the intellectual property (IP) rights of the designed part. An OCM part includes a trademark and may contract the manufacturing and distribution of the product.
- Authorized Distributor (AD) – Distributor with written authorization from and OEM/OCM to distribute product within contractually agreed T&Cs.

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Prior to purchasing and shipping products, suppliers must validate products originating from an OEM, OCM, or AD unless authorized in writing from Smith & Co. The supplier shall adhere to the following standards:

- AS5553: Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition
- AS6081: Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, And Disposition - Distributors
- AS6174: Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel

5.10 Special Processes

Special processes that may not be verifiable upon completion must be processed per the engineering and PO requirements and be accompanied by a certificate of conformance, certificate of analysis, certificate of test, and the like. The certificates or other verifiable documentation must be shipped with the product and be retained and maintained for the life of the product.

5.11 Supplier Performance

Suppliers are responsible for ensuring products, processes, and services received from their suppliers and subcontractors conform and comply with all flown down requirements such as drawings, bill of materials, specifications, standards, etc. The KPIs monitored are outlined in Section 5.1.1 Qualification and Monitoring.

In the event performance does not meet the set standards, suppliers may be directed to complete a root cause analysis to determine why along with documenting all corrective and preventive actions to prevent recurrence. Suppliers are responsible for contacting the purchasing representative at any time for the latest supplier rating and approved supplier list (ASL) status.

5.12 Control of Documented Information

Suppliers must deliver documents that are in English, legible, traceable, and meet PO/subcontract requirements. All files and data—digital and print—must comply with export-controlled technical data and Cybersecurity Maturity Model Certification (CMMC) requirements. Documents shall be marked and handled per their requirements such as Controlled Unclassified Information (CUI), export-controlled, classified, proprietary, etc. No document shall be transmitted or shared without approval from Smith & Co., their customer, and/or any other authority per the PO/subcontract.

Other electronic data such as drawing, specifications, and bill of materials (BOMs) must be provided by Smith & Co. through the proper media channel. The transmitted information can only be used for the purpose defined in the PO/subcontract. Where there is a conflict, refer to Section 5.3 Supplier Notification.

Suppliers shall maintain a system for controlling and verifying software used in the qualification, verification, and validation of deliverables. All data packages including test records, first article inspections, audits, and other records shall be maintained for a minimum of the life of contract plus 7 years unless otherwise specified in the PO/subcontract.

5.13 Handling, Storage, Packaging, Preservation, and Delivery

Suppliers must define a process for handling, storing, packaging, preserving, and delivery of all items received from Smith & Co. At all times, items must be free of debris, damage, and deterioration, and when specified, adhere to any other flown down HSPPD requirements such as labeling and transport provision.

Lot identification and traceability must be always maintained. Tags, labels, or other systems should be employed that promote lot identification and traceability throughout the entire manufacturing process up to and including delivery.

Labels shall be of material that is non-fading, clear, legible, and durable along with being in contrasting color of the ink and shipping container used. Where a container is re-purposed, all unnecessary and obsolete markings and labels shall be removed entirely. All precautionary, handling, and HazMat markings and labels must be applied in a manner that ensures proper handling and storage of its contents.

Each container and intermediate package may require identification with: (Refer to the PO/subcontract.)

- PO/subcontract number
- Part number, part name, and revision

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- Quantity
- Manufacturer's name
- Date of manufacture
- Serial number(s), lot number(s), batch number(s), and/or heat treat number(s)
- Date code
- Expiration date
- Static, moisture, impact sensors
- Hazardous markings
- Other items as outlined in the PO/subcontract

Shipping container support/dunnage shall never have miscellaneous lining of newspaper, magazines, rags, plastic, shipping peanuts, or other loose packing fill material.

5.14 Shelf-Life Material

Where material is used with a shelf life subject to degradation and deterioration over a specified time, suppliers shall establish a Shelf Life and Storage Control program ensuring that no material is shipped to Smith & Co. or its customers that has exceeded its shelf life prior to use. All shelf-life material must be individually identified with the date of manufacture and expiry date. Upon request, these materials have a certificate readily available for review. If shelf-life material is part of the delivery, at least 75% of the item's shelf life shall remain.

5.15 Hazardous Material (HazMat)

A Safety Data Sheet (SDS) shall be readily available for all HazMat used or delivered. Suppliers must ensure all employees have access to and be trained in the requirements of the HazMat to include provision of proper personal protective equipment (PPE).

5.16 Diminishing Manufacturing Sources and Material Shortages (DMSMS) Management

Suppliers and their sub-tier suppliers must maintain a DMSMS Management Program. Any known or suspected obsolescence must be immediately communicated to Smith & Co. as outlined in Section 5.3 Supplier Notification.

5.17 Restricted Materials

Unless specified in the engineering drawing and BOM, materials listed in the below table are restricted. Exceptions may be given but must be given in writing with suitable substitute information as outlined in Section 5.3 Supplier Notification.

Restricted Material Categories	Restricted Material List
• Beryllium alloys and Beryllium Compounds • Chromium and Chromium Compounds • Glycol ethers • Lead and lead compounds • Mercury and mercury compounds • Nickel and Nickel Compounds • Perchlorate Compounds • Polybrominated Diphenyl Ethers (PBDEs) • Restricted HazMat categories in NAS411-1, Table 1	• Extremely Hazardous Substances listed in 40 CFR 355, Appendix A of the EPCRA, Section 302 • Chemicals listed in 40 CFR 372.65, Paragraph A of the EPCRA Section 313 Toxic Release Inventory Chemicals • Hazardous substances listed in Table 302.4 of 40 CFR 302.4

5.18 Foreign Object Debris (FOD)/Foreign Object Damage (FOD)

Suppliers and their sub-tier suppliers must maintain a Foreign Object Elimination program that aligns with *AS9146, Foreign Object Damage (FOD) Prevention Program - Requirements for Aviation, Space, and Defense Organizations* and *NAS412, Foreign Object Debris (FOD) Prevention Guidance Document*.

5.19 Provided Property

Where Smith & Co., its customer, or a government agency provides property—tooling, jigs, fixtures, shop aids, etc.—to a supplier it becomes the responsibility of the supplier or their sub-tier supplier. Each level of the supply chain provided with property must periodically inspect, properly maintain, and retain records associated with the provided property. An inventory list is required to be maintained, retained, and made available in the event of audit by Smith & Co. or its customer. In the event if property is found out of specification or damaged, Smith & Co.

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must be notified as outlined in Section 5.3 Supplier Notification. Suppliers are responsible for the replacement of rejected parts without the possibility of rework. All items must be returned as provided.

5.20 Competency, Training, and Expected Conduct

Suppliers shall ensure persons doing work on their behalf are aware of the importance of product and service quality, product safety, and ethical requirements, along with their contribution to each.

Product and Service Conformance: Smith & Co. expects products and services to conform to all flown down and applicable requirements and comply with all applicable regulatory and statutory requirements as outlined in the PO/subcontract. The supplier's QMS and similar systems should be adequate to produce, evaluate, and continually improve products, processes, and services.

Safety: Suppliers shall have measures and controls in place that allow for a safe, healthy environment during all work activities by those performing them on the supplier's behalf. Products and processes should be implemented and evaluated to ensure it performs to its designed and intended purpose without causing unacceptable risk of harm to persons or damage to property.

Ethics: Suppliers must conduct business at the highest level of ethics. Smith & Co.'s suppliers are an extension of its operation and shall never conduct business in a manner that could damage Smith & Co.'s reputation nor violate any law, regulation, or other statutory requirements.

Competence/Training: Those performing work on behalf of Smith & Co.'s suppliers within scope of the PO/subcontract must be competent and trained in the assigned product, process, or service. The supplier shall implement a system ensuring initial and recurring training is provided and shall follow-up to evaluate training effectiveness through mentoring and as needed, on-the-job training (OJT).

5.21 Sampling Plan

Suppliers may apply sampling plans but not on material lots with known or suspected nonconforming or counterfeit products.

6.0 References

- PGM 8.4, Supplier Audit Program
- QOP 8.4, Purchasing and Receiving
- F-031, Supplier Audit Report
- F-032, Supplier Quality Survey
- AS9102, Aerospace Series – First Article Inspection Requirements
- AS5553: Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition
- AS6081: Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, And Disposition - Distributors
- AS6174: Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel
- AS9146: Foreign Object Damage (FOD) Prevention Program - Requirements for Aviation, Space, and Defense Organizations
- NAS412, Foreign Object Debris (FOD) Prevention Guidance Document
- GIDEP

8.0 Records

- PO/Subcontract Package
- Nonconformance Report
- Corrective and Preventive Action
- Supplier Quality Survey
- Supplier Audit Report
- Approved Supplier List
- Provided Property Records

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