

This document provides specific assurance requirements for all supplies ordered by Christopher Tool & Manufacturing (CTM) as specified on the Purchase Order (PO) of which this is part, to assure that such supplies conform to the required levels of quality and reliability. The quality codes listed below are numbered to correspond to numbers listed on the PO and are applicable to the product or service the seller is to furnish. The seller's failure to comply with all codes specified on the PO will be cause for rejection of the supplies furnished.

The Standard Requirements (Code 1) apply in their entirety to all PO's.

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## 1) Standard Requirements.

- a) QMS. The Seller shall have a Quality Management System (QMS) equivalent to AS9100 and is capable of fulfilling the quality codes as specified on the CTM PO.
- b) Survey / Audit. The Seller's inspection / QMS shall be subject to survey / audit at the direction of the CTM Buyer and / or CTM Quality Manager.
- c) Product Conformity. Unless otherwise specified on the PO, or by written approval, the product or service supplied by the Seller must conform to all drawings (current revisions), specifications (current revisions) and PO requirements. The Seller shall make its employees aware of their contribution to product conformity.
- d) Handling of Sub-tiers. The quality requirements specified on the CTM PO also applies to the Seller's sub-tier suppliers. The Seller accepts full responsibility to ensure sub-tier supplier compliance with all specified codes and CTM and CTM's customer's requirements.
- e) Inspection / Nonconformances. All supplies are subject to CTM receiving audit / inspection. Nonconforming material will be held, either at CTM or at the Seller's facility until an authorization / disposition is obtained in writing from CTM or its customer. All material dispositioned as return to supplier shall be at the Seller's expense.
- f) Record Retention. The Seller shall retain all associated records / documentation for 10 yrs. Flight Safety Part records / documentation must be retained for 40 yrs.
- g) Right of Entry. All work performed shall be subject to inspection, surveillance and / or test by CTM, its customer representatives and / or Governmental and Regulatory Agencies at all reasonable times, including the period of performance, at the Seller's facility or any other entity engaged in the performance of work to fulfill the PO.
- h) Notification of Changes. The Seller shall notify Christopher Tool of any changes in the certification / registration / accreditation or major audit findings within (2) business days of receiving notification of the change / finding. Examples of changes in registration include new certification, suspension or expiration. The Seller shall notify Christopher Tool of changes that may affect quality within (7) days. Examples of changes include ownership, company name change, Management, manufacturing location, process, product and inspection techniques.
- i) Communicating Language. The Seller shall have the capability to communicate in English. All documentation shall be in English. In cases where the Seller maintains copies in their native language as well as in English and there is a conflict, the English document shall take precedence.
- j) Competence. The Seller shall determine the necessary competence / qualifications of person(s) doing work under its control that affects the performance and effectiveness of the QMS. Competency shall be based on appropriate education, training or experience.
- k) Counterfeit Prevention. The Seller shall plan, implement and control processes appropriate to its organization and the product for the prevention of counterfeit or suspect counterfeit part use and their inclusion in product(s) delivered to CTM. Product will only be accepted by CTM with documentation certifying unbroken traceability (e.g. serialization, lot, batch number and mill certs including distributors pack slips / certificates of conformance) throughout product life.
- l) Product Safety. The Seller shall have control of the processes needed to assure product safety during the entire product life cycle, as appropriate to its organization and product. The Seller shall raise awareness of product safety to its employees.

- m) Ethical Behavior. The Seller shall set forth the shared accountability of each of its employees to conduct business with honesty and integrity. Example: Code of Ethics or equivalent.
- n) Performance Monitoring. CTM monitors the Seller's delivery and quality of products received. CTM may issue a Supplier Corrective Action Request (SCAR) as deemed necessary. The supplier is required to address the root cause(s) and implement corrective action(s) when SCARs are issued. To prevent further action, the Seller shall provide an acceptable RCCA by the date requested.

**2) First Article Review / Approval.**

The Seller shall submit one part for first article approval. This shall include a complete inspection on one tagged / identified part in the first shipment or, if directed by the buyer, prior to production. A report shall accompany the tagged / identified part listing all drawing requirements including notes and the actual results. The first article part must be a true representative sample and have been produced by the normal manufacturing practices to be used on production parts.

**3) In-Process Controls.**

The Seller shall have a system for controlling the hardware throughout the manufacturing process. This may be accomplished using a manufacturing outline, part traveler, shop routing or other suitable method which details the planned step by step operation sequence, inspection points and provisions for controlling the drawing / specification revision status during the manufacturing process.

**4) Material Certification.**

The Seller is required to furnish material mill certification, i.e. physical and chemical test reports as applicable in accordance with the specifications specified on this order.

**5) Test Specimens.**

The Seller is required to provide test specimens for design approval or inspection / verification purposes.

**6) Christopher Tool Supplied Material.**

The materials furnished on this order have been provided by Christopher Tool for the specific supplies specified on this order. Traceability must be maintained at all times. No substitution of material composition, size or specification will be allowed unless written authorization is received from Christopher Tool.

**7) Calibration.**

The Seller shall implement and maintain a system for control and use of inspection and / or processing equipment in accordance with ISO 10012:2003. All inspection and / or processing equipment shall be calibrated against certified standards which have known valid relationships traceable to National Standards.

**8) Nonconforming Material.**

The Seller shall implement and maintain a system for control of nonconforming material, a system for assuring prompt action to correct the cause of nonconforming material and a system for withholding and segregating nonconforming material from normal production pending disposition.

**9) Final Inspection, Test / Verification.**

Prior to shipment to Christopher Tool, the Seller will perform a final inspection as required to substantiate the purchase order requirements. Documented in process inspection may be used as substantiation for reduced final inspection.

**10) Certification of Conformance.**

Each shipment must be accompanied with a signed and dated Certificate of Conformance attesting that supplies or services provided were performed in accordance with all specified purchase order requirements.

**11) Government / Source Inspection.**

The Government, Regulatory Agencies, CTM Customers and / or CTM reserve the right to inspect, at the seller's plant, any and all materials specified on this purchase order.



# SUPPLIER QUALITY REQUIREMENTS

**12) Protection of Materials in Transit.**

All material delivered on this order must be packed in a manner to prevent any damage in shipment and storage. All packages are to be properly identified.

**13) Inspection Gaging.**

The Seller is held responsible for the protection and care, other than normal wear, of all inspection gaging that may be loaned by Christopher Tool. Loaned gaging, or replacement gaging of equal quality shall be returned in acceptable condition upon completion of this order or upon demand or notice. Unless otherwise specified, said gaging is subject to recall for Christopher Tool calibration.

**14) Tooling.**

Tooling furnished by Christopher Tool shall be used for production of supplies on this PO. Unauthorized alteration of said tooling is prohibited. Tooling damage while in Seller's possession will be debited to the Seller's account. Tooling shall be returned in an acceptable condition upon demand or notice.

**15) Special Process Procedure Approval.**

The Seller is required to submit a written procedure, manufacturing outline, part traveler or shop routing detailing the planned step by step operation sequence, inspection points and provisions intended for processing for approval. No operation shall be processed until authorization / approval is secured, in writing, from Christopher Tool.

**16) Nadcap Certification Required.**

This Seller and all members of their supply chain shall be Nadcap certified.

**17) Controlled-Significant Processes.**

The process, procedure and / or operation specified on this order is / are under vendor substantiation requirements and must be performed in accordance with a previously approved procedure. No changes to this approved procedure are permitted without the expressed written consent of Christopher Tool.

**18) Statistical Process Control.**

The Seller shall implement and maintain a system for Statistical Process Control (SPC). The Seller's control plan and procedures shall be submitted to the Christopher Tool Quality Team for review and approval. All control plans, control charts, capability studies and any corrective actions taken on the process shall be provided to Christopher Tool with each shipment.

**19) Critical Items / Key Characteristics.**

The supplies specified on this order contain product and / or features identified as a "Critical Item" or "Key Characteristic". When identified as such, additional action(s) from the Seller is required. Special instructions shall be called out on the PO on how they are to be addressed.

**20) Special Packaging Requirements.**

The supplies specified on this order require specific packaging to prevent any damage in transit or storage. All special packaging requirements shall be specified on the Christopher Tool PO or separate document.

**21) Special Handling Requirements.**

The supplies and / or products specified on this order are precision hardware with stringent dimensional and cosmetic requirements. Extreme care and handling shall be exercised to prevent any damage. All damage or suspect damage shall be reported immediately to Christopher Tool.

**22) Mercury Contamination.**

All documentation provided by the Seller shall state the following: "EQUIPMENT CONTAINING MERCURY OR MERCURY COMPOUNDS HAS NOT BEEN USED FOR FABRICATION, PACKAGING, EXAMINATION OR TESTING OF PARTS, ASSEMBLIES OR MATERIAL SUPPLIED ON THIS ORDER."

## **23) Calibration Services.**

Contractors performing calibration services for Christopher Tool shall be accredited to ANAB, A2LA, NVLAP or equivalent. The calibration contractor shall use equipment which has been calibrated and maintained using standards which are traceable to the National Institute of Standards and Technology (NIST).

Contractors performing calibration services for Christopher Tool shall also have procedures in place to ensure that eye examinations, including visual acuity and color vision, as applicable, are administered by a medically qualified / trained person to all individuals performing visual inspection, other product acceptance activities and/or M&TE calibration that require visual acuity.

- a) Minimum Vision Requirements – Near vision requirements of Snellen 14 / 18, (20 / 30) or Jaeger 2.
- b) Intervals shall not exceed one year.
- c) Individuals shall be tested in at least one eye, either corrected or uncorrected.
- d) Color Perception testing is required one time only. Individuals shall be capable of adequately distinguishing and differentiating colors used in the method for which certification is required, the process being performed or inspection activity.
- e) Records shall be retained for each individual.

Calibration certifications for equipment will contain the following information as a minimum:

- a) Supplier name.
- b) Suppliers Certification number.
- c) Equipment description.
- d) Equipment ID (model no., serial no.).
- e) Date calibration performed.
- f) Due date of next calibration.
- g) Description of standard(s) and method(s) used for calibration.
- h) NIST test number of standard(s).
- i) Date of standard(s) calibration.
- j) Due date of standard(s) next calibration.
- k) Identification of personnel performing calibration services.
- l) Measured values.
- m) Calibration Procedure used.
- n) Applicable environment conditions.

Measuring, test and processing equipment shall be packed adequately to prevent damage in shipment or storage. All standards or reference standards which are found to be out of manufacturer's specified tolerances shall be immediately reported to the Christopher Tool Quality Team.

## **24) Fraud and Falsification.**

All Seller documentation, including but not limited to, manufacturing, inspection and test records, shall contain the following preprinted statement: "THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTE."

(Ref. Federal Law, Title 18, Chapter 47.)

## 25) Drawing Control.

The drawing(s) provided are to be considered as customer property and must be returned upon completion of this order.

### ITAR WARNING STATEMENT:

The export of documentation or files sent that contain technical data is, or may be, restricted by the Arms Export Control Act and the International Traffic in Arms Regulations (ITAR). Diversion contrary to U.S. law is prohibited. The export, re-export, transfer, or re-transfer of this technical data to any other company, entity, person, or destination, or for any use or purpose other than that for which the technical data was originally provided by the customer is prohibited without prior written approval from the customer and authorization under applicable export control laws.

### EAR WARNING STATEMENT:

The export of documentation or files sent that contain technical data is, or may be, restricted by the Arms Export Control Act and the Export Administration Regulations (EAR). Diversion contrary to U.S. law is prohibited. The export, re-export, transfer, or re-transfer of this technical data to any other company, entity, person, or destination, or for any use or purpose other than that for which the technical data was originally provided by the customer is prohibited without prior written approval from the customer and authorization under applicable export control laws.

## 26) Conflict Minerals.

The use of conflict minerals is NOT permitted. Federal law defines “conflict minerals” as;

(i) columbite-tantalite, also known as coltan (the metal ore from which tantalum is extracted); cassiterite (the metal ore from which tin is extracted); gold; wolframite (the metal ore from which tungsten is extracted); or their derivatives; or (ii) any other mineral or its derivatives determined by the U.S. Secretary of State to be financing conflict in the Democratic Republic of the Congo or an adjoining country (collectively known as the “Covered Countries”).

## 27) DFARS (Defense Federal Acquisition Regulation Supplement).

DFARS applies to this purchase order. DFARS is a set of restrictions for the origination of raw materials intended to protect the US defense industry from the vulnerabilities of being overly dependent on foreign sources of supply.

Material purchased on this purchase order must meet DFARS clause 252.225-7009 Restriction on Acquisition of Certain Articles Containing Specialty Metals.

Only material from Qualifying Countries as identified in DFARS clause 252.225-7002 is allowable.

The Country of Melt and Country of Manufacture must be identified on the mill certification.

## 28) DPAS (Defense Priorities and Allocations System).

DPAS applies to this purchase order. DPAS is used to prioritize national defense-related contracts/orders throughout the U.S. supply chain in order to support military, energy, homeland security, emergency preparedness, and critical infrastructure requirements.

DPAS uses a rating to prioritize orders. A priority rating consists of either a “DX” or “DO” rating.

A DX rating is of Highest National Defense Urgency. DX rated orders take precedence over all DO rated orders.

A DO rating is Critical To National Defense. DO rated orders take precedence over all other orders.

In addition, a Program ID Symbol may be identified as well. Some examples are as follows;

- “A1” (aircraft)
- “A2” (missiles)
- “A3” (ships)
- “A4” (vehicles)
- “A5” (weapons)
- “A6” (ammunition)

Examples, the DPAS priority rating may read “DO-A1”, meaning aircraft material critical to national defense or “DX-A4”, meaning vehicle material of highest national defense urgency.

The “DX” or “DO” designation will be identified on the purchase order.



# SUPPLIER QUALITY REQUIREMENTS

## AEROSPACE CUSTOMER SPECIFIC QUALITY CODES

**29) Parker Hannifin PD1000 applies.**

**30) United Technologies Corporation (UTC) Aerospace Supplier Quality Requirements.**

The articles on this purchase order are for United Technologies Corporation (UTC) member "end use" requirements and must be controlled in accordance with all applicable Purchase Order requirements.

**31) Moog S275 applies.**

## MEDICAL DEVICE CUSTOMER SPECIFIC QUALITY CODES

**32) D84050 CTM Supplier Quality Agreement applies.**

As a requirement of ISO 13485, a written agreement between CTM suppliers and CTM Purchasing must be completed and kept on file. D85050 CTM Supplier Quality Agreement fulfills this requirement.