Purpose:

The purpose of this document is to communicate supplier flow down requirements as pertinent to suppliers who provide product or services that directly impact the products manufactured by VMW.

Scope:

The following clauses can apply to suppliers as determined by the Supplier Quality Agreements (PRF7.4.3).
See General information if no Supplier Quality Agreement exists between the Supplier and Vaupell. The acceptance of the Purchase Order will be considered agreement to the applicable clauses.

General Information:

Supplier Quality Agreements (PRF7.4.3) are required as per PROP7.4.1 (Supplier Performance) for level 1 and 2 criticality suppliers.

The clauses listed below shall be made part of the Purchase Order when noted on the Supplier Quality Agreement (PRF7.43) for a specific supplier.

Exclusions or deviations to these requirements are to be submitted in writing to VMW's Quality Manager. Verbal authorizations will not be permitted.

Requirements that cannot be applied due to the nature of the organization and or the products / services provided will be considered as excluded, providing such exclusions do not affect the organization's ability or responsibility to provide product / service that meets VMW and regulatory requirements.

1.0 Quality System Requirements

The Supplier's Quality System shall comply with the requirements of one of the following:

A) ISO 9001
B) ISO 13485
C) AS 9100
D) Approved Audit
E) ISO/IEC 17025

For AS9100 certified Sellers, Seller shall grant VMW and VMW's customer access to the OASIS database to certification of audit reports.

2.0 Source Inspection

A) VMW Source Inspection:

All items on this Purchase Order require inspection and/or test, by a VMW Quality Representative, at the Seller's facility prior to shipment. VMW Quality Assurance shall be notified forty-eight (48) hours in advance of the time articles are ready for inspection.

B) VMW Source Surveillance:

All items on this Purchase Order are subject to surveillance by VMW and/or VMW's customer, during the period of manufacture, processing, inspection and/or testing. Upon receipt of this order, and prior to commencement of performance, contact VMW Quality Assurance or Field Representative servicing your facility to arrange scheduling of such surveillance.

C) Customer/VMW Rights:

The Customer and/or VMW reserve the right to inspect any or all work included in this order at the Seller's plant.

D) Government Source Inspection:

D.1 Government Inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify the Government Rep. who normally services your plant so that appropriate planning for Government Inspection can be accomplished.

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D.2. On Receipt of this order, promptly furnish a copy to the government Rep.; if none, send to the nearest Army, Navy, Air Force or Defense Supply Agency Inspection office. In event, the representative or office cannot be located; our Purchasing department should be notified immediately.

3.0 First Article Inspection

A) First Article Inspection at Destination:

The Compliance of Seller's design with requirements of applicable engineering drawings and specifications will be determined from inspection and acceptance by VMW of one (1) first article sample representative of the production process. Said sample shall be delivered to VMW's plant and must be accepted prior to production run. All samples shall be tagged or otherwise identified. All data resulting from the Seller's first article shall be submitted with the first article. Seller will be notified in writing of disposition (approval or rejection).

B) First Article Inspection at Source

First Article Inspection shall be accomplished at the Seller's plant prior to production run. VMW Quality Engineering shall be notified at least forty-eight (48) hours in advance and shall witness the First Article Inspection and shall verify results by authenticating the appropriate documents. Verification of such results shall not constitute acceptance of any items required to be delivered hereunder, nor relieve Seller of its obligation to furnish items meeting the applicable drawing and specification.

C) First Article Report:

The Seller shall furnish a First Article Report with the first shipment of each item when:
1) It is the first time the seller has made/supplied the item to VMW.
2) Drawing Revision changes a drawing dimension. (For the change only).
3) A seller makes a change in major sub-tier support, i.e. different machine shop,
chemical treatment, plating,
from the original FAI.
4) Seller makes an engineering prototype.
5). After a two (2) year lapse in production

4.0 Boeing Approved Supplier

Parts manufactured under this purchase order require use of Boeing D1-4426 Approved Processors.

5.0 Test Data/Reports

A) Acceptance Test Data:

Each shipment against this order must be accompanied by a copy of the Seller's acceptance test(s) data to provide evidence of compliance with all acceptance test requirements.

B) Physical/Chemical Report:

A validated physical/chemical test report must accompany all shipments made against each item of this Purchase Order, which indicates the percentage of each element that makes up the chemical composition and physical properties of all raw materials. The report shall specifically identify the material by reference to the number of the melt, cast, heat, drop, lot, or other similar designation, and must indicate the applicable specification, revision and Purchase Order designation.

C) Physical and Chemical Analysis:

Seller shall maintain results of chemical and physical analysis performed on raw materials, which are employed on fabrication of articles purchased on this order, and shall make these available upon request.

D) Material Certs:

One (1) copy of material certification, identifiable to the material submitted, must accompany each shipment.

E) Dimensional Data:

A dimensional check sheet shall be furnished with each part submitted for inspection. All check sheets shall include the heat, batch or lot number (as applicable), traceable to the raw material used, and shall specify the characteristics inspected and shall indicate acceptance by Seller.

6.0 Lot Traceability

A) Traceability System:
All items on this order are subject to traceability at the seller's facility, which is defined as the ability to trace the history, application, country of origin, use and location of an individual item or characteristic lot of items through the system assignment, recording and correlation of control identification.

B) Lot Identification:
The Supplier shall assign a lot identification for each batch or manufactured lot. A lot is defined as a quantity that has been blended, mixed, or fabricated during an uninterrupted manufacturing run. Each item in each lot shall be properly identified with the assigned lot number. Unless otherwise specified, the Purchase Order number is the lot traceability number.

C) Single Lot:
All items furnished in accordance with this Purchase Order shall be of the same manufacturing lot. The manufacturing lot number shall be marked on the shipping papers.

D) Identification:
The Seller shall legibly identify each part, assembly, and material in the methods, and with the information, prescribed by the detail document. For example; purchase order number, gage or tool number, etc, as required. Parts, assemblies and materials not having sufficient space for, or which could be damaged by marking shall be identified by a tag attached to the part or container.

7.0 Age Control/ Cure Dates/Shelf Life

The articles furnished in accordance with the Purchase Order which are subject to Age Control, the Seller shall mark articles with batch or lot number, date of manufacture, cure date, storage environment, and/or shelf life as applicable. Unless otherwise specified in the Purchase Order, articles subject to age deterioration shall not be supplied when more than 20% of the shelf life has been expended.

8.0 Certificate of Compliance

The Seller shall submit with each shipment of material a statement on the Seller's stationary that certifies the following: "All material and/or services supplied are in conformance with requirements of the purchase order. Test reports, inspection results or other verifiable documentation of quality are maintained at the point of manufacture and are available for review by VMW and/or Government representative."
Certifications shall contain, at a minimum:
a) Seller's name, address, and if applicable, suppliers product identification;
b) The VMW Purchase Order number
c) Product identification and revision level
d) Quantity supplied / shipped
e) Statement that the product, material, service or process conforms to the purchase order requirements;
f) Authorized signature and date of quality representative or company official with title listed.

As applicable, the certificate shall also contain:

a). Serial numbers, lot numbers and /or batch number, as applicable;
b). Expiry date (if applicable)
c). Verifiable results (usually numerical results of observed visual criteria) of all testing /inspections required by PO, drawing or specifications for raw materials, special processes an d other applicable products:

Catalog Items: For standard "off the shelf" (catalog items), a packing list is acceptable with a reference to purchase order. No revision level is required.

9.0 Right of Entry

VMW's Quality Assurance representative, VMW's customer, and/or their customer and any regulatory agency may perform audits and maintain surveillance of the seller's facility to assure compliance with the Quality Program, and evaluate the degree of capability and the continuing application of such ability to comply with these requirements. This function may also apply to sub-suppliers with seller's cognizance. The seller shall provide such facilities and assistance as may reasonably be required by VMW's Quality Assurance representative in the performance of their functions.

10.0 Change Control

A) The Seller specifically agrees that no changes are made in design, configuration, material, manufacturing process, manufacturing location, testing method or testing sequence without the prior written approval of VMW.

The Seller agrees that no changes are to be made at sub-tier suppliers for design, configuration, material, manufacturing process, manufacturing location, testing method or testing sequence without the prior written approval of VMW.

B) Seller's drawings, specifications, process documentation and test procedure, which have previously been approved by VMW shall be resubmitted to VMW for evaluation and approval prior to the Seller effecting changes to the product or data. Changed articles shall be identified so as to segregate them from the unchanged articles.

C). Quality System Status or Management
Seller is required to inform VMW of any change that could impact product being supplied.

D) Seller agrees to notify VMW of changes to resource planning, Top Level Management positions, key suppliers, and changes that will effect capacity or capabilities.

11.0 Rejected Material

A) Failure Analysis:
Seller shall conduct failure analysis on returned products as required by VMW and furnished documented report of results to VMW. Each failure analysis report shall contain the basic identification information as to the type of hardware that failed, type or description of the analysis that was conducted on the failed part, the conclusions derived as a results of this analysis and the corrective action taken to prevent a recurrence of the failure. VMW reserves the right to witness the failure analysis.

B) Re-Submission:
Re-submittal of previously rejected parts or materials, including lots rejected on the basis of sampling inspection, shall be accompanied by the statement "Re-submittal Lot" on the Seller's shipping document and shall reference VMW's rejection report number. Such re-submittal shall be made on a separate Seller shipping document.

12.0 Inspection and/or Production Tooling

Seller is held responsible for the control, protection, calibration, and care (other than normal wear) of all production and inspection tooling and equipment furnished by VMW or paid for by VMW for use in performance of Purchase Order requirements. All tooling shall be subject to VMW surveillance and/or inspection upon notice. Said tooling, or replacement tooling of equal quality, shall be returned to VMW in an acceptable condition upon demand or notice.

13.0 Special Processes Approval / Certification

A) Approval and Certification:
Special processes, equipment, and personnel utilized in performance thereof, shall be subject to approval or certification by VMW Quality Engineer. Certification of special processes performed by a lower tier supplier is the responsibility of the Seller (first tier supplier). Objective evidence of special process certifications of the Seller's lower-tier supplier(s) shall be available to VMW Quality at the facilities of the Seller and at any sub-tier supplier's facility utilized in the performance of this order.

B) Approval:
Processes performed by the Seller or his subcontractors, such as welding, heat treating, cleaning, electro-plating, anodizing, chemical filming, nondestructive testing, etc., require VMW Quality Engineer approval prior to fabrication under this order, and objective evidence of process specification compliance must be retained and be made available to VMW and/or Government on request.

C) Certification:
Process Certification must accompany all shipments to VMW and shall identify the processor, process used and the specifications to which they conform. When nondestructive tests are performed, a legible copy of the report shall accompany the certification.

14.0 Nonconforming Material

Seller's items, which adversely affect form, fit, function, or reliability and are not conforming to VMW specifications shall be dispositioned by VMW Material Review Board (MRB) prior to shipment. Disposition by VMW MRB may be obtained by contacting the VMW Quality Engineer. MRB authority is not delegated to the Seller where nonconformance affects form, fit, function or reliability.

15.0 Corrective Acton

Seller shall take immediate corrective action regardless of nonconformance identified to ensure that suspect and nonconforming product is contained. At a minimum, the following needs to be performed:

a). Identify the problem
b). Quarantine suspect material
c). establish a clear break point
d). Review all suspect material
e). Identify root cause
f). Implement corrective actions
g). Validated the effectiveness of the corrective actions
h). ~~Update quality system documentation~~
i). Review potential downstream effects on similar products.

16.0 Re-qualification

Re-qualification on previously qualified items may be required as determined by VMW when a change is made to the design or to the production process.
Specific situations that generate a requirement for re-qualification include:

1. Any change in hardware design or specification.
2. A new manufacturing or processing source
3. Relocation of a manufacturing or processing facility
4. Interruption of 90 or more days in production of the item.

Suppliers and/or sub-tier suppliers anticipating or experiencing any of the above shall notify VMW within three (3) working days if any of these situations become apparent. VMW will provide suppliers with specific re-qualification requirements when required.

17.0 Sample Inspection

A) VMW Approval:

Fourteen (14) days prior to the performance of any sampling inspection and/or test (other than 100%) on materials to be furnished to VMW, the supplier shall submit these sampling plans to VMW for review and approval by a VMW Quality Engineer.

B) ANSI/ASQC Z1.4 / Z1.9

Any sample inspection performed on articles supplied shall be in accordance with the requirements of ANSI/ASQC Z1.4 / Z1.9.

C) Disallowed:

Sample inspection of items furnished on this Purchase Order is not permitted. 100% inspection of all items is mandatory.

18.0 Packaging and Packaging Requirements

The Seller shall assure that all the supplies on the Purchase Order are packed and packaged using materials of a grade, size, and weight, which will provide adequate physical protection from damage and contamination during handling and transport to the point of delivery.

19.0 Requirement Flow down

All requirements imposed on the purchase order shall be flowed down to all suppliers and subcontractors.
Sections of this SQR to be flowed to sub-tier suppliers are:

- Section 19
- Section 21
- Section 29
- Section 30
- Section 31
- Section 32
- Section 33

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20.0 Quality Records

Quality Records shall be maintained for a minimum of seven (7) years.
After Seven (7) years, the supplier is required to contact VMW for disposition of records.

All Quality records shall be legible and shall be stored in a clean, dry environment so as not to be subject to damage, deterioration, or loss.

Disposition of any records will include input from VMW Midwest prior to execution.

21.0 Ethics

VMW is committed to treating suppliers with fairness and integrity. VMW will emphasize competition without discrimination or deception, in a manner consistent for long term relationships. Suppliers shall adhere to the same standards of behavior. Suppliers shall have a documented ethics program.

Seller and sub-tier suppliers of the seller shall abide by the requirements of 41CFR 60-1-4(a), 60-300.5 (a) and 60-741.59(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity, or national origin. These regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, protected veteran status or disability.

22.0 Quality Planning and Risk Management

The supplier shall engage in quality planning that includes critical concepts of defect prevention and continuous improvement. The supplier shall implement and maintain a process intended to identify, periodically analyze, and mitigate all risk likely to interrupt the process and contractual obligations related to product quality and on time delivery. These risks can be linked to:

- Products
- Suppliers
- Product Manufacturing and Inspection
- Industrial resources (i.e. machines)
- Human resources.

For each of the above, if a "critical" risk is identified, the Supplier shall formalize and record actions implemented to reduce, mitigate and / or monitor risk. *Critical risk is defined as a risk being able to have a significant effect on product quality and deliveries.*

23.0 Process Controls

Product shall be inspected to an inspection plan. Records are to be maintained.

24.0 Software Validation

When a supplier writes software used to design, manufacture, inspect, test acceptance or calibration the following applies, at a minimum:

a). verify software with documented test procedure
b). Obtain evidence that the software performs the required function.
c). maintain version control
d). Change control that includes re-verification and or revalidation
e). A method for archive and backup

25.0 EYE Examinations

Individuals that visually inspect product for final acceptance shall receive the following;
a). Color Vision Eye Examination Every 12 months.
b). Near Vision Eye Examination Every 12 months.
A medical professional shall perform the eye examination (eye clinic, occupational health clinic, onsite health clinic of medical department). The individuals(s) shall meet the minimum standards in one eye, corrected with glasses or not corrected. The records of the eye examinations shall be maintained by the Supplier and made available upon request.
Near Vision: Snellen 14/18 or better, Jaeger type 1 – 20/25 or Ortho-Rated 8 or equivalent.

Color Vision: Average or normal 4 of 6 responses on Titmus, B+L or American Optical testing machine or a satisfactory response when tested with an Ishihara or Pseudoscomatic plate.

NDE Eye Examination Requirements (FPI, X-Ray, N-Ray and Ultrasonic)
a). Near Vision Eye Examination requirements for persons performing Nital/Temper Etch shall be type 2 with an acceptance criteria of 20/30 or equivalent.
b). For Inspectors certified to the requirements of NAS410 (NDT) or Mil-STD-867 (Nital/ Temper Etch), and for personnel performing visual inspection of welds, suppliers may administer their own eye examinations per the standard.

26.0 VMW Purchase Orders for U.S Government Contracts

U.S. Government owned gages and tooling supplied by VMW are Government Property and are subject to the provisions of the federal Acquisition Regulation (FAR) 52.245-2 (FP) or 52.245-5(CP), or 52.245-1. U.S. Government owned gages shall be clearly identified with tag that states the ownership.
U.S. Government-owed gages/tooling/test equipment shall be treated as VMW owned and follow the same requirements identified above.
The seller shall keep property records as shown in Federal Acquisition Regulation (FAR) 45.505-5 or 52.245-1.

27.0 Contamination Control

Foreign Object Contamination Control and Detection – Processors performing primary or secondary manufacturing or non-destructive testing (NDT) operations of VMW product shall ensure all open cavities subject to infestation of foreign objects and debris are free of any foreign matter (i.e.: machine chips and dust particles, blasting materials, shot, weld and braze splatter, coatings, process solutions, maskants, etc.). Prior to the return of all components to VMW, the processor shall confirm the absence of foreign matter, objects, debris, and process solutions.

Cross Contamination – All products (including raw materials) must be kept safe from any potential cross-contamination that may occur when processing similar or dissimilar products on the same manufacturing equipment. When switching from one manufacturing process or product to another, the entire relevant manufacturing system must be purged as necessary to prevent material(s) from the previous production run to enter into the next production run.

Lot Control – In a continuous manufacturing system lot control must be maintained to a level that a nonconformance can be traced back to additional material that could be affected, including adjacent lots. Materials known to contain greater than trace levels of lead, bismuth, silver, antimony, zinc, tin, iron, arsenic, and selenium and /or other harmful impurities such as tellurium, thallium, indium, sulfur, boron and cadmium should not be utilized in products for VMW. Seller to notify VMW immediately, if contamination with any of these above noted materials is suspected.

28.0 Preference for Domestic Specialty Materials

Seller shall agree to comply with Defense Federal Acquisition Regulation Supplement DFAR 252.225-7014 and Alternate I, Preference for Domestic Specialty Metals when the clause is specified in the purchase order. Use of foreign specialty metals may only be used with written authorization from VMW. Material substitutions are prohibited without formal approval from VMW.

SDS –Safety Data Sheets are required for raw materials.

29.0 Training

Seller shall ensure that employees who directly affect the manufacture and quality of components supplied to VMW are aware of their contribution to product or service conformity, their contribution of product safety, and the importance of ethical behavior. Seller's personnel must be trained and qualified before performing processes or services.

30.0 Counterfeit Parts

The seller shall plan, implement, and control the appropriate process(s) to ensure the prevention of counterfeit or suspect counterfeit part use and their inclusion into product(s) delivered to VMW.
The Seller shall only produce products or purchase components /hardware direct from the original component manufacturer, equipment manufacturer, or authorized distributor.
Should the seller become aware of a counterfeit part or suspect counterfeit part having been delivered to VMW, Seller shall notify VMW as soon as possible but no later than 7 days from discovery. VMW will verify receipt of this notification.

31.0 Data Security and Cyber Security

Supplier shall operate and maintain an information and cybersecurity program, including administrative, physical, and technical safeguards, designed to protect against and prevent any unauthorized use, access, processing, destruction, loss, alteration, or disclosure of Confidential Information and Personal Data ("Security"). Upon the request of VMW, Supplier shall provide proof of Supplier's security and submit its processing facilities for audit of the processing activities covered by the purchase order. Such audits shall be carried out by VMW or it's agents with the required professional qualifications and a duty of confidentiality. Supplier shall immediately (no longer than two (2) business days) notify VMW of any perceived, potential, or actual breach to Supplier's Security ("Breach"), and provides a full description of the Breach, the impact and mitigation efforts. Supplier will promptly

(a) investigate, remediate, and mitigate the effects of the breach

(b) provide VMW with assurances reasonably satisfactory to VMW that such a breach will not recur.

If VMW determines that notices or other remedial measures are warranted, Supplier will, at VMW's request and at Supplier's cost, undertake such remedial actions.

32.0 Sub-Tier Selection / Criteria

VMW reserves the right to specify or approve sub-tier suppliers contracted by its suppliers, this includes but is not limited to special process, material testing services, distributors, and other subcontractors.

33.0 Documentation

Unless authorized by VMW, the Seller may not transmit any VMW documents or specifications to anyone outside of the Supplier's business organization except approved sub-tier sources.

Upon discontinuation of business between the Seller and VMW, all proprietary documents and records will be transferred to VMW.