Applicability

☐	UG	UMBRAGROUP Corporate
☐	UGI	UMBRAGROUP S.p.A. – Foligno (PG), Italy
☒	UGM	Linear Motion LLC – Saginaw (MI), USA
☒	UGW	Umbra Cuscinetti Inc. – Everett (WA), USA
☐	UGP	Prazisionskugeln Eltmann GmbH – Eltmann. Germany
☐	UGK	Kuhn Prazisionsspindeln and Gewindetechnik GmbH, - Freiberg am Neckar, Germany
☐	UGA	AMCo. S.r.L. – Foligno (PG), Italy
☐	UGS	SERMS S.r.L – Terni (TR), Italy

Approval step

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1 SCOPE

The purpose of this document is to provide clear expectations to our suppliers that are in addition to what is normally required in an industry standard QMS and to state additional business requirements.

2 INTRODUCTION

This document is available at the latest revision on the UMBRAGROUP's web portal under the "supplier" section. Every supplier when accepting a Contract/PO is responsible to verify and guarantee compliance to the latest revision of this document. A formal compliance commitment to comply with all requirements listed herein will be provided by the supplier to UMBRAGROUP by completing and submitting the Compliance Matrix (F-SQAR-001).

New revisions of this document shall be incorporated by the supplier within 3 months from the date of release.

Any exception shall be coordinated through the Compliance Matrix (F-SQAR-001) and approved in writing by UMBRAGROUP's Supplier Quality prior to accepting the Contract/PO.

All written and oral communication with the supplier, including supplier specifications, procedures and reports, shall be in English.

3 LIST OF ACRONYMS

AAM – Acceptance Authority Media

A&D - Aerospace & Defense

APQP –Advanced Product Quality Planning

CoC - Certificate of Conformance

COTS - Commercial Off the Shelf

ESD – Electrostatic Discharge

FAI - First Article Inspection

FIR – Final Inspection Report

FMEA - Failure Mode Evaluation Analysis

FOD – Foreign Object Damage

MRB - Material Review Board

NC- Nonconformance

PFMEA - Process FMEA

PO - Purchase Order

PPAP - Production Part Approval Process

QIP - Quality Improvement Plan

QML - Qualified Manufacturers List

QMS - Quality Management System

4 QUALITY MANAGEMENT SYSTEM REQUIREMENTS

The Supplier shall maintain a Quality Management System (QMS) suitable to the product and services provided to UMBRAGROUP. The supplier shall have at least a QMS certified in accordance with:

- ISO9001 – Quality Management System Requirements

The QMS shall be certified by an accredited third-party certification body to the latest version of the standard.

In the absence of third-parties' certification, depending on the product, its application, value, and criticality, the UMBRAGROUP Quality representative may authorize the acceptance of other evidence of compliance. This may include second-party (UMBRAGROUP) audit or first-party (self) assessment to the applicable criteria above, or to a set of alternative basic quality requirements.

For suppliers providing nuclear power components to UMBRAGROUP they may choose to be registered to CSA N299.3 – "Quality Assurance Program Requirements For The Supply Of Items And Services For Nuclear Power Plants, Category 3".

For A&D orders Supplier is responsible for implementing, maintaining and demonstrating on-going compliance with the current revision of the applicable Quality Management System standards listed below:

- Minimum QMS requirement for supplier that manufacture, assemble, and/or test products provided to UMBRAGROUP:
    - **EN/AS9100 – "Quality Management Systems Requirements for Aviation, Space and Defense Organizations" certified by an accredited certification body in accordance with 9104-001 listed in on the IAQG OASIS database.**
      NOTE: ISO9001 – ''Quality Management System Requirements'' and IATF16949 – " Automotive Quality Management System Requirements'' are acceptable as minimum requirement for those suppliers that perform only single NC machining operations on UMBRAGROUP aerospace products starting from raw material provided by UMBRAGROUP and for which there is no involvement of their supply chain on UMBRAGROUP products. Non-certified organizations may be approved by UMBRAGROUP to perform NC machining operations following a successful on-site audit demonstrating full compliance with this document.
- Minimum QMS requirement for suppliers that procure parts, materials and assemblies and resell these products to UMBRAGROUP. This includes organizations that procure products and split them into smaller quantities including those that coordinate a customer-controlled service on the product Quality Management System:
    - **EN/AS9120 – "Quality Management System Requirements for Aviation, Space and Defence Distributors" certified by an accredited certification body in accordance with 9104-001 and listed on the SAE OASIS database.**
- Minimum QMS requirement for suppliers that provide Special Processes:
    - **Special processes supplier shall establish, document and maintain a system compliant with the standard EN/AS9100 or PRI/Nadcap AC7004.**
- Minimum QMS requirement for calibration laboratories or suppliers that provide measuring services to UMBRAGROUP:
    - **The supplier shall establish, document and maintain a system that complies with the applicable version of ISO 17025 or ISO 10012 (Requirements for Measurements processes and Measuring Equipment). The supplier's calibrations system is subject to audit, verification and approval and/or disapproval by UMBRAGROUP or its representative.**
- Minimum QMS requirement for Commercial Off-The Shelf Suppliers (COTS):
    - **ISO9001 – ''Quality Management System Requirements''**

The supplier's Quality Management System is subject to audit, verification, approval and/or disapproval by UMBRAGROUP or its representative(s) including UMBRAGROUP customers and regulatory agencies.

Suppliers may at their option, and at no additional cost to UMBRAGROUP, elect to establish, implement and maintain a QMS or procedures that meet higher-level requirements than those specified by UMBRAGROUP.

Audit of the supplier's Quality Management System by UMBRAGROUP, its representative, their agents, and/or by a recognized third-party certification body at the supplier's facilities or of the supplier's sub-tier sources, does not relieve the supplier of the responsibility to furnish products or services that conform to all contract requirements.

Supplier shall immediately notify UMBRAGROUP upon loss of certification.

Upon receipt of an UMBRAGROUP contract, the supplier is responsible for implementing, maintaining and demonstrating on going compliance with the applicable Quality Management System requirements mentioned above, unless otherwise specified in the contract.

For suppliers holding an IAQG (EN/AS/JISQ) 9100 series certification, the Supplier shall:

- Grant access to UMBRAGROUP to all private data available in OASIS database containing detailed certification related information,
- Provide UMBRAGROUP on request with any information about the content of the OASIS report and all private data available in OASIS. When the OASIS report or associated "Non-Conformities" are not in English, it is the responsibility of the Supplier to translate and submit necessary information in English.
    - The Supplier shall inform UMBRAGROUP in case of suspension, withdrawal or expiration of its QMS certification.
    - The Supplier shall notify to UMBRAGROUP any major change to the QMS (e.g., scope change).

Supplier shall flow down all these requirements to its Supply Chain.

NOTE: 9100 series means: 9100 (Aviation, Space and Defense Organizations), 9110 (Aviation Maintenance Organizations) and 9120 (Aviation, Space and Defense Distributors).

5 GENERAL REQUIREMENTS

5.1 COMPLIANCE TO CONTRACTUAL REQUIREMENTS

Upon accepting a UMBRAGROUP contract and/or Purchase Order, the Supplier is responsible for compliance to all contract and/or Purchase Order requirements. All documents, drawings and specifications, regardless of origin, are applicable to the Supplier when specified in the contract and/or Purchase Order or documents referenced in the contract/PO and are required to be used at all levels of the supply chain.

Unless otherwise specified in the contract and/or Purchase Order, the revisions active at the date of issue of the PO applies.

Neither audit, surveillance, inspection or tests made by UMBRAGROUP, its representatives or its customers at Supplier's facilities, at any sub-tier facilities, or upon receipt at UMBRAGROUP, relieves the Supplier of the responsibility to furnish acceptable products or services that conform to all contract and/or Purchase Order requirements; nor does it preclude subsequent rejection by UMBRAGROUP or its customers.

5.2 FOREIGN OBJECT DAMAGE/DEBRIS PREVENTION (FOD)

Suppliers shall implement a FOD Prevention Program having a suitable level of FOD prevention for their individual products/services based on the guideline AS/EN9146 - "Foreign Object Damage (FOD) Prevention Program – Requirements for Aviation, Space, and Defense Organizations" and/or similar recognized aerospace standard.

Additional valid guidelines on how to develop a FOD prevention program can be found on the Supply Chain Management Handbook (SCMH) on the IAQG website.

Supplier shall flow down these requirements to its Supply Chain.

5.3 RIGHT OF ACCESS

UMBRAGROUP and its customers or their authorized representatives, including representatives of the regulatory agencies, shall be granted access to Supplier's facilities and to all Supplier's sub-tier facilities and shall be entitled to enter such facilities at any reasonable time during Supplier's normal operating hours provided that UMBRAGROUP will notify the Supplier with reasonable advance about the visit.

Supplier shall grant access to its facility with the aim to allow inspection of the Work In Process, to monitor compliance of the actual Supplier's production process to the applicable UMBRAGROUP requirements and specifications - as contained in UMBRAGROUP Purchase Orders - and to conduct tests of processes or materials and verification of quality system procedures and processes.

5.4 RECORD RETENTION

Unless otherwise specified on the contract and/or Purchase Order, the Supplier shall retain all purchasing, production control, quality, manufacturing and manufacturing methods, test, and other related documents associated with the item purchased, for a minimum period equal to the calendar year in which the record was created plus ten (10) years from the date of shipment and/or for the Life of Product (50 years) for parts designated as "Safety Critical" 1A or Important 1B, after order completion.

These records shall provide evidence of conformity to requirements and to the effective operation of the supplier's QMS. Upon request, the Supplier shall be capable of retrieving and delivering required documents to UMBRAGROUP within 2 (two) working days from UMBRAGROUP's request at no expense for UMBRAGROUP.

Supplier shall flow down these requirements to its Supply Chain.

5.5 UMBRAGROUP'S DESIGNATED SOURCES FOR SPECIAL PROCESSES

Special Processes shall be in accordance with specification(s) and standards stated on the drawing and/or Purchase Order and shall be performed by qualified/authorized processors as follow:

1) When the process specification/standard called out by the drawing/PO is an international industry and/or military standard (i.e. AMS, ASTM, MIL, EN, etc..) the processor must hold a valid and current certification from NADCAP for each process being performed to be approved for processing UMBRAGROUP's parts. Processors must have completed their NADCAP certification process. Suppliers who are working on NADCAP or are waiting

on final approval will not be used until they are listed on NADCAP QML and/or unless temporary approved by a UMBRAGROUP management representative. (see https://www.eauditnet.com/eauditnet/ean/qml).

2) When the process specification/standard called out by the drawing/PO is an UMBRAGROUP's customer specification, the Supplier shall only use special process sources that are approved by UMBRAGROUP's' customer.

Questions regarding approved Special Process Suppliers shall be directed to the applicable UMBRAGROUP Quality Engineering and/or designee.

The supplier shall provide certification of all special processes performed. All certifications must reflect the current governing document revision level.

Supplier shall flow down these requirements to its Supply Chain, as applicable.

NOTE: Special processes are those included in the PRI NADCAP families of special processes (see PRI NADCAP Families at www.sae.org)

5.6 COUNTERFEIT PARTS PREVENTION

For finished and semi-finished products, raw materials and hardware, as well as those products containing electrical, electronic and electro-mechanical components used on UMBRAGROUP products, the Supplier shall plan, implement, and control processes to prevent the inadvertent use of counterfeit parts and materials.

The supplier shall take actions to prevent the inadvertent use of counterfeit parts and materials. In particular:

- Purchase raw material, electrical, electronic and electro-mechanical parts only from Original Component Manufacturer (OCM) / Original Equipment Manufacturer (OEM), their franchised dealer and/or an authorized distributor chain.
- Supplier may use distributors with a quality management system approved in accordance with the standard EN/AS9120 – "Quality Management System Requirements for Aviation, Space and Defense Distributors", accredited by a third-party certification body, listed in OASIS. Moreover, the distributors shall implement respectively the requirements of the standards AS/EN5553 – "Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; Avoidance, Detection, Mitigation, and Disposition" and/or AS/EN6174 – '' Counterfeit Material; Assuring Acquisition of Authentic and Conforming Material''
- Parts shall not be used or reclaimed and misrepresented as new.
- Parts shall not be acquired from independent distributors and/or brokers unless specifically authorized in writing by UMBRAGROUP Quality Engineering and/or designee.

Supplier shall flow down all these requirements to its Supply Chain.

5.7 CONTROL OF SUB-TIER SUPPLIERS

The Supplier, as the recipient of the contract, is responsible for meeting all requirements, including work performed by the Supplier's sub-tier Suppliers (also known as Sub-Suppliers or subcontract Suppliers).

When the Supplier uses sub-tier sources to perform work on products and/or services scheduled for delivery to UMBRAGROUP, the Supplier shall include (flow-down) on contracts, to its sub-tier sources, all of the applicable technical and quality requirements contained in this document and UMBRAGROUP contract and/or Purchase Order.

5.8 ACCEPTANCE AUTHORITY MEDIA (AAM)

The Supplier must comply with EN/AS9100 – "Quality Management Systems Requirements for Aviation, Space and Defense Organizations" and 14 CFR Part 21.2 – "Certification Procedures For Products And Parts" regarding the application of Acceptance Authority Media (AAM).

The Supplier shall clearly define within its Quality Management System the requirements governing the use of AAM, including, but not limited to:

- Types of AAM authorized for issuance and use by all employees.
- Application of AAM as objective evidence of manufacturing process control and verification of test and inspection status.

- Fraudulent, misleading, or malpractice-related use of AAM is considered a violation of federal regulations and/or customer requirements.
- Employee acknowledgment that the use of AAM signifies personal accountability for the accuracy, integrity, and compliance of the work certified.

Supplier shall flow down all these requirements to its Supply Chain.

5.9 PROHIBITED PRACTICES

The following acts and practices are prohibited, unless approved by UMBRAGROUP in writing. Any violation by the supplier may result in disqualification of the supplier for future business with UMBRAGROUP.

5.9.1 Unauthorized Facility Changes

During performance on the contract, the supplier shall give to UMBRAGROUP written notice before relocating any production, inspection or processing facilities; or, transferring work between different facilities; or, when applicable, prior to initiating any changes in the source of major components procured by the supplier and designated for use in or for installation on products scheduled for delivery to UMBRAGROUP; or, making any other changes which may affect product quality, reliability or integrity. Such changes are subject to approval/disapproval by UMBRAGROUP. A change in ownership or a change in the individual designated as the management representative with respect to the supplier's Quality/Inspection System shall be considered as a facility change and require the supplier to notify UMBRAGROUP.

5.9.2 Unauthorized Product Repairs & Salvage

The supplier may not perform any repairs such as welding, brazing, soldering, plugging, peening, bushing, or, use of paints, adhesives or plating, or use any standard or other repair practice or method, on products damaged or found to be discrepant during fabrication or processing, or, on defects in castings or forgings, unless such repairs are specifically permitted by the applicable drawing or specification, or are specifically authorized by UMBRAGROUP in writing for each occurrence. In those cases, where UMBRAGROUP authorized product repair or salvage, the supplier shall include reference in the CoC of the applicable concession requests.

5.9.3 Use Of Non-Conventional Manufacturing Methods

Unless required by the drawing, specification, or contract, the supplier may not use Electrical Discharge Machining (EDM), Electro Chemical Machining (ECM), laser or abrasive water jet cutting or drilling, flame spray coatings, or any other nonconventional manufacturing method or process on products scheduled for delivery to UMBRAGROUP without prior written authorization by UMBRAGROUP. This prohibition also applies to the use of such processes by the supplier's sub-tier sources. Authorization by UMBRAGROUP may be contingent on UMBRAGROUP conducting a review and approving the method, facilities, equipment and qualified personnel at the supplier's facilities or the facilities of the supplier's sub-tier sources that will perform the operation or process. In addition, when authorized, such operations and processes may only be performed by UMBRAGROUP approved sources.

5.9.4 Altering Data On Documents

The use of any method that causes the original data on documents to be obliterated and unreadable (i.e. the use of correction fluids, correction tape, write over, or other methods) to correct, modify or otherwise alter the data and/or entries on any certifications, test reports or other documents required by the contract, is strictly prohibited. Corrections may be made, providing it is clearly obvious that a correction was made, and it is signed (initialed) or stamped by an authorized individual. Upon receipt at UMBRAGROUP, products or services represented by documents that show evidence that they have been corrected or altered in an unauthorized manner are subject to rejection at supplier's expense.

5.10 CONTROL OF UMBRAGROUP PROPERTY

Supplier shall perform the following when UMBRAGROUP furnishes Raw material, semi-finished products and tools/gages:

1) Inspected upon receipt for evidence of UMBRAGROUP acceptance, shipping damage and lot/tool identification. In the event the Supplier determined parts delivered from UMBRAGROUP are not free of damage at the time of arrival, Supplier must notify the UMBRAGROUP and are not to begin processing of parts without prior approval from UMBRAGROUP.
2) Material traceability shall be maintained throughout the manufacturing process, assuring that items manufactured by the Supplier are identifiable to the material lot number provided by UMBRAGROUP. Supplier must ensure that a statement is included on the shipment certification and/or shipper identifying "UMBRAGROUP Supplied Material".
3) For tools/gages only, provide adequate protection to preclude damage or deterioration during use, handling and provide periodic calibration of gaging in accordance with UMBRAGROUP instructions, or request UMBRAGROUP to perform calibration at least 30 days prior to the expiration date shown by the calibration status. When deficiencies occur, notify the UMBRAGROUP immediately.
4) For tool/gages only assure completeness, presence of operating instructions and a valid calibration status, as applicable.
5) Support UMBRAGROUP periodic audits of UMBRAGROUP furnished tools/gages.

In this case, the Supplier shall stock the raw material supplied by UMBRAGROUP this must be done in compliance with the requisites below:

- Raw material shall remain an UMBRAGROUP property and shall be directly identified as such at the supplier's facility.
- Material shall be used only for UMBRAGROUP products.
- Material shall be stocked in a dedicated and separated area where is not possible to mix UMBRAGROUP's material with other customer's material.
- For the whole period of stocking in Supplier's facility the material must be identified with UMBRAGROUP's parameters (casting lot, material code, etc…). Supplier may add additional internal identification without removing the UMBRAGROUP identification.
- Each bar/plate/etc. and/or part of it shall be always easily and immediately linked to the original UMBRAGROUP lot. Material not properly identified shall be scrapped.
- Material found without identification during an audit and/or inspection by UMBRAGROUP will cause a MAJOR finding and the discard of the material at supplier's cost.

6 PRODUCT QUALIFICATION

6.1 FIRST ARTICLE INSPECTION (FAI)

Supplier shall perform First Article Inspections (FAI) in accordance with AS/EN9102 - "Aerospace First Article Inspection Requirement". FAI's shall be submitted to UMBRAGROUP electronically, unless otherwise authorized by an UMBRAGROUP Quality Engineering and/or designee.

The Supplier's First Article Inspection (FAI) activities shall be controlled through documented and maintained procedures that define the process, responsibilities, and verification criteria required for compliant FAI execution.

The first article item shall be clearly identified by a tag attached to the item or a label applied to the bag, and a copy of the FAI shall accompany the First Article part. UMBRAGROUP reserves the right to verify any or all the characteristics documented on the FAI report at the Supplier's facility.

Suppliers providing special process(es) can satisfy this requirement by documenting and providing the design characteristics and associated results on a detailed Certificate of Conformance (CoC)

UMBRAGROUP reserves the right to conduct oversight and/or verification of the supplier's FAI.

Supplier shall flow down all these requirements to its Supply Chain.

6.2 ADVANCE PRODUCT QUALITY PLANNING (APQP)

When specified on the contract and/or Purchase Order, the Supplier shall submit to UMBRAGROUP a more comprehensive Advanced Product Quality Planning (APQP) qualification package in accordance with AS9145 – ''Advanced Product Quality Planning and Production Part Approval Process for aerospace products''.

UMBRAGROUP may determine which elements of the APQP process shall apply to a specific order and further reserves the right to perform oversight and/or verification of the Supplier's APQP activities.

Supplier shall flow down all these requirements to its Supply Chain, as applicable.

6.3 FINAL INSPECTION REPORT (FIR)

Where specifically required by the drawing and/or Purchase Order, and prior to delivery of products to UMBRAGROUP, the supplier shall perform a final inspection on all products and design characteristics, and document the results on a FIR.

The format of the FIR is optional; however, it shall show the actual inspection results obtained, versus the drawing or specification requirements. FIR shall be delivered together with the part's CoC.

When sampling inspection has been formally authorized in writing by the UMBRAGROUP Director of Quality and/or designated representative, the supplier may be permitted to perform sampling inspection when a Final Inspection Report is required.

The supplier shall maintain the completed FIR as part of the supplier's quality records. Upon request, the FIR will be made available to UMBRAGROUP, UMBRAGROUP's customers and/or regulatory agencies for review.

6.4 SAFETY CRITICAL PARTS (applicable to UMBRAGROUP Linear Motion LLC only)

Parts or products that are designated as critical or safety critical by the drawing shall follow the product qualification process as defined by MEP8.2.0001 – ''Frozen Processes Procedure''.

7 PROCESS CONTROL

7.1 KEY CHARACTERISTIC

The Suppliers variation management program shall comply, as applicable to the product being provided, with the requirements of EN/AS9103. – '' Variation Management of Key Characteristics''.

When specified on the purchase order, or defined on the Engineering Drawing, the Supplier and all sub-tier contractors shall inspect all key characteristics 100% and provide the recorded data.

Supplier shall flow down all these requirements to its Supply Chain.

7.2 CONTROL OF MONITORING AND MEASURING DEVICES

Unless otherwise specified by contract and/or Purchase Order, the Supplier shall establish procedures to control Measuring and Test Equipment (M&TE) that are in compliance with the requirements of ISO10012 – ''Quality Management — Requirements For Measurement Management Systems'', ISO17025 – ''Testing And Calibration Laboratories'' and/or equivalent recognized industry standard.

The Supplier shall determine the monitoring and measurement to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of product to determined requirements. As a minimum, where necessary to ensure valid results, measuring equipment shall:

6) Be calibrated or verified at specific intervals, or prior to use, against measurement standards traceable to international or national measurements standards. Where no such standards exist, the basis used for calibration or verification shall be recorded; and
7) Be identified to enable the calibration status to be immediately determined by the user.

The supplier shall notify UMBRAGROUP in the event that measurement equipment is found significantly out-of-tolerance and the cognizant quality personnel shall appraise the impact on product quality already delivered.

When UMBRAGROUP furnishes tools/gages, they are assigned to a specific PO/order. The tools/gages must be returned with the order they are assigned to unless advised otherwise directly by UMBRAGROUP. The supplier assumes responsibility for the following:

8) Validating calibration status, as applicable.
9) Provide adequate protection to preclude damage or deterioration.
10) Provide periodic calibration or request UMBRAGROUP perform calibration at least 30 days prior to expiration date.

Supplier shall flow down all these requirements to its Supply Chain.

7.3 PRODUCT INSPECTION REQUIREMENTS

7.3.1 Inspection and Control System

Any inspection performed by the Supplier shall be performed by competent inspection personnel.

The supplier must show that the product was tested at all stages of the process, must identify the name of the official who certified the results (i.e. with stamps, signature, etc.) and where applicable must include inspection test results.

Evidence of such inspections may be subject to review and auditing by UMBRAGROUP Quality Assurance.

The Supplier must receive approval from UMBRAGROUP when it uses sub-supplier for inspecting UMBRAGROUP products/services.

If the drawing does not specifically call out a geometric tolerance for a specific drawing feature, the supplier shall apply the criteria given in the standard ISO 2768-2 - "Geometrical tolerances for features without individual tolerance indications".

7.3.2 Sampling Inspection

The Supplier is responsible for ensuring 100% verified quality for all items delivered to UMBRAGROUP and shall conduct complete inspection of all drawing-specified features on every product prior to delivery.

When the Supplier elects to use statistical methods for acceptance of products or processes, such methods shall be in compliance with the requirements established by AS9138 – ''Quality Management Systems Statistical Product Acceptance Requirements'' (Minimum protection levels as defined in Table A1 & Individual Sampling) or ANSI/ASQC Z1.4 – "Sampling Procedures and Tables for Inspection by Attributes" (Level II & Single Sampling); unless otherwise specified in the applicable design documentation. When ANSI/ASQ Z1.4 (Level II – Single Sampling) is applied, the sample size selection shall use AQL 4.0 or higher for minor characteristics and AQL 1.5 or higher for major characteristics. The criteria for lot acceptance shall be zero (i.e. C=0) regardless the specification being used.

Characteristics that are designated as "critical" or "safety critical" on the drawings cannot be sampled but shall be inspected 100%. The supplier shall supply with the CoC and/or the shipping documents of the part the inspection report for all safety critical characteristics reported on the drawing.

A copy of Suppliers statistical process control plan shall be furnished to UMBRAGROUP upon request.

Any sampling plans must be submitted to UMBRAGROUP Quality Engineering for review and approval prior to use. Approval shall be obtained in writing from UMBRAGROUP Director of Quality and/or designee.

Supplier shall flow down all these requirements to its Supply Chain.

7.3.3 Statistical Process Control

When the supplier elects to use a statistical process control plan this shall be based on the requirements given by AS13006 – "Process Control Methods"

7.3.4 Operator Self-Verification (OSV)

When the Supplier elects to delegate inspection authority and product/process inspection and acceptance to production operators, the Supplier's Operator Self-Verification program shall comply with the requirements of EN/AS9162 – "Aerospace Operator Self Verification Programs".

Supplier shall flow down all these requirements to its Supply Chain, as applicable.

7.3.5 Source Inspection

Supplier's products or services may be subject to source inspection (SI) by UMBRAGROUP, its representatives or applicable government or regulatory agencies. Source inspection requirements may apply to any and/or all operations performed by the Supplier or Supplier's sub-tier sources, including prior to delivery of products to UMBRAGROUP.

The Supplier shall provide the necessary access, equipment and resources required to effectively accomplish the source inspection. On site product acceptance by UMBRAGROUP and/or customer personnel does not absolve the Supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejections by UMBRAGROUP.

The supplier shall inform adequately in advance (at least 5 days in advance) UMBRAGROUP Quality Engineering when the product that requires a source inspection is ready and available for the customer inspection.

Supplier Funded Source Inspection (SFSI) may be applied because of the poor-quality performance of the supplier. In this case the supplier will be charged the additional costs UMBRAGROUP will incur to perform the source inspection.

7.3.6 Delegated Product Release Verification (DPRV)

In the event the supplier shows the ability to control its manufacturing processes in terms of quality management system requirements and product conformity to requirements and has been delegated with the authority for product inspection on behalf of UMBRAGROUP, the Supplier shall comply with the requirements of EN/AS9117 – ""Delegated Product Release Verification".

Supplier shall flow down all these requirements to its Supply Chain, as applicable.

7.3.7 UMBRAGROUP Receiving Inspection

All products and services delivered to UMBRAGROUP are subject to Receiving Inspection to ensure compliance with UMBRAGROUP requirements as outlined in the contract and/or Purchase Order.

Product failing to pass Receiving Inspection may be returned to the supplier for screening, replacement, credit, or rework.

A copy of the rejection paperwork will be returned with reworked material. Nonconforming product detected at receiving inspection will be reflected in the Supplier quality rating.

7.4 PREVENTIVE MAINTENANCE

The Supplier should identify key process equipment, provide resources for machine/equipment maintenance activities, and develop an affective planned total preventive maintenance system.

7.5 SHELF-LIFE CONTROL

With each delivery of materials or products that have a limited or specified shelf life, the Supplier shall furnish certifications and shipping documents on which shall be recorded data that shows, as applicable, the following:

11) The cure or manufacture date
12) Expiration date or shelf life,
13) Temperature limits,
14) Compound number,
15) Manufacturing identification,
16) Lot or batch number
17) Any special handling or storage requirements

Unless otherwise specified in the contract and/or Purchase Order, for all shelf-life limited materials or products delivered to UMBRAGROUP, the remaining shelf life shall be a minimum of 80% of the total shelf life of the material, otherwise the materials or products can be rejected. If exception is taken and approved, it will be noted on the PO. The mixing of date codes within a single order shall be minimized.

Temperature-sensitive materials shall be maintained within the limits prescribed in the applicable document during storage and shipment. Material requiring storage temp below 40° F requires special temperature labels to be attached to the exterior of each package. The label shall reflect the words “temperature sensitive material” and the maximum material storage temperature allowed.

8 RAW MATERIALS REQUIREMENTS

8.1 CONFLICT FREE MINERAL REQUIREMENT

Minerals from war zones, also known as “Conflict Minerals”, are minerals and related derivatives extracted from Countries where the profit is potentially used to finance, directly or indirectly, armed groups engaged in the civil war, causing social and environmental abuse. Materials under this risk are: tin, tantalum, tungsten and gold.

UMBRAGROUP supports actions to eliminate the use of war zones minerals. UMBRAGROUP is carrying out procedures to assure that minerals used on its products come only from mines and foundries out of conflict zones, or, in case of material coming from mines and foundries inside conflict zones, certificated from third-party authorities as “Conflict free”. In particular:

- UMBRAGROUP suppliers shall respect the above requisites identifying the origin of the minerals and shall transfer to sub-tiers sources the conflict free mineral requirements.
- Upon request, all Raw Material Suppliers shall provide to UMBRAGROUP a completed “conflict minerals compliance checklist” (available on http://www.conflictfreesourcing.org/) and/or an equivalent declaration stating the non-use of minerals from war zones.

Supplier shall flow down all these requirements to its Supply Chain, as applicable.

8.2 PROHIBITED MATERIALS (apply only to suppliers based in Europe)

Suppliers shall respect restriction from REACH Regulation (EC) No.1907/2006 for chemical substances. REACH Regulation defines a list of chemical substances that have a restricted use and/or are banned in the UE (more details at https://echa.europa.eu/it/home). Supplier shall:

- Quickly inform UMBRAGROUP about the using of substances candidate to be banned published on ECHA website in the section "SVHC Candidate List".
- Not use banned substances by ECHA listed in Annex VII of ECHA's website.
- Not use substances that require ECHA authorization listed in Annex XIV.
- Comply with the article 33 of REACH regulation.
- Be authorized according with the REACH regulation for the use of SVCH or shall purchase products that use or involve in the production process the use of a SVCH only from REACH approved suppliers.

The above requirements apply to all UMBRAGROUP Suppliers and to all products (chemical, mixtures, raw materials, final products and packaging). Substances non-directly used by the Supplier for UMBRAGROUP products, their packaging, stocking, production are not subject to the above requirements.

Supplier shall flow down all these requirements to its Supply Chain, as applicable.

8.3 VALIDATION OF RAW MATERIAL TEST REPORTS

When test reports are used to accept purchased raw material, the Supplier shall:

- Check test reports 100% against Supplier's requirements and applicable specifications.
- Periodically validate test reports for raw material accepted on the basis of test reports. That validation shall be accomplished by the Supplier or other independent party through periodic, scheduled tests of raw material samples. Schedules for frequency of tests will be established by Supplier based on historical performance of the raw material Supplier.

The Supplier shall retain test reports provided by raw material suppliers, as well as Supplier's validation test results as quality records traceable to the conformance of goods.

Supplier shall flow down all these requirements to its Supply Chain.

8.4 RAW MATERIAL LOT CONTROL

Where the Supplier elects to use more than one lot of raw material, the Supplier shall request permission from the UMBRAGROUP Quality Engineering and/or designee, ensure, document and furnish positive traceability of each individual product to the raw material certification/test report that represent the raw material from which each of the products was manufactured.

Traceability shall be provided by identifying the raw material heat, lot, batch or melt number form the certification/test report on the product and/or on packaging (when used), or the products segregated and identified.

9 CHANGE CONTROL

9.1 LATEST REVISONS

The product being manufactured and/or services being performed by the Supplier shall be completed per the latest UMBRAGROUP's revision applicable of the drawing and engineering standards/specifications, unless otherwise indicated on the order. At no time shall other revisions be used other than what is indicated on the purchase orders (or the latest drawing distributed by UMBRAGROUP) without the express written permission from UMBRAGROUP Quality Engineering and/or designee.

9.2 CHANGE CONTROL PROCESS

The Supplier shall have a process to ensure that relevant versions of applicable documents furnished by UMBRAGROUP (as well as those specified of external origin) are available at the point of use.

The Supplier is responsible for the timely review, distribution and implementation of all UMBRAGROUP engineering standards/specifications and changes, in accordance with the schedule required by UMBRAGROUP.

The Supplier shall maintain a record of the date on which each change is implemented in production. Implementation shall include updated documents.

Changes of UMBRAGROUP's approved part design are not allowed.

9.3 SUPPLIER CHANGE REQUESTS

Supplier shall not make changes to its manufacturing processes, location, facilities, equipment, material, product design (or any change which may affect product design or function) without written approval from UMBRAGROUP Quality Engineering and/or designee for:

- Correction of a discrepancy on a previously submitted part;
- Any planned changes by the Supplier to the design, process, or manufacturing location, such as:
  - Use of other material than was used in previously approved part or product.
  - Production for new, additional, replacement or modified tools, dies, molds, patterns, etc.
  - Production following upgrade or rearrangement of existing tooling or equipment.
  - Production from tooling and equipment transferred to a different plant site or from an additional plant.
  - Change of Sub-Tier Supplier for Parts, non-equivalent Materials, or Services (e.g. heat treating, plating, etc.).
  - Product produced after tooling has been inactive for production for 12 months or more.
  - Change to test/inspection method.
  - Use of any non-conventional manufacturing methods such as electro-discharge machining (EDM), electro-chemical machining (ECM), laser or abrasive water jet metal cutting, flame spray coating, etc…, unless specifically authorized by the drawing.

10 CONTROL OF NONCONFORMING MATERIAL

10.1 COST OF THE NON-CONFORMANCE, NONCONFORMANCE NOTIFIFCATION & PRODUCTS FINAL DISPOSAL

When a non-conformance is identified at UMBRAGROUP on purchased products and or services (i.e. machining services, special processes, etc…) and is charged to the Supplier, it will be immediately notified to the Supplier.

The Supplier shall acknowledge UMBRAGROUP within 5 (five) working days from the notification received with the following information, as applicable:

- Non-conformance acknowledgement.
- containment actions taken.
- acceptance of the responsibility.
- or request for a change of responsibility (change of charge).

UMBRAGROUP reserves the right to return any nonconforming product to the original source if a response is not received within the specified timeframe. In such circumstances, responsibility for the nonconformance will be considered accepted by the Supplier.

For nonconforming products supplied to UMBRAGROUP, including those that reach an UMBRAGROUP customer, the Supplier must cover the costs (including the NC documental costs) to correct the non-conformance.

The Supplier shall address with a root cause corrective action analysis all non-conformances notified by UMBRAGROUP. When explicitly requested by UMBRAGROUP (i.e. if the non-conformance is repetitive, or if the non-conformance has impact on UMBRAGROUP's customer etc…) the supplier shall provide evidence of the root cause corrective action performed within 15 (fifteen) working days to UMBRAGROUP.

Scrapped Nonconforming products on which the supplier has performed only processing operations starting from UMBRAGROUP raw material and/or a UMBRAGROUP semi-finished product (i.e., machining or special processes), dispositioned as scrap by UMBRAGROUP and charged to the supplier, will be segregated for 5 (five) working days from the NC notification to the supplier. During this period, the supplier has the possibility to view and investigate the parts at UMBRAGROUP (or to have the parts sent back for investigation). After the 5 days, parts will be permanently disposed.

All nonconforming product scrapped due to Supplier-related causes will be rendered unusable, and the associated cost will be charged to the Supplier. Mutilated product will not be returned to the Supplier unless UMBRAGROUP is expressly directed otherwise by the Supplier. In such cases, the product will be returned at the Supplier's expense.

10.2 NON-CONFORMANCE DISCOVERED BY THE SUPPLIER

10.2.1 Identification, Segregation & Control of Non-conformance parts prior to delivery to UMBRAGROUP

The Supplier shall document all nonconforming conditions in accordance with the requirements of EN/AS9131 – "Quality Management Systems - Nonconformity Data Definition and Documentation" and submit them to UMBRAGROUP Material Review Board (MRB-) for disposition.

Any product found to be nonconforming to the applicable drawing and/or process specification requirements during production shall be visually identified using appropriate media (i.e. labels, cards, tags). At a minimum, the selected media shall enclose the following information:

- Production order number.
- Part description.
- P/N as reported in the drawing.
- Features called out by drawing ("Should Be" condition).
- Detected non-conformance ("Is" condition).

Any product lost and/or scrapped by the Supplier that was manufactured from raw material or semi-finished product owned or supplied by UMBRAGROUP shall be reported on both the Supplier's Certificate of Conformance and the shipping documentation. The report shall indicate the quantity of product lost and/or scrapped so that the associated cost may be charged to the Supplier, as applicable

10.2.2 Concession/Deviation Requests (Supplier MRB Authority Limitations)

Supplier is authorized only to perform Material Review actions limited to rework (to applicable requirements), Scrap, or Return to Vendor (RTV), defined as returning product to sub-tier sources for rework or replacement.

Supplier is not authorized to disposition nonconforming product as "use as is" or repair without written authorization from an UMBRAGROUP representative. The supplier shall request a concession to UMBRAGROUP in writing, reporting the root cause analysis of the non-conformity and evidence of corrective/preventive action adopted.

For make-to-print products, the Supplier may request a nonconforming product concession from UMBRAGROUP, which will be coordinated with the subject design authority. In such cases, any cost incurred by UMBRAGROUP associated with a submittal will be charged to the Supplier, along with any associated fees and expenses. UMBRAGROUP reserves the right to reject any concession request and to dispose the product at its sole discretion.

For UMBRAGROUP Linear Motion LLC. design-authority products, the Supplier is not authorized to deviate from UMBRAGROUP's drawing or process specification without prior submittal and approval MTF8.4.0025 - "Supplier Deviation Form" from an authorized UMBRAGROUP Quality Engineer and/or desginee, before initiating production. Any deviation request submitted after production has commenced will be considered an abuse of the MRB process and will not be accepted by UMBRAGROUP.

Supplier shall clearly identify on the Certificates of Conformity when parts are accepted or rejected through a Concession/Deviation Request when these are delivered to UMBRAGROUP.

Supplier shall not knowingly ship product that deviates from the drawing, specification limits, or design intent without prior written authorization of UMBRAGROUP.

10.2.3 Notice of Escapement

When the supplier has determined that nonconforming products have been delivered to UMBRAGROUP, the supplier shall notify an UMBRAGROUP Quality Engineering and/or designee within twenty-four (24) hours of the initial discovery. The notification shall include the following information:

- Supplier name.
- UMBRAGROUP contract number and/or Purchase Order, as applicable.
- Part number and description.
- Affected quantity and serial numbers, if known.
- Dates delivered, if known.
- Brief description of the nonconforming condition.

The initial notification shall be followed by a formal "Disclosure Letter" delivered to UMBRAGROUP Quality Engineering and/or designee within three (3) working days of the initial notification. The Disclosure shall include the following information:

- Complete description of the nonconforming condition(s).
- The affected quantity of the products (including serial numbers when applicable) and dates delivered to UMBRAGROUP.
- Potential effect of the non-conformance on the performance, reliability, safety and/or usability of the product(s) if known.
- Recommendations for UMBRAGROUP action including for products that UMBRAGROUP may have already delivered to its customers.
- Immediate action taken by supplier to contain the non-conformance and nonconforming products.
- Root cause analysis of the nonconforming condition.
- Root cause corrective actions plan and schedule.
- The plan and schedule for verifying the effectiveness of the corrective actions.

If the above points are under investigation and incomplete, the supplier may request to submit an interim disclosure letter. The interim letter shall include as much information as available and identify the due date for competition of the investigation and the date of the final disclosure letter that includes all above data will be submitted to UMBRAGROUP.

UMBRAGROUP reserves the right to participate in the nonconforming product investigation at the facilities of the supplier or its sub-tier sources.

11 PRODUCT PRESERVATION, PACKAGING, LABELLING

11.1 PRESERVATION

The Supplier is required to provide special handling to prevent part-to-part contact and other damage to the parts and to individually protective package the parts prior to return to UMBRAGROUP. Failure to comply with this clause may result in a UMBRAGROUP rejection and subsequent back charges to the Supplier for rework and scrapping of parts, if it is determined that the Supplier is responsible due to negligence during packing and/or handling.

11.2 PACKAGING

The Supplier shall maintain proper control of packaging and shipping operations to assure that items are:

- Shipped in correct quantities and accompanied by the proper certifications and other related paperwork.
- Properly preserved and packaged to protect items from corrosion, contamination and damage in transit.

For those Supplier's providing a service to UMBRAGROUP using UMBRAGROUP supplied products and or materials, and such products and or materials are provided to the Supplier by UMBRAGROUP in dedicated and reusable containers, the Supplier shall utilize these containers when returning items to UMBRAGROUP after the Supplier's services have been performed.

Boxes or containers, as applicable, should be selected to the extent necessary to provide protection from physical and environmental damage during shipping and handling. Cushioning materials shall be applied, as required, to protect and to restrict movement of the item(s). Expendable materials and packaging must meet local and national standards for safe disposal and/or recycling.

11.3 LABELLING

All packages and paperwork shall be marked with UMBRAGROUP part number, Purchase Order number, line number where applicable, date, suppliers name and lot number where applicable.

11.4 DELIVERY

The Supplier shall systematically inform UMBRAGROUP of any delay in delivering product and provide new dispatch date. The Supplier is responsible for additional transport costs due to delays.

12 PRODUCT CERTIFICATIONS

12.1 Certificate of conformance (CoC)

A signed and dated CoC by the Supplier's Quality Representative and/or designee, attesting that all products and/or services delivered are in compliance with all contract requirements, shall be furnished with each shipment to UMBRAGROUP. All CoC's must be in English language and may be in electronic format with electronic signatures. All signatures or signature blocks must clearly show title of the signatory. The CoC shall include:

- Name of manufacturer.
- Manufacturers address.
- UMBRAGROUP Purchase Order Number and if applicable the release (line) number.
- Item name and Part Number.
- Quantity of parts shipped.
- identification number(s) (i.e., Lot Number, Serial Number).
- Applicable Drawing/Specification number(s) and Revision Level.

- Authorized Waiver (Deviation) or Concession Request.
- NDT test report identification number(s).
- The Certificate of Conformance shall include the following statement, or similar: *"We hereby certify that the Materials/Products/Services furnished in this order were made or performed in accordance with and conform to the applicable specification(s) and/or drawing(s) as stipulated in the UMBRAGROUP Purchase Order."*
- The signature of the provider authorized representative.

Supplier shall flow down all these requirements to its Supply Chain.

NOTE: A Packing List or a Certificate of Analysis containing the information and statements noted in a. through i. above may substitute for The Certificate of Conformance.

Unless otherwise specified by the contract and/or Purchase Order parts shall have no FAA PMA markings on them or on the associated documentation and shall not be sold with an FAA 8130-3 form. This also applies to the "constituent" parts thereof and the supplier's sub-tier supply chain.

12.2 Raw Material Certificate of Analysis

All metallic and non-metallic raw materials shall be accompanied by a certificate in compliance with EN10204 – "Metallic products — Types of inspection documents"

12.3 Special Processes Certificate

Special process(es) suppliers shall include in the CoC the following information with each shipment:

- Process identification.
- Process specification number and revision level.
- Identification of the process method used as the acceptance criteria document.
- Evidence of product acceptance including applicable reports.

13 CONTINUAL IMPROVEMENT

Supplier should define a process for continual improvement, at a minimum, in compliance with ISO9004 – "Quality of an organization — Guidance to achieve sustained success", including Annex B as guideline. A copy of the Supplier's continual improvement program shall be furnished to UMBRAGROUP upon request**.**

14 SUPPLIER PERFORMANCES

UMBRAGROUP has developed KPIs parameters to measure suppliers' performances in terms of quality and on time delivery of the products and services delivered. Supplier performance results are distributed periodically to the supply chain by UMBRAGROUP. Failure of the supplier to meet the performance targets communicated by UMBRAGROUP will results in an "escalation" process to recover the supplier performance:

- Initially the supplier will be required to develop a Quality/Delivery/Performance Improvement Plan shared with UMBRAGROUP
- Suppliers with extremely negative chronic performances, or suppliers that have demonstrated to be unable to promptly develop, put in place and accomplish an effective QIP, will be moved to a probation status. During the probation status, it will not be involved in new bid, it will be removed from the product delegation program and Supplier Founded Source Inspection will be established where possible and UMBRAGROUP will consider alternative sources when placing new orders (where/when possible).
- Finally, Suppliers on probation who are not able a) to develop a QIP in a reasonable amount of time or b) to give confidence to UMBRAGROUP to be able to meet the probation exit criteria or c) to show management commitment in achieving the required improvement (including necessary company investment), will be withdrawn from UMBRAGROUP's approved suppliers list.

15 SPECIAL REQUIREMENTS

15.1 SPECIAL REQUIREMENTS FOR SUPPLIERS OF ELECTRONIC DEVICES, COMPONENTS AND ASSEMBLIES (according to UMBRAGROUP blueprints and/or UMBRAGROUP technical specifications)

15.1.1 Control plan for electrostatic discharge (ESD)

Before beginning production operations, the supplier of electronic devices sensitive to electrical voltage, (including electronic components, sub-assemblies and assemblies) must establish, implement and present to UMBRAGROUP for verification and approval, through an audit preferably at the production site, a control plan of the production and handling areas for protection from Electrostatic Discharge (ESD), in accordance to the requirements of IEC 61340-5-1 – "Electrostatic control — Part 5-1: Protection of electronic devices from electrostatic phenomena" or ANSI/ESD S20.20 – ''Protection of Electrical and Electronic Parts, Assemblies and Equipment".

Devices identified as being subject to electrostatic discharge must be packaged and labelled in accordance with ANSI/ESD S20.20 – ''Protection of Electrical and Electronic Parts, Assemblies and Equipment" in antistatic containers.

The external packaging of ESD sensitive components and products must have clear warning labels in accordance with ANSI/ESD S8.1 — "ESD Awareness Symbols".

15.1.2 Electronic Products for A&D Application - General Requirements

The materials, methods and acceptance criteria for the production and assembly of electrical and electronic devices and boards must comply with the requirements of IPC-A-610 - "Acceptability of Electronic Assemblies" and IPC/JSTD-001 "Requirement for Soldered Electronic Assemblies" for Class 3: High Performance aeronautical electronic products.

15.1.3 Electronic Products for Industrial Application - General Requirements

The materials, methods and acceptance criteria for the production and assembly of electrical and electronic devices and boards must comply with the requirements of IPC-A-610 "Applicability of Electronic Assemblies" and IPC/EIA JSTD-001 "Requirement for Soldered Electronic Assemblies" for Class 2: Electronic products for industrial applications. The products used for the execution of conformal coating must conform to Class 2 (or higher) of IPC-CC-830 — "Qualification and Performance of Electrical Insulating Compounds for Printed Wiring Assemblies"

The tools used, the wires and requirements for crimping must conform to AS22520 — "Crimping Tools, Wire Termination, General Specification for Crimping Tools, Accessories, and Inspection Gages".

15.1.4 Certification and inspection tests for electronic devices

Electronic devices assembled according to UMBRAGROUP blueprints and/or UMBRAGROUP technical specifications are subject to the FAI/PPAP requirements specified in section 6.

With each shipment of electronic devices or components, the supplier must send the certification documentation of production traceability and coating processes (e.g. conformal coating) to UMBRAGROUP.

"Documented inspections of electrical and electronic devices", shall include:

a) Applicable specifications and their revisions.

b) Part number (P/N) and its revision.

c) Lot and date of manufacture.

d) Quantity shipped.

e) Checks performed.

15.1.5 Identification of electronic devices

Each electronic device or component must be identified in accordance with the applicable specifications by a lot number needed to identify and track its production and applied processes.

15.1.6 Inspection of printed circuit boards (PCB)

With each shipment, suppliers of printed circuit boards (PCB) must provide the following:

a) A sample of the printed circuit board for each printed lot. The sample can be examined by the supplier in case of defects and non-compliance.

b) Rigid printed circuits must comply with the quality requirements of IPC-6012 — "Qualification and Performance Specification for Rigid Printed Boards" , according to audits and inspections required for group A and group B.

c) Flexible printed circuits must comply with the quality requirements of IPC-6013 — "Qualification and Performance Specification for Flexible Printed Boards", according to audits and inspections required for group A and group B.

d) A certificate of inspection and testing of electrical continuity.

15.1.7 Components Obsolescence Management

The supplier must develop, document and implement a process for managing the electronic components including all aspects of the product life cycle, from design to maintenance, including the selection of components, application, standardization and obsolescence management.

Supplier shall perform a systematic check of production continuity for all components potentially at obsolescence risk.

The Management plan of the supplier must include the following activities:

a) If a component becomes obsolete or cannot be procured, the supplier management process for obsolete components must include a provision for the assembly of alternative parts or equivalent parts, before the end of its commercial availability.

b) When obsolete components are no longer available, the parts selected to replace them must be verified according to appropriate criteria in terms of shape, function and interchangeability (form-fit-function), to ensure the performance and quality of the original parts. The documentation and verification tests must be properly documented and promptly communicated to UMBRAGROUP.

c) When assembly of alternative components requires modification of the layout of the printed circuit board (PCB), approval by UMBRAGROUP must be requested.

d) The duration of market availability of a component needs to be considered properly, and the supplier must promptly notify UMBRAGROUP of his intent to proceed with the replacement of components, for potential approval.

e) When the alternative parts cannot meet form-fit-function requirements, the supplier must promptly notify UMBRAGROUP of his intent and implement a detailed plan for the analysis, testing and inspections necessary to demonstrate equivalence with the original parts. The tests must be documented and recorded.

f) The report of analysis by the supplier must be sent to UMBRAGROUP and must include the following points:

    1) Reasons for replacement.
    2) Components that need to be replaced in Critical Operations.
    3) List of equipment in which the new component will be used and its number.
    4) Part number (P/N) of the existing component.
    5) Evaluation of the Temperature range of the existing component.
    6) Quality specifications or reference standards applicable to the existing component.
    7) Part Number (P/N) of the New component.
    8) Evaluation of the Temperature range of the New component.
    9) Quality specifications or reference regulations applicable to the New component.
    10) Analysis of possible effects of the new component on the reliability and safety of the equipment in which it is to be assembled.
    11) Description of the analyses and inspection tests results, showing the reliability of the new component under operating conditions.

g) For a discontinued component, in case of which obsolescence makes the component irreplaceable, the supplier must notify UMBRAGROUP of the circumstances that resulted in the irreplaceable component. UMBRAGROUP

and the supplier must work together to document and promptly inform the end customer about the imminent problem of obsolescence and discontinuity of product supply.

15.2 SPECIAL RQUIREMENTS FOR SOFTWARE SUPPLIERS

The supplier shall develop, document, and implement a counterfeit prevention plan to prevent malicious logic from being imbedded into parts or devices (when products or devices with code if supplied). This shall also apply when software only is supplied. Malicious logic is defined as any extraneous code that has been included in hardware, firmware, or software whose purpose is to perform some harmful or otherwise unauthorized action (e.g. logic bomb, Trojan horse, virus, worm, etc.).

Rev.	**Data / *Date***	**Descrizione modifica / *Change description***
0	*09/20/2023*	First release of the document SQAR. Combines and supersedes the documents QAP8.4.0001 (Linear Motion LLC) and A-740-002 (Umbra Cuscinetti Inc).
1	*10/09/2026*	- Removed obsolete requirements and improved verbiage for clarity. - New additions are identified in blue font.

Appendix A – Terms and Conditions Applicable to All Purchase Orders

UMBRAGROUP Terms and Conditions are available on the company website and/or upon request.

Appendix B – Terms and Conditions Applicable to Defense Purchase Orders

The following clauses of the Federal Acquisition Regulations (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS) supplements thereto, are specifically incorporated herein by reference and the seller agrees to be bound by these clauses. Where necessary to derive proper meaning, the terms "Government "and "Contracting Officer" shall mean "Linear Motion, LLC" or "Buyer", and the term "Contractor" shall mean "Seller".

The FAR and DFARS flow-down clauses should be effective as of the date of the purchase order, when applicable. The Guidance lists only current effective FAR and DFARS clauses that require the prime contractor to include terms into its subcontracts. However, the contractor must incorporate discontinued and/or prior versions of the FAR, and DFARS clauses (other than the CAS clause) not listed, which are contained in its prime contracts, into its subcontracts to the extent required by such clauses.

The contractor should have a process in place to ensure compliance with these flow-down requirements.

Current versions of FAR and DFARS clauses may be found at https://www.acquisition.gov/browse/index/far

FAR / DFAR	Title
FAR 52.236-13	Accident Prevention
DFARS 252.228-7005	Accident Reporting and Investigation Involving Aircraft, Missiles and Space Launch Vehicles
DFARS 252.209-7000	Acquisition from Subcontractors Subject to On-Site Inspection Under the Intermediate-Range Nuclear Forces (INF) Treaty (only for contracts over $100,000)
DFARS 252.211-7000	Acquisition Streamlining (only for contracts over $1,000,000)
FAR 52.222-90	Addressing DEI Discrimination by Federal Contractors.
FAR 52.230-6	Administration of Cost Accounting Standards
FAR 52.222-36	Affirmative Action for Workers with Disabilities (only on contracts over $10,000)
FAR 52.203-7	Anti-Kickback Procedures (only on contracts over $100,000)
DFARS 252.225-7043	Antiterrorism / Force Protection for Defense Contractors outside the United States
FAR 52.215-2	Audit and Records – Negotiations (only on contracts over $100,000)
FAR 52.214-26	Audit and Records – Sealed Bidding (only on contracts over $650,000)
FAR 52.227-1	Authorization and Consent (only on contracts over $100,000)
DFARS 252.225-7001	Buy American Act
FAR 52.246-15	Certificate of Conformance
FAR 52.203-11	Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (only on contracts over $100,000)
FAR 52.222-50	Combating Trafficking in Persons
FAR 52.222-4	Contact Work Hours and Safety Standards Act – Overtime Compensation
FAR 52.212-5	Contract Terms and Conditions Required to Implement Statues or Executive Orders – Commercial Items
FAR 52.212-5, deviation	Contract Terms and Conditions Required to Implement Statues or Executive Orders – Commercial Items (deviation)

DFARS 252.212-7001	Contract Terms and Conditions Required to Implement Statutes or Executive Orders Applicable to Defense Acquisitions of Commercial Items
DFARS 252.246-7007	Contractor Counterfeit Electronic Part Detection and Avoidance System
DFARS 252.225-7040	Contractor Personnel Authorized to Accompany US Armed Forces Deployed Outside the United States
DFARS 252.242-7005	Cost / Schedule Status Report
FAR 52.230-5	Cost Accounting Standards – Educational Institution (only on contracts over $500,000)
FAR 52.230-2	Cost Accounting Standards (only on contracts over $500,000)
FAR 52.230-3	Disclosure and Consistency of Cost Accounting Practices (only on contracts over $500,000)
DFARS 252.204-7000	Disclosure of Information
FAR 52.225-8	Duty Free Entry
DFARS 252.225-7013	Duty-Free Entry
DFARS 252.225-7037	Duty-Free Entry NAFTA Country End Products and Supplies
DFARS 252.242-7002	Earned Value Management System
FAR 52.234-4	Earned Value Management System
FAR 52.222-37	Employment Reports on Special Disabled Veterans (only on contracts over $25,000)
FAR 52.222-26	Equal Opportunity
FAR 52.222-35	Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (only on contracts over $25,000)
DFARS 252.225-7048	Export-Controlled Items
FAR 52.227-10	Filing of Patent Applications – Classified Subject Matter
FAR 52.245-5	Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts)
FAR 52.245-2	Government Property Installation Operation Services
DFARS 252.228-7001	Ground and Flight Risk
FAR 52.216-16	Incentive Price Revision – Firm Target
FAR 52.216-17	Incentive Price Revision – Successive Targets
FAR 52.237-7	Indemnification and Medical Liability Insurance
FAR 52.234-1	Industrial Resources Developed Under Defense Production Act Title III
FAR 52.246-6	Inspection – Time-and-Material and Labor Hour
FAR 52.246-10	Inspection of Facilities
FAR 52.246-8	Inspection of Research and Development – Cost-Reimbursement
FAR 52.246-7	Inspection of Research and Development – Fixed Price
FAR 52.246-9	Inspection of Research and Development (Short Form)
FAR 52.246-4	Inspection of Services – Fixed Price

FAR 52.246-3	Inspection of Supplies – Cost-Reimbursement
FAR 52.246-2	Inspection of Supplies – Fixed Price
FAR 52.228-5	Insurance – Work on a Government Installation
FAR 52.215-14	Integrity of Unit Prices (only on contracts over $100,000)
DFARS 252.208-7000	Intent to Furnish Precious Metals as Government Furnished Material (only on contracts requiring more than 100 troy ounces of silver)
DFARS 252.211-7003	Item Identification and Valuation (only on delivered items valued at more than $5,000)
DFARS 252.217-7012	Liability and Insurance
FAR 52.245-8	Liability for the Facilities
FAR 52.203-12	Limitation on Payments to Influence Certain Federal Transactions (only on contracts over $100,000)
FAR 52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement (only on contracts over $100,000)
DFARS 252.249-7002	Notice of Anticipated Contract Termination or Reduction (only on contracts over $100,000)
FAR 52.223-7	Notice of Radioactive Materials
FAR 52.222-39	Notification of Employee Rights Concerning Payment of Union Dues
FAR 52.215-19	Notification of Ownership Changes
DFARS 252.246-7003	Notification of Potential Safety Issues
DFARS 252.247-7024	Notification of Transportation of Supplies by Sea
FAR 52.223-11	Ozone Depleting Substances
FAR 52.227-13	Patent Rights – Acquisition by the Government
FAR 52.227-12	Patent Rights – Retention by the Subcontractor (Long Form)
FAR 52.227-11	Patent Rights – Retention by the Subcontractor (Short Form)
FAR 52.215-15	Pension Adjustments and Asset Reversions
FAR 52.204-9	Personal Identity Verification of Contractor Personnel
DFARS 252.225-7012	Preference for Certain Domestic Commodities
DFARS 252.225-7014	Preference for Domestic Specialty Metals
DFARS 252.225-7014, Alt 1	Preference for Domestic Specialty Metals, Alternate 1
FAR 52.247-63	Preference for US Flag Air Carrier
FAR 52.247-64	Preferences for Privately Owned US Flag Commercial Vessels
FAR 52.222-22	Previous Contracts and Compliance Reports
FAR 52.216-5	Price Redetermination – Prospective
FAR 52.216-6	Price Redetermination – Retroactive
FAR 52.222-21	Prohibition of Segregated Facilities
FAR 52.204-27	Prohibition on a ByteDance Covered Application

DFARS 252.225-7007	Prohibition on Acquisition of United States Munitions List Items from Communist Chinese Military Companies
DFARS 252.203-7001	Prohibition on Persons Convicted of Fraud or Other Defense Contract Related Felonies
DFARS 252.223-7006	Prohibition on Storage and Disposal of Toxic and Hazardous Materials
DFARS 252.223-7006, Alt 1	Prohibition on Storage and Disposal of Toxic and Hazardous Materials, Alternate 1
DFARS 252.225-7006	Quarterly Reporting of Actual Contract Performance outside the United States (only for contracts over $500,000)
FAR 52.227-9	Refund of Royalties (only on contracts with royalties over $250)
DFARS 252.229-7011	Reporting of Foreign Taxes – US Assistance Programs (only for contracts over $500)
FAR 52.208-8	Required Sources for Helium and Helium Usage Data
DFARS 252.225-7016	Restriction on Acquisition of Ball and Roller Bearings
DFARS 252.225-7009	Restriction on Acquisition of Certain Articles Containing Specialty Metals
DFARS 252.225-7025	Restriction on Acquisition of Forgings
DFARS 252.225-7015	Restriction on Acquisition of Hand or Measuring Tools
DFARS 252.225-7008	Restriction on Acquisition of Specialty Metals
FAR 52.203-6	Restriction on Subcontractor Sales to the Government (only on contracts over $100,000)
DFARS 252.225-7052	Restriction on the Acquisition of Certain Magnets, Tantalum and Tungsten
FAR 52.225-13	Restrictions on Certain Foreign Purchases
DFARS 252.222-7000	Restrictions on Employment of Personnel
FAR 52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions
DFARS 252.227-7016	Rights in Bid or Proposal Information
DFARS 252.227-7014	Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation
DFARS 252.227-7018	Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program
DFARS 252.227-7013	Rights in Technical Data – Noncommercial Items
DFARS 252.204-7012	Safeguarding of Unclassified Controlled Technical Information
FAR 52.204-2	Security Requirements
FAR 52.222-41	Service Contract Act of 1964, as Amended
FAR 52.219-9	Small Business Subcontracting Plan (only on contracts over $550,000)
DFARS 252.246-7008	Sources of Electronic Parts
FAR 52.245-18	Special Test Equipment
FAR 52.245-17	Special Tooling
FAR 52.245-1	Government Property
FAR 52.229-10	State of New Mexico Gross Receipts and Compensating Tax

DFARS 252.229-7004	Status of Contractor as a Direct Contractor (Spain)
FAR 52.214-28	Subcontractor Cost or Pricing data – Modification – Sealed Bidding (only on contracts over $650,000)
FAR 52.215-13	Subcontractor Cost or Pricing Data – Modifications (only on contracts over $650,000)
FAR 52.215-12	Subcontractor Cost or Pricing Data (only on contracts over $650,000)
FAR 52.244-6	Subcontracts for Commercial Items
DFARS 252.244-7000	Subcontracts for Commercial Items and Commercial Components
FAR 52.229-9	Taxes – Cost-Reimbursement Contracts with Foreign Governments
FAR 52.229-8	Taxes – Foreign Cost-Reimbursement Contracts
15 CFR 700	The Defense Priorities and Allocation System Regulation (DPAS)
22 CFR 120-130	The International Traffic in Arms Regulations (ITAR)
FAR 52.223-14	Toxic Chemical Release Reporting (only on contracts over $100,000)
DFARS 252.247-7023	Transportation of Supplies by Sea
DFARS 252.226-7001	Utilization of Indian Organizations, Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns (only for contracts over $500,000)
FAR 52.219-8	Utilization of Small Business Concerns
DFARS 252.227-7019	Validation of Asserted Restrictions – Computer Software
DFARS 252.227-7037	Validation of Restrictive Markings on Technical Data
FAR 52.248-1	Value Engineering (only on contracts over $55,000)
FAR 52.228-4	Workers Compensation and War Hazard Insurance Overseas
FAR 52.228-3	Workers Compensation Insurance (Defense Base Act)