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## 1. PURPOSE

This document describes the general and special product assurance requirements (clauses) that will be used by Arnold Magnetic Technologies on the Purchase Order, Contract or other formal agreement (hereafter referred to as the Contract) between a Supplier and Arnold Magnetic Technologies. The purpose of this document is to clearly define for each purchase of products or services, all of the necessary and applicable technical and quality requirements with which the Supplier is required to comply to meet Arnold Magnetic Technologies (AMT), Arnold Magnetic Technologies' customer and/or regulatory requirements.

## 2. RESPONSIBILITY AND AUTHORITY

Purchasing and the Quality Manager is responsible to make sure all the applicable requirements are communicated to the suppliers and that the suppliers are in conformance with these requirements. By delivering products or services on the Contract, the Supplier certifies that such products or services are in compliance with all applicable requirements of the Contract, and objective evidence of compliance is available and will be furnished to Arnold Magnetic Technologies for review upon request.

## 3. SCOPE

This document applies to all PO's where PQC's are identified. General requirement PQC's apply to all orders regardless of whether or not they are individually called out on the PO. Any customer specified flow downs/quality requirements noted in the Purchase Order supersede Arnold Magnetic Technologies PQC requirements.

## 4. GENERAL REQUIREMENTS

The following requirements apply to all products delivered to Arnold Magnetic Technologies where the requirements of meeting the standard PQC's are referenced on the PO.

### 4.1. **Quality System:**

The suppliers on this order must be controlled under a Quality Control System that conforms to the requirements of the current acceptable revision of the ISO 9001 or AS 9100 Quality Management System Standards or equivalent with written approval of Arnold Magnetic Technologies. For suppliers with a third party ISO Certificate, any renewal, probation or revocation of ISO Certificate requires immediate notification to Arnold Magnetic Technologies Purchasing and Quality Departments.

Note: Additional quality system requirements may be applied based on customer flow downs, as required the flow downs will be noted on the purchase order.

### 4.2. **Control of Documents:**

All documents in the Quality Management System shall be controlled and accomplish the following:

- Ensure that changes and current revision status of documents are identified.
- Ensure that relevant versions of applicable documents are available at point of use.
- Ensure that documents remain legible and readily identified
- "White-Out" or correction fluid shall not be used on product acceptance records. Corrections can be made by marking the error with a single line then having the authorized person make, initial and date the correction.
- Ensure that documents of external origin are identified and their distribution controlled.

### 4.3. **Record Retention:**

The supplier shall retain all records that provide objective evidence of compliance to contract requirements pertaining to material, manufacturing processes, special processes, testing and

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inspection for a minimum of 10 years after final payment. There are special circumstances and customer requirements that may be longer.

Special requirements will be defined in the purchase order. Supplier is required to notify and get Arnold Magnetic Technologies written approval prior to destruction.

4.4. **Right of Access**

The Supplier shall permit Arnold Magnetic Technologies, their customers, and regulatory agencies the right of access at the Suppliers premises for surveillance or investigation in order to verify the quality of work, records and conformance of purchased services to specified requirements.

4.5. **Configuration Control:**

Supplier shall make no change to the manufacturing process (i.e. tooling, machining method, process steps, etc) without the written approval from Arnold Magnetic Technologies.

The supplier shall be responsible to make sure any relevant specifications referenced on the purchase order or drawing is current, unless otherwise specified.

The supplier shall not transfer any work to another source without the written approval from Arnold Magnetic Technologies.

4.6. **Flow Down Of Requirements:**

If approval granted to transfer work the Supplier is responsible to flow down all requirements of this purchase order and must verify that the sub-tier supplier being used is capable of performing the work and meets all the requirements of the contract.

4.7. **Material Review:**

Arnold Magnetic Technologies Customer's Quality shall retain MRB authority on dispositions for any discrepancies affecting product performance and/or drawing requirements other than scrap or rework. Non- conforming material is to be identified, segregated, and controlled to prevent its unauthorized use for shipment. The cause of such non-conformances is to be identified and corrected. The supplier must notify Arnold Magnetic Technologies within 48 hours of detection of non-conforming product.

4.8. **Acceptance at Destination**

Articles ordered on this PO are subject to final acceptance at end user. Materials received which do not conform to the provisions as indicated on the purchase order will be subject to rejection or such measures as may be deemed necessary by Purchasing or the Quality Manager or their designates. Should a SCAR be issued corrective action shall be taken and evidence shall be provided to Arnold Magnetic Technologies within 30 days upon notice unless other actions are agreed upon between Arnold magnetics Technologies Purchasing or Quality manager and the supplier.

4.9. **Calibration System:**

The supplier's measuring and testing equipment used in the performance of orders for Arnold Magnetic Technologies shall be calibrated in accordance with ISO 10012-1 or equivalent.

4.10. **Dimensional Test Data:**

The supplier shall perform dimensional inspection to verify all characteristics and notes on the drawing/specification. The supplier shall record the actual dimensional readings. The inspection results must be kept on file and shall be made available to AMT upon request at no additional cost. All recorded data must be legible.

The items delivered on this PO shall be controlled by the supplier/manufacture under a quality inspection system sufficiently adequate to verify that the material or service furnished meets all requirements of this purchase order. Sample inspection shall be performed per **ANSI Z1.4 Level II, AQL 1.0 (C=O)**. At a minimum the inspection report

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shall contain the balloon #, drawing note/characteristic, actual reading, inspection instrument used, job/lot#, drawing # and revision.

If key characteristic(s)(KC) are noted on the drawing or specified by Arnold Magnetic Technologies, these KC shall be inspected and recorded as specified on the purchase order.

**Note:** *The recording of false, fictitious or fraudulent statements or entries on inspection records may be punishable as a felony under Federal Statute.*

**Note:** Special inspection requirements may be required as identified by Supplemental PQC's noted on the Purchase Order.

4.11. **Certificate of Conformance:**

A certificate of conformance must accompany each shipment of material. The Certificate of Conformance shall **be legible** and at a minimum include the following information:

- Supplier name and address
- A statement that material shipped conforms in all respects to the applicable specifications and/or standards.
- The standard or process number called out on the PO/Product drawing must be present on the C ofC provided as written on the PO/Product Drawing.
- The Arnold Magnetic Technologies Purchase Order Number and line number.
- Part Number and Latest Revision Letter. (unless specified otherwise on the PO)
- Manufacture lot number. (Traceability Information)
- Quantity shipped.
- Date Shipped.
- Identity of Quality Representative or company official.
- Signature of an authorized company representative.
- Serial Numbers. (if applicable)
- Mill Heat Number if material is provided by supplier.

Lot traceability: When multiple lots of material are used in completing a shipment, the parts shall be packaged separately with a separate and complete certification package including a supplier Certificate of Conformance for each lot of material.

4.12. **Raw Material Certification:**

For raw material shipments the material certification shall contain the following at a minimum:

- Chemical Composition
- Material description.
- Any other requirement specified on the PO or drawing.

Material certification shall be supplied with each shipment and be legible.

4.13. **Control of Software**

Software used for manufacturing and quality control shall be controlled in accordance with document and data control requirements as set forth in AS9100D. When requested, suppliers shall submit their procedure to demonstrate compliance.

4.14. **Unauthorized Facility Change:**

The supplier shall give Arnold Magnetic Technologies written notice prior to relocating any production, inspection, or processing facilities. Change in ownership or management representation with respect to the supplier's quality system also require written notification.

4.15. **Unauthorized Product Changes:**

The supplier may not make any changes or substitutions to any products or services required by the contract, drawing, specification or any other applicable document without prior written approval from Arnold Magnetic Technologies.

When suppliers have been acquired by another entity, sold to another entity, or plan to cease

operation, Arnold Magnetic Technologies shall be notified in writing.

4.16. **Preservation and Packaging:**

The organization shall incorporate good commercial standard practices and methods for the preservation, packaging, and shipment to preclude damage to products during shipment to Arnold or deterioration/corrosion while in storage. Newsprint shall not be used for wrapping of parts or as dunnage due to its acidic nature.

Supplier shall individually mark the outside of each box shipped with the Arnold Magnetic Technologies P.O. Number, part number and the quantity of parts in the box. If the boxes are reused any previous markings must be completely removed or covered such that only the current contents of the box are visible. If heat lot traceability is required heat lots shall not be mixed within a box.

Divided containers or individual packaging, etc., shall be used for material susceptible to damage from part-to- part contact. Use of staples, paper clips, or other potential sources of Foreign Object Damage / Foreign Object Debris (FOD) is prohibited in packaging.

4.17. **Product Safety**

By accepting the purchase order the supplier acknowledges that it is critical that any article ordered must be conforming to all requirements in order to ensure it is able to perform its designed or intended purpose without causing risk of harm to persons or damage to property. This includes protection of the article's characteristics during manufacturing and shipment. Suppliers shall notify Arnold Magnetic Technologies of any deviations from purchase order requirements and must receive approval from Arnold Magnetic Technologies before shipment of any affected articles.

4.18. **Foreign Object Damage (FOD) Prevention:**

Supplier shall establish and maintain an effective Foreign Object Damage/Debris (FOD) Prevention Program to reduce FOD using NAS412 as a guideline. Supplier shall utilize effective FOD prevention practice to protect product at all times. Suppliers shall establish methods and facilities for identifying, handling, and storing articles to ensure against contamination, corrosion, damage, deterioration and invasion of foreign objects or substances.

4.19. **Counterfeit Parts**

Suppliers shall maintain adequate procedures to control Counterfeit Materials, including (but not limited to) Avoidance, Detection, Mitigation, Disposition and Reporting per the requirements of SAE AS6174.

Suppliers shall notify Arnold Magnetic Technologies Purchasing (within 24 hours) upon determining that counterfeit materials, have been shipped or previously supplied to Arnold Magnetic Technologies.

4.20. **Competence, Awareness, and Training:**

The supplier shall ensure competence of their personnel. Job descriptions shall be prepared identifying the qualifications required for each position that affects product quality.

Qualifications shall include requirements for education, skills and experience, along with required training. The supplier shall provide the competence required for each position.

All employees shall be trained on the relevance and importance of their activities and how they contribute to the achievement of the quality objectives.

The Supplier shall perform periodic review of their employees competence and provide additional training as required.

The supplier shall ensure that their employees are aware of their contribution to product or service conformity; product safety and the importance of ethical behavior.

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4.21. **Supplier Performance Rating**

Arnold Magnetic Technologies shall monitor supplier delivery and quality and maintain quality records of the results.

Suppliers are expected to maintain an acceptable on time delivery and quality performance. Arnold Magnetic Technologies will monitor and take appropriate action as necessary. The supplier will receive report cards quarterly showing their performance rating.

Suppliers continually receiving unacceptable rating values will be notified and may be removed from the Approved Supplier Listing. Unacceptable ratings will be determined based upon management input.

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## 5. SUPPLEMENTAL QUALITY CLAUSES

The following PQC's will apply if noted on the Purchase Order:

### PQC-08 Source Inspection:

Arnold Magnetic Technologies or their customers are required to perform source inspection prior to shipping from the supplier's facility. When material is ready for inspection, notify Arnold Magnetic Technologies at least forty-eight (48) hours in advance. Source Inspection does not relieve the supplier of any of the requirements of this purchase order nor the responsibility of rework or replacement of material found to be defective during normal acceptance procedures. The supplier's gages, measuring and testing devices shall be made available for the Source Inspector.

### PQC-09 Government Source Inspection (GSI):

GSI is required prior to the shipment of any items against this purchase order. Government inspection does not relieve the supplier or Arnold Magnetic Technologies of their obligation to provide conforming parts/services.

Government inspection does not constitute acceptance. When Government Inspection is required, Arnold Magnetic Technologies will add to his purchasing document the following statement:

*“Government inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify the government representative who normally services your plant so that appropriate planning for government inspection can be accomplished.”*

When, under authorization of the Government representative, copies of the purchasing document are to be furnished directly by the subcontractor or supplier to the Government representative at his facility rather than through Government channels. Arnold Magnetic Technologies will add to its purchasing document a statement substantially as follows:

*“On receipt of this order, promptly furnish a copy to the government representative who normally services your plant, or, if none, to the nearest Army, Navy, Air Force, or Defense supply agency inspection office. In the event the representative or office cannot be located, our purchasing agent shall be notified immediately.”*

### PQC-14 Special Process Approval Required:

All special processes (welding, plating, heat treating, etc.) must be performed by an Arnold Magnetic Technologies or Arnold Magnetic Technologies' customer approved source, unless other sources are defined on the purchase order. Special processes, once approved may not be changed without written Arnold Magnetic Technologies approval of the changes.

### PQC-15 Special Process Certification:

The supplier is required to submit with each shipment a certification of all the special processes performed on the delivered part (E.G., NADCAP). The certificate must relate specifically to the part number being purchased and contain the signature of an authorized company representative.

The Certificate of Conformance shall include the quantity processed, the specification number and revision of all special processing performed. Suppliers are not permitted to out-source machining or special process operations without prior written authorization from Arnold Magnetic Technologies.

### PQC-16 Dimensional Test Data Supplied With Each Shipment:

- A. In process dimensional inspection data per Section 4 General Requirements paragraph 4.8 or other specified AQL requirement shall be supplied with each shipment against this order. The data shall be representative of the parts and manufactured lot being shipped.
- B. 100% inspection report required for each part shipped. Each design characteristic shall

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have a unique identifier. The ballooned drawing shall have 100% accountability for all design features and notes. At a minimum the report shall contain the balloon #, drawing note/characteristic, actual reading, inspection instrument used, job/lot#, drawing # and revision.

**PQC-17 Restriction of Hazardous Substances (RoHS):**

The supplier shall provide with each delivery a certificate of compliance stating that all materials supplied are within the limits for hazardous substances as established by EU Directive 2002/95/EC. Should any material not comply, the concentration of the hazardous substance shall be reported on a chemical test report. At the discretion of Arnold Magnetic Technologies the material may be rejected and returned to the supplier if the concentration of the hazardous substance is over the established limits. Arnold Magnetic Technologies also reserves the right to request a written plan from the supplier detailing the necessary steps required to bring the material into compliance and the date when compliance will be established. Certification to meeting RoHS requirements must be included on the C of C.

**PQC-18 Restriction of Hazardous Substances (RoHS) Mercury specific:**

The supplier shall certify that all materials supplied are within the limits for hazardous substances as established by EU directive 2002/95/EC. Material supplied shall contain no metallic mercury and shall be free from mercury contamination. Upon request, the supplier will be required to certify that the product is mercury free. Certification to meeting RoHS requirements must be included on the C of C.

**PQC-19 SPC program:**

The Supplier shall utilize a SPC program to establish control, and verify process capability, product characteristics, and process improvement. Process capability  $C_{pk}$  must be 1.33 or higher. SPC tools should be used to evaluate or improve product key characteristic(s).

**PQC-21 Gage R&R Program:**

The Supplier shall utilize a Gage Repeatability and Reproducibility program in order to determine the viability of the measurement system in reference with key characteristic(s).

**PQC-21 Non-Conventional manufacturing methods:**

Unless required by the drawing, specification, or contract, the supplier may not use EDM, ECM, laser or abrasive water jet cutting or drilling, flame spray coatings, or any other non-conventional manufacturing method without the written approval from Arnold Magnetic Technologies.

**PQC-30 DFARS 252.225-7008-7009 Applies:**

Per DFARS 252.225-7008-7009: If the metal or component(s) for this order contain "Specialty Metals" then these "Specialty Metals" must be MELTED in the United States or in a Qualified Country as defined in the Defense Federal Acquisition Regulation Supplement 225.003(9). This requirement applies to every sub-tier under contract with your company. The vendor supplier C of C must show compliance to DFARs.

**PQC-31 ITAR Compliance:**

This document, which includes any attachments and exhibits hereto, may contain information subject to International Traffic in Arms Regulation (ITAR) or Export Administration (EAR) of 1979, which may not be exported, released, or disclosed to foreign nationals, inside or outside the United States, without first obtaining an export license.

**PQC-32 Shelf Life (of age sensitive components):**

The supplier shall assure that all limited life components used or contained within provided assemblies are within their respective shelf life at the time of installation or use. The supplier shall record and maintain documented evidence of compliance with this requirement for each of the limited life components and consumables used for each assembly. This documented

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evidence is not required to accompany shipment of assemblies; however, it shall be retained and shall be made available upon request.

**PQC-33 REACH Compliance:**

All goods provided shall be compliant to the REACH regulations. The supplier shall bear full responsibility for continuous monitoring of the publication and updates of the European Chemicals Agency list of Substances of Very High Concern (SVHC) and immediately notify Arnold Magnetics if provided goods will contain greater than 0.1% by weight or substances restricted under Annex XVII of REACH. (SVHC list is viewable at <http://echa.europa.eu/web/quest/candidate-list-table>). Notification that goods will contain SVHCs shall include the name and weight of the substance(s) and the weight percentage present, if greater than 0.1% by weight of the delivered good. Presence of SVHCs less than 0.1% by weight of the delivered goods does not need to be reported. Unreported SVHCs present above the threshold or substances restricted under Annex XVII of REACH, may result in purchase order cancellation and/or return of goods. Compliance to REACH shall be included on the C of C.

**PQC 34 Serialization:**

Each part, component, or assembly furnished on this purchase order shall be identified with a distinct serial number. Serial number shall not be duplicated on one part, component, or assembly number when manufactured in sequential lots. Marking of serial number shall be MIL-STD-130, or in the applicable specification.

**PQC 38 Age Sensitive Material**

The supplier is required, when age sensitive material is specified on purchase order, to submit with each shipment a certificate attesting to the conformance of the material(s). Age sensitive materials shall be identified and packaged in accordance with the applicable procurement specification. Product shall, as a minimum, be identified on each container or certification with the following:

- Manufacturer's name
- Batch number
- Storage temperature
- Compound/Specification number
- Date of manufacture
- Manufacturer's recommended expiration date (if applicable)
- Shelf life, cure date, retest date (if applicable)
- Compound number, etc. so as to indicate useful life of the material (if applicable)

Any applicable special storage requirements shall be defined.

Material that has an expiration date shall have a minimum one year, or 80% of life when specified Shelf life is less than one year at the time of delivery to AMT unless otherwise stated on the Purchase Order.

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**6. REVISION HISTORY**

Rev Date	Description of Revision	Revision By
11/03/19	Initial Release	N. Jarosch
11/18/19	<p>Added to para. 4.5 “The supplier shall be responsible to make sure any relevant specifications referenced on the purchase order or drawing is current, unless otherwise specified”.</p> <p>Added to para. 4.11 “The supplier must notify Arnold Magnetic Technologies within 48 hours of detection of non-conforming product”.</p> <p>Added to para. 4.15 “When suppliers have been acquired by another entity, sold to another entity, or plan to cease operation, Arnold Magnetic Technologies shall be notified in writing”.</p> <p><b>Added PQC-19 SPC program:</b> The Supplier shall utilize a SPC program to establish control, and verify process capability, product characteristics, and process improvement. Process capability Cpk must be 1.33 or higher. SPC tools should be used to evaluate or improve product key characteristic(s).</p> <p><b>PQC-21 Gage R&amp;R Program:</b> The Supplier shall utilize a Gage Repeatability and Reproducibility program in order to determine the viability of the measurement system in reference with key characteristic(s).</p>	N. Jarosch