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Allied Motion

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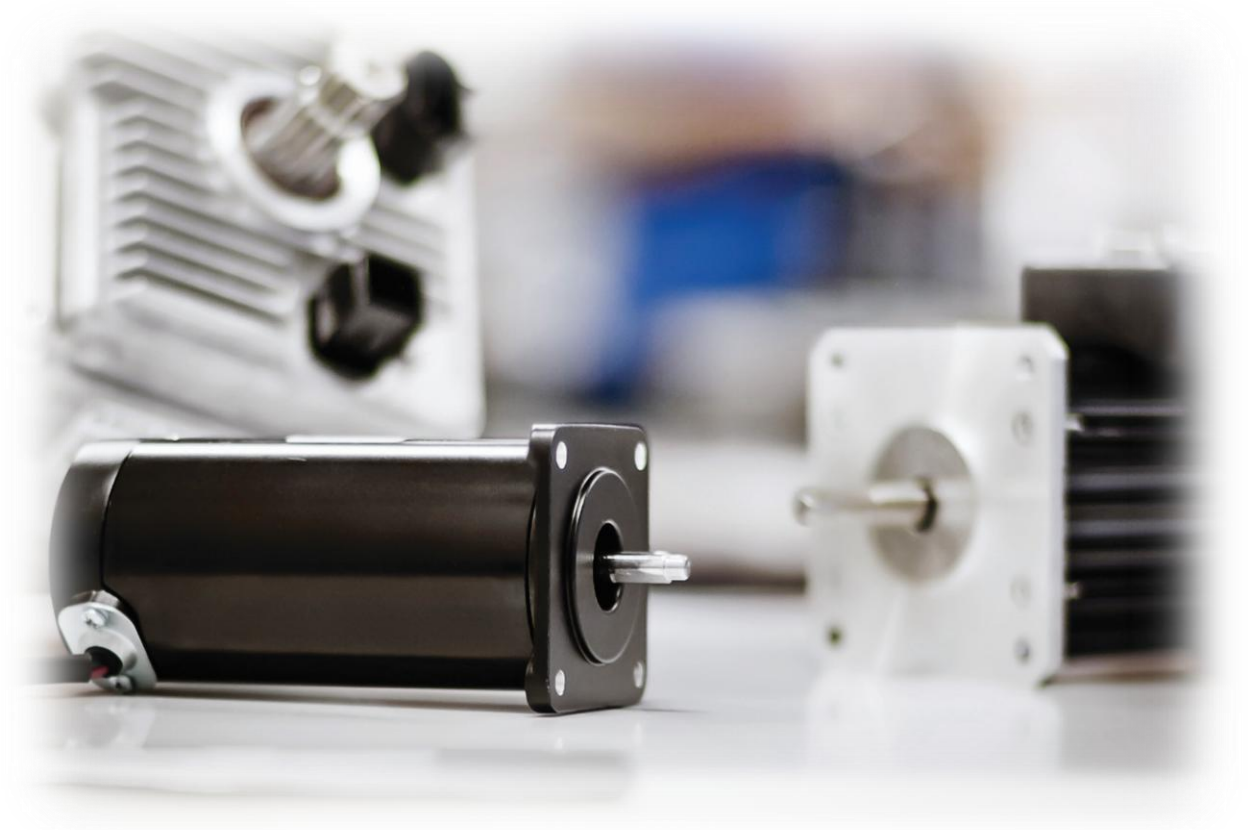

Allied Motion

Supplier Quality Manual

Issued: October 15, 2024

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Company Background

Allied Motion develops advanced motion control products and systems, both custom and standard, primarily for the aerospace and defense, automation, and robotics, medical, and vehicle markets. Our goal is to provide customers with safe, quality products.

QUALITY, ENVIRONMENTAL AND SAFETY POLICY

Allied Motion is committed to the continual improvement of customer perception and satisfaction, the environment and providing a work environment that is conducive to the safety and sustained wellbeing of its customers, employees, shareholders, suppliers, business partners and the surrounding communities.

This commitment is a fundamental objective of the Allied Motion business strategy, and it is the individual and collective responsibility of all Allied Motion employees and business partners. This commitment is to be promoted at all levels through training, communication, and deployment of the Allied Systematic Tools (AST).

This commitment is relevant to:

- Our Customers, by understanding their requirements, anticipating their needs and expectations while creating Value in everything we do.
- Our Employees, by promoting their involvement, development, and participation at all levels, stimulating creativity, innovation, and teamwork, and demonstrating continual improvement for a safe and environmentally friendly workplace.
- Our Shareholders, by increasing our core value in a lawful manner and our commitment to compliance that is socially and environmentally responsible.
- Our Suppliers and Business Partners, by working pro-actively for the development of long-term partnerships based upon Integrity and co-operation, striving for improved and environmentally responsible equipment, materials, and services.
- Our Surrounding Communities, by reducing the environmental impact of our activities, products, and services through prevention of pollution, promotion of the safety and health of our employees and the general public.

1.0 Purpose

The Supplier Quality Manual is the Supplier's guide to understanding Allied Motion's quality requirements and expectations. This document forms a part of the Allied Motion purchase order and contains helpful general information and specific quality requirements.

2.0 Applicability

These requirements apply to all suppliers and subcontractors that furnish materials, components, and services for incorporation into products to be sold by Allied Motion as well as production tooling that is purchased by Allied Motion The latest revision of this document, as well as other pertinent information, may be viewed within the Allied Motion Supplier Website found at http://supplier.alliedmotion.com

3.0 Allied Motion Expectations

Zero Defect	Allied Motion expects all purchased product to be free from defect, suitable for use, and properly identified.
100% On Time Delivery	Allied Motion expects all purchased product to be delivered at the scheduled time.
Compliance	Allied Motion expects suppliers to comply with the requirements stated in this Supplier Quality Manual as well as all applicable legislative and regulatory requirements. Allied Motion requires suppliers to sign an acknowledgement of compliance to this document and note any exceptions prior to doing business. Reference F-14.07, The Supplier Quality Manual Acknowledgement.
Social Responsibility	Suppliers are expected to incorporate the same ethics, standards and business practices stated in the Allied Motion's Corporate Environmental, Health & Social Responsibility Policy. Environmental, Health and Social Responsibility - Allied Motion
Systems	Allied Motion expects suppliers to be able to provide evidence of compliance with ISO 9001, ISO 13485, ISO 26262, AS9100/IA9100 or IATF 16949. (Depending upon Industry served).
Resources	Allied Motion expects suppliers to provide the resources necessary to fully understand and support all our quality requirements.

Capabilities	Allied Motion expects suppliers to maintain manufacturing and technical capability. Suppliers are expected to demonstrate process capability which meets or exceeds defined levels for Processes and all designated Key Product Characteristics (KPCs).
Responsiveness	Allied Motion expects suppliers to initiate containment and provide a documented response within 24 hours of notification of all non-conformance situations. We expect our suppliers to be the champions of root cause investigation and problem resolution activities which lead to solutions which permanently prevent re-occurrence and to provide final Corrective Action Response within 10 working days.
Issue Cost Accrual	Allied Motion expects suppliers to share in the cost(s) of doing business. We have expectations of 0 Defects and 100% conforming products and services. Therefore, if a Nonconformance (NCM) is issued for a supplier/supplied component, per issue charge accumulations for administration: ($200 US/185€/1418¥) and additional charges incurred for Allied Motion personnel sorting/Sort oversight per hr. ($150 US/139€/1064¥). Expedited freight, travel charges, rework, etc... as accrued will be consolidated and reported for the corresponding Nonconformance (NCM).

4.0 Allied Motion Philosophy and Objectives

At Allied Motion we believe in establishing reliable, long- term partnerships with our suppliers with a goal to achieve economic and technical advantages that will allow us to compete successfully in a global marketplace. Our objective is to establish such relationships with suppliers who will be as responsive to our needs as we are to our customer's satisfaction. Secondly, we continue to focus on doing business with a smaller, more efficient, and more effective supply base.

5.0 Supplier Communications

Policy Statement: Allied Motion Purchasing Department is responsible for all official company communications between Allied Motion and our suppliers**.**

Effective communication is the most important ingredient for the success of our respective organizations. All communication regarding price, quality, delivery, design, or schedules between Allied Motion's support groups such as Product Design and the Value Stream Team, with our suppliers must be copied to Allied Motion' s Purchasing Department. Refer to your Purchasing contact in the event of a discrepancy.

All costs associated with changes to price, quality, delivery, design, or schedule without prior written authorization from Allied Motion Purchasing Department are the sole responsibility of the supplier**.**

All written communication from suppliers including PPAP submissions and quotations must be in English to be accepted by Allied Motion. Our contract documents are to be treated with the following precedence:

Highest: The purchase order or contract

Next: Drawings

Next: Customer Specific Requirements (CSR), Industry or International standards, External specifications, or Manuals

Finally: The requirements in this Supplier Quality Manual

The latest revision of any contractual document should be used except where a specific revision is called out in a document of higher priority. No document should be used prior to its effective date.

6.0 Supplier Responsibility to Notify Allied Motion about Discrepancies and Changes

In the event the supplier produces Discrepant or Suspect material and discovers that it has been shipped to Allied Motion, the supplier MUST notify Allied Motion immediately. We expect the supplier to take necessary action(s) to contain all defective product and keep Allied Motion in production while the problem is resolved. We also expect our suppliers to participate as requested with the preparation and presentation of corrective actions for our customer.

In order to protect Allied Motion from potential line stoppages, a disposition (Sort, Scrap, Rework, Return to Supplier) may be made, and the supplier will be contacted to make arrangements for that disposition. If line stoppage is imminent and arrangements can't be made in a timely manner, then Allied Motion will make the arrangements and the supplier will be debited the costs incurred.

Policy Statement: Supplier is required to obtain documented approval from Allied Motion's Purchasing and the Value Stream Team in advance of making any changes to the product, process, or packaging. Parts shipped prior to approval are considered to be rejected and unusable material. All costs associated with the production, shipment, containment, and removal of products associated with unauthorized changes are the sole responsibility of the supplier. These policies are applicable to changes made by a supplier's sub-supplier or sub-contractor as well. These policies are not applicable to products which have COTS status except where the changes have a direct impact on Fit, Form, Function, performance and or durability. (See section 12.0 for a detailed explanation of COTS status.) Examples of changes which require approval are shown below but not limited to:

- Change to the Process.
- Change to Material
- Additional Capacity
- Alternative or additional sub-supplier
- Change in tooling
- Addition or replacement of production equipment
- Major equipment overhaul.
- Use of tooling inactive for volume production more than 12 months
- Change in Test/Inspection methods
- Production from transferred tooling to a new or additional site

7.0 Supplier Approval and Quality System Requirements

As a condition of doing business with Allied Motion, suppliers must be on the approved supplier list. The supplier quality system can be approved by; certification by an accredited 3rd party auditor to an applicable; ISO, AS/IA, or IATF quality system, audited and approved by an Allied Motion representative or approved on the basis of a completed comprehensive Self Audit checklist. In some cases, Allied Motion must select suppliers based on customer specific requirements which may include certification to IATF 16949 or ISO 26262, AS9100/IA9100, AS9120, ISO 9001 or ISO 13485.

Distributors must demonstrate compliance to ISO 9001:2015, and must be either OEM Approved or purchase directly from OEM when purchasing material on behalf of Allied Motion In any case the supplier must, at a minimum, be able to provide evidence of a quality system that meets all of the requirements based on the AS9100/IA9100, AS9120, ISO 9001:2015, ISO 13485, ISO 26262 or IATF 16949.

Allied Motion requires their suppliers of products and services to develop, implement, and improve a quality management system certified to ISO 9001, with the ultimate objective of becoming certified to the IATF 16949 Standard.

Suppliers must have a current copy of their quality system registration certificate on file with Allied Motion Purchasing Department.

Defense Federal Acquisition Regulation (DFAR)/Federal Acquisition Regulation (FAR) suppliers must meet applicable regulations and requirements reference within the corresponding websites.

DFAR Requirements:	https://www.acq.osd.mil/dpap/dars/dfarspgi/current/index.html
FAR Requirements	https://www.acquisition.gov

All suppliers must have an active and effective Foreign Object Debris (FOD) Program. A FOD prevention program must be implemented in all areas which includes design and manufacturing process review, housekeeping program, FOD awareness training, material handling awareness training, protection from part damage due to handling, FOD incident metrics, FOD incident analysis to identify root cause and corrective action and physical entry controls in critical FOD areas.

8.0 Requirements for Sub-suppliers and Sub-contractors

Suppliers are responsible for ensuring all items procured from its subcontractors and suppliers conform to all requirements of the Allied Motion. purchase order, Allied Motion drawing, and all requirements found in the latest revision of this document.

DFAR requirements/Defense Priorities Allocation System (DPAS) Ratings per 15CFR700 will be noted on the Purchase Order. All DFAR requirements must be flowed down to any and all sub-suppliers and sub- contractors at all levels. DFAR Record Retention shall occur for 35 years. All other record retention shall be life of program plus 1 year. Customer requirements may require additional retention.

9.0 Quality Audit

Allied Motion shall have the right of entry to the supplier's and supplier's subcontractor facilities to review product / equipment owned by Allied Motion or our Customers. Allied Motion may be accompanied by our customers, and Regulatory Agencies including the FAA. Supplier will be notified in advance of such request.

10.0 Special Process Requirements

When special process controls and/or National Aerospace and Defense Contractors Accreditation Program (NADCAP) requirements are designated by Allied Motion through the PO or Allied Motion Drawing, the supplier must be accredited by Nadcap or Automotive Industry Action Group Continuous Quality Improvement (AIAG CQI) certified unless specifically exempted by contract. The supplier shall also ensure that processes subcontracted by suppliers are compliant to all applicable requirements including NADCAP or AIAG CQI. Process approval will be determined based on Allied Motion review of the Supplier's Quality system, special process review, the latest NADCAP website listing, or a copy of their latest NADCAP, AIAG CQI certification. All costs associated with NADCAP compliance and accreditations are the responsibility of the supplier.

Special processes include but are not limited to:

- Nondestructive testing
- Heat Treating
- Chemical Processes
- Welding
- Plating
- Soldering
- Coating
- Molding
- Casting

In some cases, the Supplier may be required to select a Special Process sub-supplier from a list of approved providers. Suppliers should consult their Allied Motion Purchasing Department contact to determine if this requirement applies.

The below processes have been identified by AIAG as having specific additional audit requirements. These processes will be audited by Allied Motion or a qualified third party as deemed appropriate based on previous audits of the same process and confidence in the supplier:

- Heat Treat CQI-9
- Welding CQI-15
- Plating CQI-11
- Soldering CQI-17
- Coating CQI-12
- Molding CQI-23
- Casting CQI-27

Other industry standards such as VDA or JAMA may have similar requirements.

11.0 Request for Deviation or Drawing Change

Supplier requests for a temporary deviation or permanent drawing change should be sent to your Allied Motion Purchasing or VST representative.

A request for Drawing Change may be initiated to effect a permanent change to an Allied Motion drawing, engineering specification or quality standard.

A request for a Temporary Deviation may be initiated to allow for an out of specification characteristic to be accepted for a defined quantity of parts or specified length of time. A deviation for an indefinite period of time such as “life of tool” or “as needed” should not be submitted to Allied Motion for consideration.

Suppliers are expected to make recommendations for changes to drawings or specifications as early in the project as possible. All change requests and deviations should be submitted and approved prior to PPAP submission.

The supplier shall obtain written approval from Allied Motion prior to shipment of any parts being submitted or considered for deviation.

12.0 Part Qualification Process

Policy Statement: Suppliers shall ensure that all products comply with all contract and engineering requirements, specifications and standards specified on the Purchase Order and/or Allied Motion drawings. This compliance shall be demonstrated through the timely and satisfactory submission of the requested documentation, records and sample(s) requested on the Parts Qualification Request (PQR). Product should not be shipped until the PQR submission has been approved.

Part Qualification may be requested for a variety of reasons including but not limited to the following:

- New part introduction
- Existing part change/revision
- Supplier tool, equipment, or process modifications/changes, including sub- tier suppliers
- Source relocation, including sub-tier suppliers
- Material, process, or component change, including sub-tier suppliers
- Lapse in production of 2 or more years

When a Part Qualification is requested the format for the submission will be a PPAP which is a method used for evaluating the complete manufacturing process and is aligned with ISO/IATF 16949.

The specific items required in the PQR will be defined by the Value Stream Team.
Supporting documentation should be provided electronically to the Value Stream Team shown on the PQR. Be sure to include a numbered (bubbled) print when a layout is requested. Please Do Not send “zipped” files.

Sample parts are to be segregated DO NOT send sample parts in the same container with production parts. A Sample Tag is required for all samples or sample shipping containers.
All PQR sample parts must be produced from production representative tooling unless otherwise

specifically directed. All dimensions shown on the drawing must be met post process unless specifically stated as otherwise on the Allied Motion drawing or Purchase Order.

Part Qualification approval may be granted if all samples' parts meet all requirements shown on the applicable Allied Motion drawing and all qualification requirements defined on the PQR have been submitted and accepted without issue. Submitted sample parts may undergo product verification activities such as inspection, testing and/or assembly trials.

If the PQR requirements are not met, the submission may be rejected. In that case sample parts are scrapped or returned to the supplier at their expense.

The first shipment of production parts should not occur until after approval has been granted. The first production shipment should be tagged with the Certified Material Tag, Form QAF859 available at http://supplier.alliedmotion.com

A temporary deviation may be proposed by the supplier as a means to obtain an interim approval for a PQR submission.

If all product characteristics have been met and only document issues prevent the PQR submission from being approved, the Value Stream Team has the option to provide temporary interim approval until all requirements are met.

Allied Motion does not make final payment of tooling invoices until all part qualification requirements are approved. Any cost associated with the receipt of unqualified parts is the sole responsibility of the supplier.

Some purchased components fall into the category of Commercial Off The Shelf (COTS) items.

Part Qualification Activity may NOT be required for a product which has COTS status. In some cases, a Certificate of Conformance (C of C) may be required, see Section 15.0.

COTS status is defined as: (All requirements must be met)

- *Item is made available for purchase to the public and is being sold to commercial customers*
- *Item meets drawing and engineering requirements without being modified from the form that is offered publicly*
- *Drawing and engineering requirements do NOT contain any KPC items*
- *Item Design has not been created or influenced by Allied Motion personnel*
- *Item has not been denied COTS status by Design Engineering, Value Stream Team, or Allied Motion* Management

13.0 Commercial ESG Requirements

Commercial ESG (environmental, social, governance) requirements evaluates the supplier's ability to meet Allied Motions risk and compliance requirements.
Standard design characteristics not specified in the face of the Allied Motion drawings may be found in the Allied Motion shop standard *53S100. The *53S100 specification should be utilized as a complement to all Allied Motion DDR – Globe Motors drawings and is available on Allied Motion's website.

*53S100 Only Applies to Allied Motion DDR – Globe Motors Drawings

All materials used in part manufacture must satisfy current government and safety constraints on restricted, toxic, and hazardous materials; as well as environmental, electrical and electromagnetic considerations applicable to the country of manufacture and sale.
Any special requirements will be defined in our purchase order or contract documentation.
Certain product for use in Europe, you shall comply with the European Union (EU) Regulations as required by the European Parliament and Council Directive on the Restrictions of use of certain Hazardous Substances in electrical and electronic equipment (2002/95/EC) or most current version of ("the RoHS Directive").

ROHS Directive Compliance

The regulation pertains to Restriction of Hazardous Substances (RoHS) and Waste Electrical and Electronic Equipment (WEEE) Directives. All suppliers must demonstrate compliance by completing the technical document "Allied Motion Materials Declaration (EU Directive)" form. EU ROHS specifies maximum levels for 10 restricted substances. ROHS Directive restricts the use of 10 substances with maximum levels specified they include:

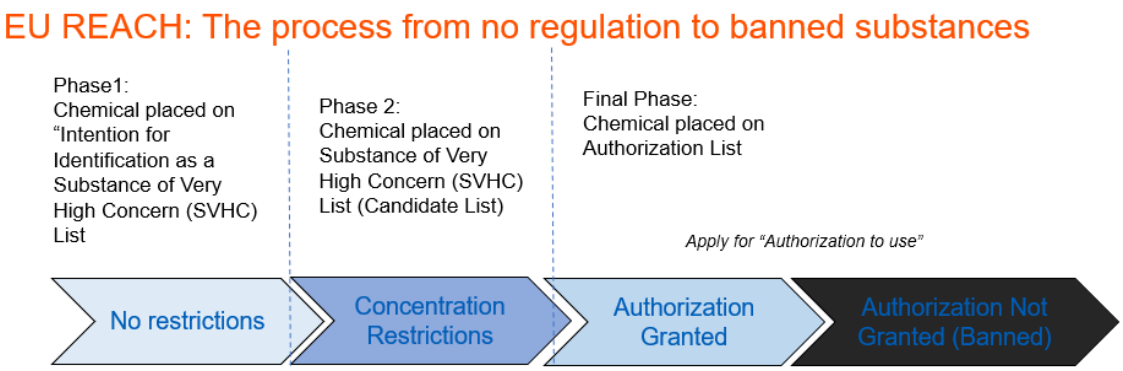
- **Cadmium (Cd)**: < 100 ppm
- **Lead (Pb)**: < 1000 ppm
- **Mercury (Hg)**: < 1000 ppm
- **Hexavalent Chromium: (Cr VI)** < 1000 ppm
- **Polybrominated Biphenyls (PBB):** < 1000 ppm
- **Polybrominated Diphenyl Ethers (PBDE)**: < 1000 ppm
- **Bis(2-Ethylhexyl) phthalate (DEHP)**: < 1000 ppm
- **Benzyl butyl phthalate (BBP)**: < 1000 ppm
- **Dibutyl phthalate (DBP)**: < 1000 ppm
- **Diisobutyl phthalate (DIBP)**: < 1000 ppm

You can find more information about RoHS compliance at http://www.rohsguide.com

REACH Compliance

The European Union regulations requires compliance to REACH. REACH is the Regulation on Registration, Evaluation, Authorization and Restriction of chemicals.

It entered into force on 1st June 2007. It streamlines and improves the former legislative framework on chemicals of the European Union (EU).



The main aims of REACH are to ensure a high level of protection of human health and the environment from the risks that can be posed by chemicals, the promotion of alternative test methods, the free circulation of substances on the internal market and enhancing competitiveness and innovation. More compliance information is found at https://echa.europa.eu/regulations/reach/understanding-reach.

U.S. Toxic Substances Control Act (TSCA)

became law on October 11, 1976, and became effective on January 1, 1977.

The Act authorized EPA to secure information on all new and existing chemical substances, as well as to control any of the substances that were determined to cause unreasonable risk to public health or the environment. Congress later added additional titles to the Act, with this original part designated at Title I - Control of Hazardous Substances.

TSCA protects human health and the environment by, among other things, authorizing EPA to issue rules requiring the testing of specific chemicals and to establish regulations that restrict the manufacturing, processing, distribution in commerce, use and disposal of chemicals and mixtures.

California Proposition 65

The US state of California approved an initiative to address their growing concerns about exposure to toxic chemicals. That initiative became the Safe Drinking Water and Toxic Enforcement Act of 1986, better known by its original name of Proposition 65.

Proposition 65 requires the State to publish a list of chemicals known to cause cancer or birth defects or other reproductive harm. This list, which must be updated at least once a year, has grown to include over 800 chemicals since it was first published in 1987.

Proposition 65 requires businesses to notify residents of California about significant amounts of chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. By providing this information, Proposition 65 enables residents of California to make informed decisions about protecting themselves from exposure to these chemicals.

Proposition 65 also prohibits California businesses from knowingly discharging significant amounts of listed chemicals into sources of drinking water. For general information on the Proposition 65 list of chemicals visit https://oehha.ca.gov/proposition-65

International Material Data System (IMDS) Disclosure

If requested, you are required to disclose the chemical composition of materials used in components supplied to Allied Motion in the IMDS System. A free website which you may register with is: http://www.mdsystem.com. Here you will submit your components for our approval to be included in our full assembly submittal to the end customer. As part of your submittal, you will be asked to enter which company the submittal is for. Allied Motion' I.D. number is 10878.

Where the following entries are used; miscellaneous not to declare, further additives not to declare, other ingredients, proprietary, secret or confidential substance, you must include in your submittal the following material disclaimer in the remarks area:

This material does not contain any restricted or reportable substances according to the ILRS, GMW3059, Ford's RSL, Toyota's SoC or DCX CS-9003 other than those specifically identified.

14.0 Process Requirements – Capability (Cpk) Index

Allied Motion quality standards are based on risk and severity ratings within the Failure Mode Effects (FMEA) and require that all dimensions meet a minimum Cpk Index of 1.33. Continuous improvement activity should be in place to achieve 1.67 Cpk. Allied Motion continual improvement initiatives are moving to 5 Sigma Quality Levels.

Higher level quality requirements identified as Significant or Critical Characteristics "KPCs" may be identified on the drawing. Significant characteristics with a FMEA Severity Ranking of 7-8 must meet a minimum Cpk index of 1.67 with continuous improvement activity to a Cpk index of 2.0. Critical characteristics with FMEA Severity Ranking of 9-10 must meet a minimum Cpk index of 2.0. Cpk must be tracked and maintained, and process control must be maintained to ensure consistent Cpk performance. Allied Motion continual improvement initiatives for higher level characteristics are moving to 6 Sigma levels.

A part that has a critical or significant dimension with an inherently low Cpk Index must be subjected to a form of enhanced process control subject to the agreement of the Value Stream Team. Enhanced Control may consist of an increased inspection frequency or could result in 100% inspection. These controls must be defined as an in- process control and documented as such in the supplier's process control plan.

15.0 Certificate of Conformance

Raw Materials and some component parts require a Certificate of Conformance (C of C) to be included with each shipment. The requirement to include a C of C will be indicated on the Purchase Order. Following is a list of items requested on a C of C:

- Name of Supplier or Organization providing the C of C
- Allied Motion Part Number and Revision as shown on the Purchase Order
- Allied Motion Purchase Order Number

- Size of the material or Description of the component being certified
- Type of Material or Name of Specification to which the item is being certified
- Expiration Date (where applicable)
- Statement of Compliance indicating that the requirements being certified have been met
- Signature or typed name of the person authorizing the Statement of Compliance
- The serialized components serialized number or range of serialized numbers within the lot shipped.

C of C documents which do not contain all of the required items may be rejected. In addition, the material or component requiring the C of C may be rejected if the discrepancy cannot be corrected in a timely manner.

Superseded Specifications

Unless specifically prohibited on the Drawing or Purchase Order, it may be acceptable for a supplier to certify material to a specification which has formally superseded the specification referenced on the Allied Motion drawing. In order to do so, the supplier must request and receive formal authorization from the Value Stream Team, prior to the first material shipment.

16.0 Packing and Shipping

Mislabeled parts received by Allied Motion will be classified as nonconforming material.

All shipping containers must be clearly marked with the Allied Motion Purchase Order Number, Part Number, Revision Level, Lot Number or Build Date, and Quantity.

Packaging materials, as well as packing and shipping methods, must be reported and approved on the Supplier Packaging Instructions (SPI) form which can be found on the Allied Motion website (http://supplier.alliedmotion.com). Packaging approval made prior to January 2012 may be documented “in writing” such as a supplier form, a memo on company letterhead or in an email.

17.0 Inspection of Received Items

It is Allied Motion operating philosophy to not perform receiving inspection by implementing Dock-To-Stock (DTS) status for supplied product wherever possible. It is the supplier’s responsibility to assure the quality of the products prior to shipment. The need for continued inspection by Allied Motion is evidence of unacceptable quality performance. Where receiving inspection does occur, acceptance or rejection of purchased materials is based upon a representative sample inspection. Rejection of purchased material is documented and communicated electronically via a Non-Conforming Material notification (NCM). The supplier is expected to respond promptly to requests to replenish stock, sort, rework and /or provide a Corrective Action Response (CAR).

18.0 Corrective Action Response

An Allied Motion representative will decide when it is necessary to request a Supplier Corrective Action Response (CAR) via email. A CAR is typically required in response to Nonconforming Material Notification (NCM) which is the result of a rejection of a supplied component. However, a CAR may also be required for other supplier quality failure events.

The Supplier is responsible to submit a preliminary response within 24 hours. Unless otherwise specified, the final response will be due within 10 days.

Containment activity typically includes the shipment of certified material while the issue is investigated, and a permanent corrective action implemented. During that time the supplier may be asked to apply a Certified Material Tag, form QAF859, to the certified material. The Value Stream Team will notify the supplier when this is required. A copy of the tag and instructions for its use may be obtained from the http://supplier.alliedmotion.com website.

The CAR must be provided electronically as a standalone document in Word, Excel, or Adobe. The supplier may utilize their internal format for the Corrective Action Response provided the information in the report corresponds to the information normally contained in an Automotive Eight Discipline (8D) response and include the populated Root Cause Corrective Action (RCCA) tool (Fishbone, Fault Tree, 3 Leg 5 Why). The report should reference the Allied Motion Corrective Action Number provided with the request.

For Allied Motion to have received non- conforming product there must have been three supplier process failures; a failure to produce the item correctly, a failure to detect the non-conformance, and a systemic failure that allowed the issue to occur. All process failures must be clearly and adequately addressed in the CAR response.

The completed CAR must have specific effective dates for all actions. TBD is not an acceptable response. A CAR submitted without a signature or typed name of an authorized management representative is not acceptable.

If supplemental items such as an updated Process Control Plan, Process FMEA, Cpk analysis data, etc. are requested, they must be submitted with the CAR. CARs submitted without the additional requested data are not acceptable and will be rejected.

If a satisfactory response to the CAR request is not received by the identified due date, it will be assumed that adequate permanent corrective action has not been implemented by the supplier. At that time, the item may be placed on inspection at the supplier's expense.

19.0 Warranty Improvement

The supplier is expected to execute failure analysis activities to diagnose, contain, and correct field failures that occur during product use. This activity needs to be implemented such that failed samples returned from Allied Motion are analyzed in a structured, repeatable way that gives the highest likelihood of finding root cause without masking or destroying any failure modes present in the sample. It is further expected that Suppliers be able to provide results in a manner that demonstrates that failures are being found and corrected and recurrent problems are avoided.

Records of warranty returns must be maintained, and Suppliers are expected to work with Allied Motion to eliminate any “No Trouble Found” diagnosis. Your protocol and records for warranty returns are auditable by us during process audits and system audits.

20.0 Supplier Scorecard

A Supplier Scorecard will be prepared on a periodic basis and the information reported will be used to support decisions regarding supply chain strategy.

In the event a customer notification is received where supplied component impedes performance at our customer these issues will be addressed utilizing applicable problem-solving methods and will be reflected within the overall DPPM score reflected on the score card.

Suppliers may request the most recently prepared report of their performance. Any discrepancies should be communicated to the Supplier’s purchasing contact at Allied Motion The issue will be promptly investigated and a report of the outcome of the investigation will be sent to the supplier. Parameters reported on the score card (not an exhaustive list) may vary from site to site. As a baseline the following parameters can be provided within the score card:

DPPM
DPPM formula =QTY Returned/QTY Shipped*1000000
OTD
Timing 5 days early/0 days late 1st requested date.
8D Timeliness
Expected closure date - 10-day closure per SQM interim contain 24 hrs. preliminary 5 days final 10 day
8D Effectiveness
Measured by more than one link related to a similar Non-conformance.
Premium Freight
Expedited material (air) due to either shortages quality issues (internal/external)
Customer Disruptions
Supplier related nonconformance created line stop issue or short ship to customer.

If a supplier has consistently underperformed Allied Motion’s expectations, they will be subject to a Supplier Performance Escalation process. This is intended to support the supplier in driving systematic improvement to meet Allied Motion’s requirements and performance expectations.

This process is utilized to address systemic issues related to poor performance. It may be initiated as a result of violations of this manual, but not limited to, the following examples:

- Sustained poor quality and/or delivery performance
- A customer notification where a supplied component-caused field, recall or warranty quality issues
- A supplier-caused field issue
- Quality or delivery issues that result in line impact situations
- Unauthorized changes made by a supplier
- Inadequate sustainability in the correction of defective material
- Past due SCAR or CAPA
- Customer notifications as it relates to supply chain material delivery and quality issues

21.0 Counterfeit parts; Avoidance, Detection, Mitigation, and Disposition

All products sold to Allied Motion intended for incorporation into final product/assemblies must be manufactured at the Original Equipment Manufacturer or Original Component Manufacturer. Counterfeit items or any form of unauthorized substitution is STRICLTY FORBIDDEN. Suppliers must be able to produce sufficient traceability documentation to establish compliance with this requirement upon request.

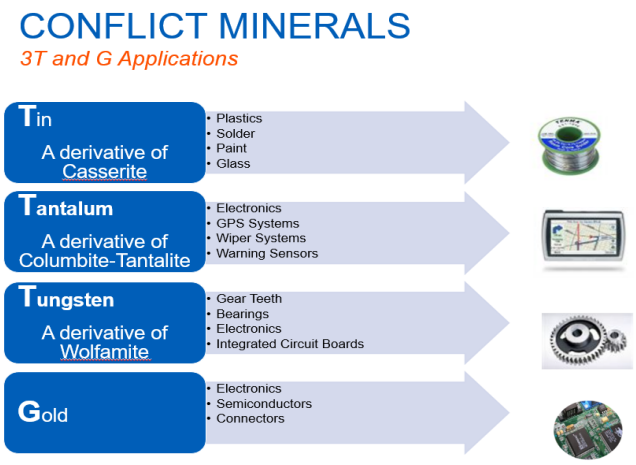
In addition, the supplier shall implement a counterfeit electronic parts control plan that documents its processes used for risk mitigation, disposition, and reporting of counterfeit parts. The control plan shall include the processes described in specification SAE AS5553 latest revision. Reference WII 14.17, Counterfeit Materials Avoidance and Detection.

Electronic and mechanical parts shall be procured only through Original Equipment Manufacturers (OEMs)/Original Component Manufacturers (OCMs) or their franchised dealer or distributors.

- The supplier shall verify the procurement source and associated certifying paperwork.
- Appropriate incoming inspection test methods shall be used to detect potential counterfeit electronic parts.
- The supplier shall not use brokers for the purchase of electronic parts unless approved by Allied Motion
- The supplier shall employ validation methods which assure parts and materials provided are not counterfeit.
- Supplier shall flow this requirement down to all sub-tier suppliers to prevent the inadvertent use of counterfeit parts and materials.

22.0 Conflict Minerals

Allied Motion fully supports this legislation and the Electronic Industry Citizenship Coalition (EICC)/Global e-Sustainability Initiative (GeSI) position to assure that specified minerals are not being sourced from mines in the “Conflict Region”, which are controlled by non- government military groups. Allied Motion will require directly or through 3rd party source declarations from all Suppliers, ensuring transparency in our supply chain.



Allied Motion expects our suppliers to source from socially responsible suppliers. This means we not only source from suppliers using sources from other regions but also source with suppliers who have confirmed non-conflict sources, even if those sources do come from the DRC or adjoining countries. Suppliers are expected to have policies and procedures in place to ensure that products and parts supplied to Allied Motion are 'DRC Conflict-free'.

This also includes mines and smelters outside the "Conflict Region" that are not certified as conflict free and mines and smelters that have been certified by an independent third party as "conflict free" if sourced from within the "Conflict Region". Suppliers are expected to provide all necessary due diligence information to confirm that all components supplied are DRC Conflict-free. Allied Motion expects suppliers to pass this requirement on to their supply chain.

Compliance to these requirements is required by law and will be taken into consideration when selecting and retaining suppliers.

23.0 Cyber Security and Incident Reporting

In the event the Seller faces a cyber breach, Seller shall be responsible for the following:

(a) If the DFARS 252.204-7012 is applicable, as defined therein, the Seller shall rapidly report cyber incidents to the DoD at http://dibnet.dod.mil and the Buyer, providing the requisite information required under the clause.

(b) Without exception, any cyber incident the Seller encounters shall be reported to Buyer as soon as practicable within 72 hours of discovery of an incident. Further, any cyber incident that Seller encounters which affects their materials resource planning systems, or the manufacturability of the parts supplied to Buyer by Seller, shall be reported to Buyer within 48 hours of discovery of an incident.

(c) In the event of a data breach, Buyer shall be afforded unfettered access to certain technical information (e.g., logs, packet flow information, etc.). This information will be required to satisfy Buyer's customer information requests.

(d) Failure to report or provide these notices will be considered a material breach of this Agreement.

24.0 Traceability Requirements

Suppliers of goods and services provided to Allied Motion for use in our products must have developed and documented plans for maintaining traceability (finished goods to raw material). As a best practice, where applicable, serial number or lot numbers should be applied to all parts and easily visible.

Suppliers are expected to be able to isolate and identify suspect lots (components/material) from a given date code. In the event of a quality nonconformance or spill suppliers are expected to provide traceability data upon request electronically within 24 to 48 hours to support risk analysis. Traceability data can include production history to include any rework performed, test records, manufacturing process parameters or any other processing which could impact fit, form or function of the supplied component or product.

Suppliers should always refer to the Allied Motion supplied print for requirements which can include bar code requirements, component marking and traceability requirements. In the absence of Allied Motion supplied print, refer to the traceability matrix below:

		MINIMUM TRACEABILITY DATA REQUIREMENTS	
#	Commodity Type	GENERAL REQUIREMENTS	RISK ANALYSIS ADDITIONAL REQUIREMENTS (WHERE APPLICABLE) *
1	Castings, Forgings, Powdered Metal	Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	Machine Machine Program/Settings Die/Mold/Fixture Heat Treat Lot Results Plating/Coating Lot Results Leak Test Results Install Torque Data Weld Test Results Press Force/Distance (Bearings, Tubes, Pins, etc.) KPC Data Control Plan Data End of Line Test Data
2	Fasteners, Bearings, Seals, Gaskets, Plastics, Rubber, Frict	Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	Test Data per Drawing and/or Governing Body (SAE, ISO, etc.) Plating/Coating Lot Results
3	All Stampings, Fabricated Components / Weldments	Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	Machine Program/Settings Die/Mold/Fixture Heat Treat Lot Results Plating/Coating Lot Results KPC Data Control Plan Data End of Line Test Data Plastic Colorant Die
4	Electronic/Electrical Components, Drives, Brakes, Controls	Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	Revision # Firmware Revision Calibration Data Control Plan Data End of Line Test Data
5	MRO, Paint, Lubricants	Expiration Date Lot # MFG Date MFG Name/Location	NA
6	Machined Components, Gears, Machining Services	Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	Machine Program/Settings Die/Mold/Fixture Heat Treat Lot Results Plating/Coating Lot Results Leak Test Results Install Torque Data Weld Test Results Press Force/Distance (Bearings, Tubes, Pins, etc.) KPC Data Control Plan Data End of Line Test Data
7	Steel and Alloy Bar, Pipe & Tube, Structural and Tool Steel	Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	
8	Steering & Drivetrain Components	Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	Machine Machine Program/Settings Die/Mold/Fixture Heat Treat Lot Results Plating/Coating Lot Results Leak Test Results Install Torque Data Weld Test Results Press Force/Distance (Bearings, Tubes, Pins, etc.) KPC Data Control Plan Data End of Line Test Data
9	Motors, Gear Reducers, Mechanical Drives	Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	
10	Magnets	Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	As per print requirements
11	Rotor, Stator, Laminations & Yoke Rings	Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	Test Data per Drawing and/or Governing Body (SAE, ISO, etc.)
12	Outside Processing (Plating, Coating, Heat Treating)	Lot # Revision # MFG Date	
13	Raw Material	Raw Material Certifications	n/a
14	Electromechanical – Custom	Lot # MFG Date MFG Name/Location	Revision # Firmware Revision Calibration Data End of Line Test Data
15	Commercial Off the Shelf (COTS)	Lot # MFG Date	
16	HW Elements/Components (COTS)	MFG Name/Location/Certificate of compliance	Per Functional Safety Requirements for qualification, verification and validation prior to use, /Safety Manual/Attest to ASIL Level
17	SW Elements/Components (COTS	MFG Name/Location/Certificate of compliance/	Per Functional Safety Requirements for qualification, verification and validation prior to use, Safety Manual/Attest to ASIL Level
18	Adhesives	Expiration Date Lot # Revision # MFG Date MFG Name/Location Raw Material Certifications	

* **Note: The Allient Print supersedes requirements defined within this matrix.**

DEFINITIONS

Conflict Minerals – Refers to minerals or other derivatives mined in the Democratic Republic of the Congo (DRC) and in the adjoining countries where revenues may be directly or indirectly financing armed groups engaged in civil war, resulting in serious social and environmental abuses. In July 2010, the United States passed the Dodd-Frank Wall Street Reform and Consumer Protection Act. Section 1502(b) of the law requires all US stock listed companies to disclose the usage of Conflict Minerals which include but are not limited to Tin, Tantalum, Tungsten, and Gold. These elements are collectively known as 3TGs.

Containment – Immediate short-term supplier actions to identify and segregate defective product in order to eliminate any further negative impact to Allied Motion

Corrective action – The permanent, documented, systemic corrections to the failed processes that will prevent a recurrence of the identified non-conformance, and ensure future defect detection.

Counterfeit Part – A copy or substitute part without legal right or authority to represent the OEM/OCM intended part. A part knowingly misrepresented in terms of the material, performance, or characteristics.

Cpk (Process Capability) Index – A numerical value that is a measure of the inherent process variation of a specific dimension relative to an engineering specification expressed in terms of three standard deviations.

CQI (Continuous Quality Improvement– An Approach to quality management that builds upon traditional quality assurance methods by emphasizing the organization and systems: it focuses on "process" rather than the
individual; it recognizes both internal and external "customers"; it promotes the need for objective data to analyze and improve processes.

CS-II Controlled Shipping Level II – The containment activity referenced by your 8D is referred to as CS-I. In the event of repeat, high risk issues or issues found by our customer you may be placed on CS-II status which is similar to CS-I with the addition of a neutral third party paid for by the supplier whose purpose is to carry out the containment activity.

FMEA (Failure Modes and Effects Analysis) – A tool that identifies all failure modes of a process or product then ranks and prioritizes them based on the frequency and impact of the failure modes as well as develop and implement preventative actions, with responsible persons assigned to carry out these actions.

FAIR Sample – An actual part measured for the First Article Inspection Report. Must be included with the FAIR submission and tagged with a Sample Part Label.

*FOD – Foreign Object Debris which is a*ny undesirable material found in a manufactured device. FOD usually enters during the manufacturing or assembly process. Some examples are dust, metal shavings, human organic material or clippings.

ISO 9000 Series of Standards – A series of standards established in the 1980s by countries of Western Europe as a basis for judging the adequacy of the quality control systems of companies.

KPC – Key Product Characteristic is a special product characteristic for which variation could significantly affect its compliance to engineering or quality standards.

NADCAP – National Aerospace and Defense Contractors Accreditation Program

OEM- Original Equipment Manufacturers

OCM- Original Component Manufacturers

Part Qualification Request – Request for a supplier to conduct a set of analysis to prove quality compliance.

Quality Audit – An on-site verification activity based upon a sample used to determine the effective implementation of a supplier's documented quality system.

Quality System – The organizational structure, responsibilities, procedures, processes, and resources required to achieve management's goals or objectives.

Root Cause -The primary, proven reason(s) for the occurrence of the product defect(s), or for the failure to detect the defect(s). If the reason(s) are eliminated the defect(s) would be eliminated.

Root Cause Analysis – Study of original reason for non-conformance within a process. When the root cause is removed or corrected, the non-conformance will be eliminated.

Supplier Quality Manual Acknowledgement (F 14.07)-

IATF 16949 – An international standard replacing QS-9000. IATF 16949 includes ISO 9000, QS-9000, and many European requirements. IATF is much more process-oriented than QS or ISO. It defines the business as a set of processes with inputs and outputs that need to be defined, controlled, improved/optimized, etc.

AS9100/IA9100**-** is a widely adopted and standardized quality management system for the aerospace industry. It was released in October 1999, by the Society of Automotive Engineers and the European Association of Aerospace Industries. AS9100 replaces the earlier AS9000 and fully incorporates the entirety of the current version of ISO 9001, while adding requirements relating to quality and safety. Major aerospace manufacturers and suppliers worldwide require compliance and/or registration to AS9100 as a condition of doing business with them. In 2024 AS9100 will be revised and renamed IA9100 to unify the standard under a single brand and to make it more consistent with other aerospace standards.

AIAG- Automotive Industry Action Group is a not-for profit association founded in 1982 and based in Southfield, Michigan. It was originally created to develop recommendations and a framework for the improvement of quality in the North American automotive industry. The association's areas of interest have expanded to include product quality standards, bar code and RFID standards, materials management, EDI, returnable containers and packaging systems, and regulatory and customs issues. The organization was founded by representatives of the three largest North American automotive manufacturers: Ford, General Motors and Chrysler. Membership has grown to include Japanese companies such as Toyota, Honda and Nissan, heavy truck and earth moving manufacturers such as Caterpillar Inc. and Navistar International, and many of their Tier One and sub-tier suppliers and service providers.[2] Over 800 OEMs, parts manufacturers, and service providers to the industry are members.

VDA- *Verband der Automobilindustrie e. V.*) German Association of the Automotive Industry is a German interest group of the German automobile industry, both automobile manufactures and automobile component suppliers. It is member of the European Automobile Manufacturers Association (ACEA). The VDA represents carmakers including BMW, Volkswagen, and Mercedes-Benz parent Daimler but also counts foreign suppliers and foreign-owned carmakers like Opel among its members.[2] The group is located in Berlin, Germany.

JAMA-Japan Automobile Manufacturers Association is a trade association with its headquarters in Tokyo, Japan. It was founded in April 1967 and serves as a platform for the automakers of Japan to share technological developments and management practices. There are currently 14 member companies, manufacturing not only cars, but trucks and motorcycles as well. The organization also deals with the manufacturing and distribution of vehicle parts around the world. Together, the companies of JAMA hold a vast share of the markets in the United States, Europe, and many developing countries. JAMA also has offices located in Beijing, Singapore, Washington, D.C. (US Office), Toronto (Canadian Office) and Brussels, Belgium (Europe Office).

Revision Log

Revision	Description	Authorization	Date
1	Initial Release	Steve Strickland	11/1/2017
2	Revise to change TS to IATF. Change QP900 to WII 14.17, Revise website address	Steve Strickland	12/8/2017
3	Revise section 14.0 to 6 Sigma levels	Joan Danley	09/11/2018
4	Revise section 18 to address 3 levels of failure	Steve Strickland	05/06/2019
5	Revised section 3.0 to include Social Responsibility	Joan Danley	11/7/2019
6	Revise to include Issue Cost(s) accrual	Steve Strickland	11/27/2019
7	Revise section 13.0 to include REACH compliance, California Proposition 65	Joan Danley	1/7/2020
8	Revised Section 14.0 defining capability requirements, replace Supplier Quality Engineer with Value Stream Team, removed specified Automotive requirements.	Joan Danley	10/1/2020
9	Revised Section 3.0 to include reference to F-14.07 Supplier Quality Acknowledgement Form requirement	Joan Danley	10/22/2020
10	Add section 23.0 Cyber Security and Incident Reporting	Steve Strickland	9/9/2021
11	Revise Section 20.0 to add supplier under performance statement	Beth Arthur	6/7/2022
12	Add section 24.0 Traceability Requirements and reference to ISO 26262	Steve Strickland/Felechia Childs	7/26/2022
13	Updates to section 20 Score Cards to cover customer notification for quality or delivery issues and DPMO	Felechia Childs	12/13/2022
14	Added Table of contents, Update to Section 13 changed name Commercial ESG requirements was Additional Product Requirements added EU REACH Graphic, update to Section 22 Conflict Minerals added REACH Graphic, Added ROHS Subtitle, added under new RoHS Directive Compliance subtitle 10 restricted substances and the max levels. Update to Section 20 score card added score card parameter details.	Felechia Childs	10/15/2024