System Process Manual

Document:	SPM 14.02
Revision:	2
Responsible:	Manager of Quality/Supplier Quality

Título:	SP 14 - Supplier Quality Manual

Document

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 Allied Motion purchase order. It 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 Motions 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.
Systems	Allied Motion expects suppliers to be able to provide evidence of compliance with ISO 9001, ISO 13485, AS9100 or IATF 16949. (Depending upon Industry served)
Resources	Allied Motion expects suppliers to provide the resources necessary to fully understand and support all of 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.

4.0 Allied Motions 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 Motions' Purchasing Department is responsible for all official company communications between Allied Motion Technologies Inc. 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, Quality Assurance, Manufacturing Engineering or Production and our suppliers must be copied to the Allied Motion's Purchasing Department. Refer to Purchasing 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 submission's and quotations must be in English in order 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 specified 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, the supplier MUST notify Allied immediately. We expect the supplier to do whatever is necessary to contain the defective product and keep us 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 from potential line stoppages, a disposition will 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 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 Quality Assurance in advance of making any changes to the product, process or packaging. Changed 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
- Changed 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 Allied Motions approved supplier list. The supplier quality system can be approved by; certification by an accredited 3rd party auditor to an applicable; ISO, AS, 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, AS9100, 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 Technologies Inc. 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, AS9120, ISO 9001:2015, ISO 13485 or IATF-16949.

Allied Motion Inc. requires their suppliers of automotive 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 Technologies Inc. Purchasing Department.

DFAR/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

FOD Program - Supplier must have an active and effective FOD prevention program 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/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 records have a retention of 35 years.

9.0 Quality Audit

Allied Motion Technologies Inc. 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 NADCAP requirements are designated by Allied through the PO or Allied Drawing, the supplier must be accredited by Nadcap or 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 Requirements.

Process approval will be determined based on Allied 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. Contact the Purchasing Department 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	Plating	CQI-11	Coating	CQI-12
Welding	CQI-15	Soldering	CQI-17	Molding	CQI-23
				Casting	CQI-27

11.0 Request for Deviation or Drawing Change

Supplier requests for a temporary deviation or permanent drawing change should be sent to your Allied Purchasing or Quality 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 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 PQR (Parts Qualification Request). 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 typically 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 Supplier Quality. Send the documents electronically to the Quality Engineer shown on the PQR. Be sure to include a numbered (bubbled) print when a layout is requested. Please Do Not send "zipped" files.

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. Form QAF859 is 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 SQE 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 COTS (Commercial Off The Shelf) items.

Part Qualification Activity may NOT be required for a product which has COTS status. In some cases, a 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, Supplier Quality, or Allied* Management

13.0 Additional Product 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 drawings and is available on Allied Motion's website.

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.

For certain product for use in Europe, you must comply with the RoHS 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").

The Regulation pertains to Restriction of Hazardous Substances (RoHS) and Waste Electrical and Electronic Equipment (WEEE) Directives. Non-automotive suppliers must demonstrate compliance by completing the technical document "Allied Motion Materials Declaration (EU Directive)" form.

This ban has set maximum levels on specified materials/ingredients that affect elements: Mercury (Hg), Lead (Pb), Cadmium (Cd), Hexavalent Chromium (Cr), Polybrominated Biphenyl (PBB), and Polybrominated Diphenyl Ether (PBDE).

The main requirement of the RoHS Regulations is that from July 1, 2006 a producer may not sell components to Allied Motion containing over the maximum allowable amount for the six elements stated above unless approved by exemptions provided by the Legislation.

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 Motions' 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 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 continual improvement initiatives are moving to 5 Quality Levels.

Items identified with "KPC" on the drawing must meet a minimum Cpk index of 1.67, Cpk must be tracked and maintained and process control must be maintained to ensure consistent Cpk performance. Continuous improvement activity should be in place to achieve 2.0 Cpk. Allied continual improvement initiatives 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 appropriate Supplier Quality Engineer. 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 Supplier Quality Engineer, 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.globemotors.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 Motions’ operating philosophy to not perform receiving inspection by implementing dock-to-stock 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 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’s representative will decide when it is necessary to request a Supplier Corrective Action Response 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 SQE 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 8D response and include the populated RCCA tool (Fishbone, Fault Tree, 5 Why). The report should reference the Allied Corrective Action Number provided with the request.

For Allied Motion to have received non-conforming product there must have been two supplier process failures; a failure to produce the item correctly, and a failure to detect the non-conformance. Both 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 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 you 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 we expect you to work to eliminate any "No Trouble Found" diagnosis. Your protocol and records for warranty returns are auditable by us during process audits, system audits and PSO.

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.

Suppliers may request the most recently prepared report of their performance. Any discrepancies should be communicated to the Supplier's purchasing contact. The issue will be promptly investigated and a report of the outcome of the investigation will be sent to the supplier.

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

All product supplied to Allied and all product used by Allied 's suppliers to produce product which is intended to be supplied to Allied 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 fee 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.

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 – 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.

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.

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