

General Quality Agreement

GENERAL QUALITY AGREEMENT

between

SUPPLIERS

and


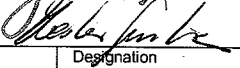

**Temic Automotive of North America INC
A Company of the Continental Corporation**

- hereinafter referred to as "Buyer" -

The Buyer shall mean


- (i) Temic Automotive of North America INC itself and
- (ii) any Participating Related Companies of
Temic Automotive of North America INC

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Designed by Gerold Will	Date	Department	Sign
Released by Günter Fella 	2008-06-01	Supplier Quality Management	
Released by Günter Heitzer 	2008-06-01	Purchasing Automotive	
	2008-06-01	Supplier Quality Management	
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Suppliers address:


<p><i>Company name:</i></p> <hr style="border: 1px solid black;"/>
<p><i>Address:</i></p> <hr style="border: 1px solid black;"/>

accepted with Vendor Addendum

accepted without Vendor Addendum

<p>Signed for and on behalf of the Supplier and its Participating Related Companies</p>	<p>Signed for and on behalf of Temic Automotive of North America INC and its Participating Related Companies</p>
<p><i>Signature Sales:</i></p> <hr style="border: 1px solid black;"/> <p><i>Date/Name/Position (in printed letters):</i></p> <hr style="border: 1px solid black;"/>	<p><i>Signature Purchasing:</i></p> <hr style="border: 1px solid black;"/> <p><i>Date/Name/Position (in printed letters):</i></p> <hr style="border: 1px solid black;"/>
<p><i>Signature Quality:</i></p> <hr style="border: 1px solid black;"/> <p><i>Date/Name/Position (in printed letters):</i></p> <hr style="border: 1px solid black;"/>	<p><i>Signature Supplier Quality:</i></p> <hr style="border: 1px solid black;"/> <p><i>Date/Name/Position (in printed letters):</i></p> <hr style="border: 1px solid black;"/>

Annex 1: Incorporated Requirements

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1 Introduction

1.1 Definitions

"Related Companies" shall mean any company which, through ownership of voting stock or otherwise, directly or indirectly, is controlled by, under the common control with, or in control of a Party hereto, the term "control" meaning the ownership of more than 50% of such company's voting rights.

"Supplier" shall mean

- (i) the signing legal entity itself and/ or
- (ii) any Participating Related Company/ Companies of the signing legal entity

"Customer" shall mean

any Customer the Buyer delivers parts to directly or indirectly

1.2 Purpose

The purpose of this document is to communicate the Buyer requirements with respect to the quality and environmental management system of those companies that supply production goods and/or services to the Buyer.

It is the Suppliers' obligation to ensure that all quality rules set out in this Agreement are transmitted, implemented and committed to by the members of Supplier's sub-supplier panel.

The Buyer expects zero defects for every quoted contract-product and a commitment from our suppliers to implement appropriate systems and controls to ensure the 100% on-time delivery of conforming, defect free products.


1.3 Background / Area of Application

The Buyer Supplier Quality and Environmental System Requirements are based upon the latest edition of ISO/TS 16949 Quality System Requirements and ISO 14001 Environmental System Requirements. Although this does not alter or reduce any other requirements of the contract, it is intended to provide a concise understanding of our quality and environmental expectations.

By signing this GQA the Supplier hereby acknowledges that this GQA applies to all components and services supplied by it to any Buyer location world-wide.

Beside the conditions of this General Quality Agreement, the supplier expressly warrants to the Buyer that all work and Contract Products shall conform to and satisfy the drawings, specifications and samples or other descriptions furnished, specified or approved by the Buyer as well as applicable safety and environmental rules or regulations from time to time in force in the countries where contract products or vehicles equipped with Contract Products are to be sold or used, including those of EU/EFTA/NAFTA (e.g.: End of Life Directive, REACH ...)

This Agreement supersedes all previous former TEMIC or CONTINENTAL TEMIC or CONTINENTAL TEVES or SIEMENS VDO and Motorola (ACES) supplier quality and environmental systems requirements manuals.

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1.4 Validity

Any new version and or amendment of the GQA shall become applicable upon written agreement between the Parties and shall render the respective old version null and void.

Relevant incorporated documents (see Appendix 1) shall become applicable with signature of the GQA. New versions of incorporated documents will be provided and become valid if there is no objection received in writing within a three month period from the facility for taking notice of the documents.

In case of conflicting rules between the rules of this Agreement and any other agreement / document, the order of precedence of the documents is as follows:


1. Strategic Supplier Contract
2. Individual Agreement (IA), e. g. Sourcing Agreement, component specification / drawing
3. Category Quality Requirements, Quality Process Requirements, Company Standards
4. General Quality Agreement (GQA)

2 General System Requirements

2.1 Management System Requirements

- Present and potential suppliers to the Buyer must operate within a comprehensive quality system. Suppliers shall provide written confirmation and objective evidence of third party certification to an active version of ISO/TS 16949. Suppliers who are not ISO/TS 16949 (latest issue) certified must have a working plan to become compliant to ISO/TS 16949 available for review, unless the supplier has an approved Supplier Quality Certification Exemption from the Buyer waiving such a plan.
- Suppliers are required to install environmental systems in their facilities that are compliant to ISO 14001. Suppliers who are not certified must have a working plan to become compliant to ISO 14001 available for review, unless the supplier has an approved Supplier Quality Certification Exemption from the Buyer waiving such a plan.

Certified suppliers must record their initial and renewal certifications in the “Business Directory” of the SupplyOn Platform within 10 days of receiving the certificate from their registrar. Also, suppliers are required to submit the Certificates to all Buyer receiving sites and the Purchasing department and notify the same within 24 hours, when the certificate will be suspended by their registrar.

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2.2 Sub-Supplier Control

The requirements set out in this Agreement shall also apply to the QM-System that the Supplier shall set up with its sub-suppliers. Upon Customer request the Supplier shall submit supplier- and product approvals and corresponding quality contracts with its sub-suppliers.

The Supplier shall notify the Buyer of any changes to their approved vendor list and request Buyer's approval. The Supplier shall not ship any components impacted by the change to the Buyer until written approval is granted.

Each supplier is responsible for the control and continuous improvement efforts of sub-suppliers. That responsibility as well applies to sub-suppliers nominated by the Buyer. Suppliers shall enable visits by the Buyer at their suppliers.


2.3 Audits

Upon request of the Buyer, a 3rd party representative or Customers shall be entitled to visit any product related location of the Supplier and to conduct audits on the basis of ISO/TS 16949 and VDA standards. This right shall also include audits at the Supplier's sub-suppliers' locations. The Supplier shall provide the necessary resources for the performance of this task. The Supplier is, however, not obligated to reveal any proprietary information without a mutual non-disclosure-agreement in place.

A scoring and audit report will be provided by the respective auditor at the end of an audit during the common wrap-up discussion with the involved participants. The audit report and the necessary measures resulting from the audit (as far as identifiable) shall be agreed upon by the Supplier and the Buyer within an action plan. The tracking and follow-up for the realization of the action plan will be performed by the Buyer's auditor.

Each year, the Supplier shall perform a self audit according to VDA 6.3 standard for all product lines including subcontracted processes. The Buyer shall be informed of all audit results below AB ranking. Upon request of the Buyer the Supplier shall provide all audit results including documentation and action plans.

Supplier of heat treated components shall use the assessment forms AIAG CQI 9 in addition to the VDA 6.3 questionnaire. For plating processes AIAG CQI 11 is mandatory as well as AIAG CQI 12 for coating processes in addition to VDA 6.3.

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2.4 Supplier Performance Indicators and Rating

The Buyer performs a supplier evaluation in several categories based on key performance indicators such as:

Amount of incidents

An incident is any disturbance created by the Supplier with impact to the Buyer or its Customer processes. Typical examples (not a complete list) for incidents are:

- a non-conformance related to the component specification (e.g. drawing, environmental specification)
- a rejected or past due PPAP caused by the Supplier
- a deviation request by a Supplier after component review
- a delay or error in delivery which leads to disturbances in a Buyer manufacturing plant (except if there is evident inadequacy between determined and real delivery requirements)

Any of these incidents shall require an 8D-report by Supplier containing defined corrective actions as determined by the Buyer.

PPM-Level

The PPM-Level evaluates the Supplier's performance in parts per million for failures in the Buyer manufacturing line and/or at its Customer.

APQP performance

For the definition of APQP requirements see chapter 3.2. The performance will be measured based on the fulfillment of mandatory elements.

Cycle time

Cycle time is the calculated response time (in days) of the Supplier to a complaint issued by the Buyer. See also chapter 5.6 for respective requirements.

Supplier Evaluation

The global performance of the Supplier will be evaluated annually for purchasing, quality, logistics and technology elements and serves to determine the Buyer strategic supply base.


Based on the results of such evaluation the Supplier shall define and implement appropriate corrective actions.

If the quality results fail to meet the committed goals, the Supplier shall implement immediate corrective actions to reach the targets.

Suppliers are required to monitor their performance on the

"SupplyOn – Performance Monitor", located at: http://www.supplyon.com/gen_root_de.html

The supplier enters the tools by using a registration code and gets authorization to monitor its performance. Data for ppm-level and incidents are refreshed monthly, further on more complex evaluations of suppliers performance and yearly strategic evaluations are published.

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2.5 Escalation Process

An escalation process is launched in case of non satisfying supplier performance.

The Supplier shall enable a visit from the Buyer or a meeting within 48 hours after receipt of the complaint.

Incident escalation

As entry criteria into the escalation an 8D report from the supplier is mandatory. Based on the 8D report and an expert meeting the supplier could be set to CSL1 in order to prevent re-occurrence of the same failure.

In case of CSL1 the Supplier shall apply additional / redundant testing to prevent shipping of non-conforming components to the Buyer. The testing process shall include a 100% screening. The screening shall be applied to all components at the Supplier's location, in transit, or at the buyer's plant. The Supplier shall absorb all costs related to these containment actions and report the status and results to the Buyer.

CSL2 may be applied independently from CSL1, the application of CSL2 shall be mandatory if a failed part is delivered during CSL1. In case of CSL2 the Supplier shall hire an independent third party to perform the containment actions and to support the related 8D process.

Components shipped under CSL1 or CSL2 shall be marked with a mutually agreed upon identification method.

Supplier ppm targets not achieved or worst five supplier


As entry criteria into the escalation an action plan from the supplier is mandatory. Based on the action plan and an expert meeting the supplier could be set to CSL1. If there is no progress concerning the actions agreed, a management meeting shall be conducted and based on the results the supplier could be set to CSL2.

CSL1 or CSL 2 can be used as containment action.

A Q-BIC@supplier program can be launched to support the improvement plan.

Top Management Meeting, New Business on Hold, Phase-Out

In case that CSL1/2 failed or the Audit result has been ranked with B or the supplier evaluation results have been insufficient, a Top Management Meeting will be organized. The output of the meeting could lead to the decision "New Business on Hold" or "Phase-Out".

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2.6 Record Retention

The Supplier shall be obligated to document and maintain Production Part Approval Process (PPAP) packages, annual layout and validation records, tooling records, traceability records, engineering records, corrective action records, quality performance records and inspection and test results. In minimum the listed documents shall be archived over at least 15 years after the production has been terminated and tooling scrap authorization has been granted. Records shall be available to the Buyer upon request.

The above time periods are considered "minimum". All retention times shall meet or exceed the above requirements and any governmental requirements.

2.7 Declarable Substances

The supplier guarantees and warrants that all products worldwide supplied to the Buyer are in compliance with the substance and material restrictions specified in the "Global Automotive Declarable Substances List" (GADSL).

GADSL is available under the following internet address: <http://www.gadsl.org>


The supplier is obliged to declare all substances listed as "declarable" or "prohibited" like specified within the GADSL. The complete composition of components and materials shall be declared in the "International Material Data System" (IMDS) and has to be accepted by the Buyer.

The IMDS access is available under the following internet address: <http://www.mdssystem.com>

A proof of the IMDS Data Input shall be provided with the IMDS material data ID number in the respective PPAP/ PPF documents.

2.8 Contingency plans

Suppliers are required to prepare contingency plans (e.g. utility interruptions, labor shortages, key equipment failure and field returns) to reasonably protect the Buyer's System's supply of product in the event of an emergency, excluding Acts of God / Force Majeure.

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3 Advanced Quality Planning

3.1 Feasibility Commitment, Supplier Component Review (SCR)

With each offer to the Buyer, the Supplier shall submit a feasibility commitment in regards to project time plan, quality targets and technical requirements.

The Supplier shall perform a detailed feasibility analysis for critical and important criteria to be presented during a "Supplier Component Review Meeting".

The main output of this meeting will be a feasibility commitment to a common agreed project time schedule, a common agreed (target) specification/drawing, a fixed supply chain and an annual PPAP agreement.

3.2 Advanced Product Quality Planning (APQP)


Supplier and its sub-suppliers shall have a comprehensive APQP process in place in accordance to the latest Buyer demands. The Supplier shall maintain APQP based on latest Buyer requirements for each component development project.

Based on these requirements the Buyer has the opportunity to verify the APQP process at the Supplier as well as at the sub-supplier's premises together with its customer.

The Supplier shall have a designated project engineer / manager for each component development project, who will be available upon request by the Buyer to be part of the overall project team.

3.3 Engineering Prototype Sample Submission

Engineering prototype parts with documentation of specification conformance shall be submitted to the Buyer by the supplier as instructed by the department at the Buyer responsible for prototype and engineering validation testing. Each sample or prototype must be clearly labeled as such and accompanied by completed dimensional results, material test results, and performance test results reports as described in the AIAG PPAP Manual. Specific instructions, in addition to these stated requirements, may be agreed upon and documented by the Buyer via the APQP Kick-Off Meeting or other formal communication.

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3.4 FMEA

The Supplier shall conduct a FMEA before design validation according to accepted technical standards.

The FMEA shall:

- (a) recognize and evaluate the potential failure of a design/process and the effects of that failure,
- (b) identify actions that could eliminate or reduce the chance of the potential failure occurring, and
- (c) document the entire process.

All identified potential failure modes shall be considered in order to improve the product/process.

Supplier shall set up a rating system in its QM-system which identifies the priorities of recommended measures (e.g. RPN, Severity).

The first release of the FMEA shall be transmitted to the Buyer before design validation. Each event or change shall be updated in such FMEA.

The process FMEA shall be delivered to the Buyer, the design FMEA shall be made available to the Buyer for inspection.

3.5 Special Characteristics

Special Characteristics are any product characteristics defined by the Buyer or Customers or manufacturing process parameters identified by the Supplier including government and safety regulations, which have a substantial influence on the:


- manufacturability at the Buyer
- manufacturability at the Customer
- usage and operation of the product by the Customer
- compliance with applicable regulations
- compliance to applicable safety requirements

Special Characteristics are further categorized into:

- Characteristics not relating to safety or legal considerations
- Characteristics with safety or legal considerations

In accordance with the requirements of ISO/TS 16949, Special Characteristics shall be identified and specifically addressed in the Design-FMEA, Process-FMEA, Control Plans, Process Flows, work instructions and other associated documents.

The Buyer required Special Characteristics will be identified on drawings/specifications or in a separate document that cross-references these characteristics to the drawings/specifications. The supplier is responsible to fully understand the process impact to their product and identify any process parameter Special Characteristics as they deem appropriate. Suppliers are also responsible for ensuring that relevant Special Characteristics are explained, understood and controlled by their sub-suppliers where applicable.

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3.6 Qualification

The Supplier shall maintain a qualification system for processes and components which are capable of proving the requirements as defined in the respective specifications/drawings and incorporated documents (see Annex 1).

3.7 Manufacturing Process Review

The supplier is responsible to carry out reviews in his area of responsibility. They must be scheduled in such a way that the results are available on the specified release days (milestones) of the project. An assessment of a supplier's manufacturing process may be conducted before and after part approval at the supplier's facility. This assessment may be specified by the Buyer or its Customer (e.g. Run@Rate and VDA 6.3 Audit).


3.8 Production Part Approval Process (PPAP)

The Supplier shall conduct the PPAP according to the date specified. PPAP shall determine whether all Buyer engineering design requirements, specification requirements and process requirements are met by the Supplier and that the process has the defined capability to produce components meeting these requirements during an actual production run at the quoted production rate. PPAP shall be performed following the rules set out in the AIAG PPAP manual and related Buyer requirements.

The standard PPAP submission level shall be 3, unless otherwise agreed.

Upon request by the Buyer, the PPF requirements as referenced in the VDA volume 2 manual shall be used.

PPAPs shall be submitted to the requesting quality department and any associated PPAP sample parts shall be clearly labeled as such.

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3.9 Product and Process Release Information

The Product and Process is released after a PSW has been countersigned by the Buyer SQM. Changes of the process or product are not allowed after this point without prior notification. Supplier's components shall not be accepted by the Buyer for series production in case a product release has not been issued. Any production shipments received by the Buyer prior to obtaining this approval will be rejected. The product release shall only be issued if Supplier's product, process line and manufacturing site have been approved for series delivery.

In case a full approval cannot be achieved on time a written deviation approval is required prior to shipping parts to the Buyer for production. The Buyer shall inform the Supplier of such product release.

Before a component is released for series production at the Buyer, four (4) approval steps must be completed.


- Component Approval (CA) is given with the countersigned PSW as described above.
- Supplier Approval (SA) will be granted if -at a minimum- the following steps have been successfully completed:
 - Evaluation of the Supplier's QM-System
 - Audit
 - Fulfillment of APQP requirements
 - Pre-production capacity audit if appropriate (Run@Rate, etc...)
 - Agreement on GQA and related documents (required before sourcing decision).
- Application Approval (AA): Application specific tests (Buyer responsibility).
- Manufacturing Approval (MA): Manufacturing specific tests (Buyer responsibility).

4. Ramp up Process

4.1 Pre-Production and Sample Part requirements

Suppliers are required to meet the Buyer's Pre-production and Sample Part requirements. These requirements will be defined by the Buyer via the APQP Kick-Off Meeting or other formal communication. Required documentation (e.g. Control Plans) must be kept current.

Suppliers are expected to clearly identify "pre-production" or "sample parts" to ensure that the Buyer's receiving site does not mix such parts with "regular" production parts. Suppliers are also expected to work closely with the Buyer plant Scheduling and Material Control personnel to minimize unnecessary obsolescence. Labeling must be done per Buyer's receiving site requirements and shall be differentiated from regular production shipping labels, unless the parts are already PPAP approved. In particular, the Supplier Identification, Part Number, Engineering Level, and Quantity must be clearly displayed on the part-packaging label to ensure easy, visible segregation of containers/parts.

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4.2 Safe Launch Concept

The Supplier shall apply the SLC according to the product and process maturity. The scale of the SLC shall be defined during the APQP process and agreed by the Buyer. The purpose of the SLC is to document the Supplier's control of its processes during start-up and ramp-up phase, it shall also enable the Supplier to quickly identify and quickly correct any quality issues that may arise at the Supplier's location. SLC includes special verifications performed by the Supplier for a defined time-frame or quantity as determined together with the Buyer in the APQP process.

SLC requires a Pre-Launch Control Plan, which is a significant enhancement to the Supplier's production control plan and which in turn will raise the confidence level to ensure that all components shipped initially will meet the Buyer's expectations. The pre-launch control plan will also serve to validate the production control plan. The Pre-Launch Control Plan shall take into consideration all known critical conditions of the product as determined with the Buyer as well as potential areas of concerns in the Supplier's process as also identified during the introduction and PPAP. The Supplier shall generate the Pre-Launch Control Plan prior to start of series production and shall make it available to the Buyer for approval prior to start of series production. The Buyer shall be entitled to request changes.

Suppliers are required to submit inspection data to the Buyer's plant. This should include variable measurement data where applicable. Suppliers may exit new production containment if they have achieved SLC targets unless otherwise specified by the Buyer.

Suppliers shall develop action plans to address missed failure modes or capability improvement needs.


The Buyer may require suppliers to perform production on stock for product and process verification purpose.

Missing achievement of the SLC targets within the mutual defined period of time or quantities may lead to a withdrawal of the release.

5 Serial Production

5.1 Deviation Approval for Product or Process Deviations

It is the policy of the Buyer not to accept products that do not meet the requirements of the applicable drawings and specifications. Requests for deviations on nonconforming products shall be submitted to the Buyer's receiving plant for review and approval prior to shipment. Deviations shall be approved only for a specific time period or quantity of parts. No permanent deviations are permitted. A deviation request shall be accompanied by a Problem Solving Report (8D). This report shall include the identification of a clean point and the manner in which products will be identified, including how traceability will be maintained.

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5.2 Process Capability and Control

Suppliers are required to meet the process capability requirements as defined in the AIAG PPAP and SPC reference manual. Acceptance criteria for an initial process study is a cpk ≥ 1.67 and machine capability cmk ≥ 2 (Pa = 99 %) for new introduced components. The supplier is responsible that control requirements are documented in the control plan and that capability indices are achieved and improved throughout production. If the required capability cannot be reached then 100% testing is mandatory.

The Supplier is obligated to define samples ("golden" samples) to be used as reference for the manufacturing process and final product.

Upon request of the Buyer the Supplier shall provide measurement and traceability data for special characteristics.

The Supplier shall inform the Buyer about any deviation of the current reading of the First Pass Yield (FPY) from the average weekly FPY of more than +/-10% for any product within two days after the deviation occurred. The Supplier shall provide information regarding the current and past FPY upon request of the Buyer.

Without the prior written approval of the Buyer the Supplier shall not repair or sort components. Rework/repair includes all activities on components outside the continuous process flow.


5.3 Annual Re-Qualification

The Supplier shall re-qualify its components in case of changes and regularly at least once a year.

A qualification-monitoring program for reliability and environmental tests has to be maintained in order to ensure and demonstrate that the delivered components meet all the agreed requirements. Re-qualification documentation shall be archived by Supplier and shall be made available to the Buyer upon request.

In case that the Supplier does not have design-responsibility the Supplier shall perform a lay-out inspection, verifying all characteristics as specified in the respective drawing or specification on a regular basis, at least once a year.

Suppliers with PPAP documentation over one year old are required to re-PPAP as directed by the Buyer's receiving site Quality department.

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5.4 Certificates of Conformance

Upon request a signed certificate of conformance shall be maintained on file at the supplier and may be required to accompany each shipment of specified components or materials. The certificate of conformance must contain the actual results of physical testing, measurements and/or analysis specified by the contract confirming compliance with all identified requirements. The Buyer's receiving site will give specific instructions during the APQP process or other formal communication.


The supplier should have a system capable of retrieving and submitting the requested Certificate of Conformity within 24 hours after Buyer's request.

5.5 Problem Solving Methods

Suppliers shall have trained (preferably certified) personnel with the ability to quickly and permanently resolve product and process issues using data driven problem resolution tools and techniques. Problem resolution must be conducted using a defined, structured process like the 8-Discipline process, Six Sigma DMAIC (Define, Measure, Analyse, Improve, and Control) or any other process that includes verification of the root cause and validation of corrective action effectiveness.

Data driven techniques should also be used during the process design, verification and validation phases of the APQP process in order to prevent problems with new or changing products and processes. These data driven tools and techniques include but are not limited to: Failure Mode and Effects Analysis (FMEA), Measurement System Analysis (MSA), Statistical Process Control (SPC), Design of Experiments (DOE) and Taguchi Methods.

Product design responsible suppliers must use reliability methods during the product design, verification and validation phases of the APQP process in order to assure the robustness and durability of their product design for the intended application or as specified by the Buyer.

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5.6 Non-Conforming Components / Corrective Actions

For any case of non-conforming components the Supplier shall have a complaint handling flow process in place that allows the Supplier to respond within the time frame defined in the table below. The Supplier shall have a procedure and appropriate process in place to take all necessary corrective and preventive actions for all rejects or non-conforming components received by the Buyer. The Supplier shall use the systematic 8D analysis method with risk assessment. For each Supplier incident an 8D-Report shall be submitted to the Buyer.

The defined containment action shall stay in place until the effectiveness of the implemented corrective action has been verified successfully.

The respective reaction time period as defined in the table below ("Time table") shall begin with the initial notification to the Supplier by the Buyer that a problem exists.

By the Supplier's report the Buyer shall be enabled to determine the instance level as defined below for the incident. The instance level shall be set to "priority" in case of potential Buyer or Customer line stoppage, reliability risk, components in safety applications and Customer returns. Upon request the Supplier shall provide top management support in the 8D team as part of an adequate escalation process.


Time Table:

8D disciplines	standard	priority
D2: Problem description D3: Implement containment actions	released within 24h	released within 24h
D4: Define root cause(s)	released within 3 days	released within 24h
D5: Choose permanent corrective action D6: Implementation of permanent corrective action	released within 14 days	released within 7days
D7: Action(s) to prevent recurrence D8: Prevention of repetition	per agreed plan	per agreed plan

The Supplier shall provide the Buyer with a report immediately upon receipt of the defective component.

Irrespective of the instance level, the Supplier shall take all necessary short-term actions (e.g. screening) at its plants, at the sub-supplier's plants, – upon request by the Buyer - also at the Buyer's plants, and if required at the Customer's plants. These actions shall guarantee continuous delivery of defect free components.

Any arrangements with third party for the purpose of containment and maintaining full production capacity of Buyer's production lines shall be the responsibility of the Supplier. The Buyer in general shall not be obliged to provide any personnel or space for the required Supplier's containment actions.

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The Supplier shall keep the Buyer informed on a regular basis about the progress in the failure analysis process. In case the analysis of the Supplier concludes that a claimed non-conformity is not in the Supplier's responsibility or no failure found (NFF), the affected components shall be sent back to the respective Buyer contact person immediately, along with all analysis results. Otherwise the components will be considered as being at Supplier's fault after two (2) weeks from the initial notification date.

5.7 Changes to Approved Products and Processes (PCN/PTN)

Suppliers and sub-suppliers are not to make any unauthorized changes to a product (e.g. material, component, sub-assembly) or the process used to produce a product that has been previously PPAP approved by the Buyer. This includes changes to Process Control Plans.

The Product Change Notification (PCN) process shall apply to all production and prototype components. The rules and terms for Product / Process Changes of purchased components are set out in the "Quality Process Requirement for PCN" (QPR A2C00052905).


The Supplier shall submit the notifications following the preconditions:

- PCN's - 6 months prior to the planned product/process change, with samples availability and qualification report done.
- All affected part numbers must be identified within the PCN.
- Only 1 PCN within 2 years for affected components might be accepted by the Buyer.

- PTN for customized components: A lifetime supply (series and aftermarket requirements) must be guaranteed. Consequently no product discontinuation will be accepted.
- PTN for standard components: A lifetime supply should be guaranteed for the series production.

In case of unavoidable product discontinuation:

- The Supplier must send a Product Termination Notification (PTN) to the Buyer, in writing minimum 12 months prior to such discontinuation.
- All affected part numbers of the Buyer shall be identified with the PTN.
- The Supplier shall specify alternative components / solutions for replacement.
- If the PTN leads to a last time forecast/buy, the Buyer provides the Supplier with forecasts information.
- The products must be stored at the Supplier's premises and remain ownership of the Supplier until they are shipped according to the delivery schedules and / or purchase order of the Buyer.
- The Supplier is responsible for the correct storage, handling and quality of the products. Furthermore quantities terminated for the Buyer are exclusively to be delivered to the Buyer's location, which forecasted the products.

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PCN / PTN for electronic and electro mechanic components must be submitted to the global e-mail address


07rbfmrbgpcnptn@continental-corporation.com

PCN for mechanical products must be submitted to all locations of the Buyer the products are delivered to.

Lack of written response from the Buyer does not constitute acceptance of the change/termination.

The Buyer's quality responsible for supplied components manages the supplier and component approval whereas the location specific manufacturing and application approval is performed by the Buyer's locations. The Supplier has to receive acceptance and release notifications from all Buyer's locations, affected by the PCN. Deliveries of changed components and / or termination of delivery must not start prior to a written approval of all respective Buyer's locations.

The Supplier is obligated to identify the first shipment including the change with proper identification, mutually agreed upon between the Supplier and the receiving Buyer's location.

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5.8 Identification and Traceability

The aim of traceability shall be to minimize the impact and consequences of quality concerns. The Suppliers shall maintain an appropriate traceability system.

Suppliers are required to utilize and ship material on a “first in” – “first out” basis.

Forward Trace

Forward Trace shall be the provision of any information required to identify suspect components already delivered in order to minimize the quantity of non-conforming components - as early as possible.

Requirements for electronic components

- For packaged parts a maximum of 2 trace codes per packing unit (reel, tray, tube, etc) shall be required.
- For components without sufficient marking possibilities on the product itself (bare die, small package size, etc.) the traceability data shall be placed on the packaging. One lot per packing unit shall be required with one exception: In order to facilitate deliveries of full packing units, it shall be allowed to use the subsequent lot to complete the packing units (e.g. reel).

Backward Trace

Backward Trace shall be the provision of any information required to identify suspect source material and origin at the Supplier.

A traceability system shall ensure that its final components and subcomponents utilized in the product can be traced back to the manufacturing date, shift, equipment, tool number and the respective inspection/conformity results. Based on internal risk assessment lot sizes shall be established minimizing the internal as well as the external risk.


Marking and identification

Labelling must be done per Buyer's receiving site requirements. At a minimum, the Supplier Identification, Part Number, Engineering Level, Quantity and Batch/Lot Number must be clearly legible in both human readable and bar coded form on the part-packaging label. The 2-D Code (PDF417) for package label description shall be used if not otherwise agreed with the receiving location. All bar codes must be scanned by the supplier to verify readability.

5.9 Incoming Inspection

The Buyer requests “Zero defect” deliveries.

Upon delivery only the type and quantity of components shall be inspected by the Buyer as to its accordance with the delivery documents; furthermore the shipment shall be inspected for externally visible damages caused by transportation. The Buyer shall not be obliged to carry out a more detailed incoming inspection. Whenever the Buyer notices a defect, the Supplier shall be informed accordingly in writing. In case the Buyer complies with the afore-stated conditions the Supplier hereby waives any right it may have to reject delayed notification of deficiency.

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6 Supporting Documents and Standards

The following publications are available from the Automotive Industry Action Group (AIAG).


These documents contain information that is mandatory for suppliers to Continental Automotive Systems:

- Quality System Requirements ISO/TS 16949
- Quality System Assessment (QSA)
- Production Part Approval Process (PPAP)
- Advanced Product Quality Planning and Control Plan (APQP)
- Potential Failure Modes and Effects Analysis (FMEA)
- Measurement Systems Analysis (MSA)
- Fundamental Statistical Process Control (SPC)
- Tooling & Equipment Assessment (QSA-TE)
- AIAG CQI-9 : Heat Treat System Assessment
- AIAG CQT-11 : Plating System Assessment
- AIAG CQT-12 : Coating System Assessment
- AIAG TC-5 TREAD Act Reporting Information Kit

These documents ¹ can be purchased from:

<p>Canada/United States Automotive Industry Action Group 26200 Lahser Road, Suite 200 Southfield, MI 48034 United States of America Phone: (248) 358-3570/3003; Fax: (248) 358-3253 Web: http://www.aiag.org</p>	<p>Brazil IQA-Instituto de Qualidade Automotiva Alameda dos Aicas, 95. Indianapolis, Sao Paulo, Brazil CEP 04086-000. Phone/Fax: 55-11-5051-8971 Email: webmaster@iqa.org.br</p>
<p>Europe Carwin Continuous Ltd. Unit 1 Trade Link, Western Avenue, West Thurrock, Grays Essex RM20 3FJ United Kingdom Phone: 44 (0) 1708 861 333 Fax: 44 (0) 1708 867 941 Web: http://www.carwin.co.uk/qs</p>	<p>Australia FAPM 6th Floor, Perpetual Trustees Building 10 Rudd St. Canberra City GPO Box 295 Canberra, ACT 2601 Phone: 61-6-247-4177 Fax: 61-6-257-4651</p>
<p>Asia Local source for Japanese translation For QS 9000 and QSA listed below. Use America's source for English copies Of the other required documents. Japanese Industrial Standard Japanese Standards Association 1-24, Akasaka 4, Minato-ku, Tokyo 107-8440, Japan Phone: 81 3 3583 8002; Fax: 81 3 3583 0462</p>	<p>Mexico Instituto Mexicano de Normalizacion Y Certificacion A.C. Manuel Maria Contreras N° 133 1er. Piso, Col. Cuauhtemoc. C.P. 06470 Mexico D.F. Phone: 52-5-546-4546 Fax: 52-5-566-4750</p>

¹ This information is not subject of the revision control

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7 Reference to ISO/TS 16949


Chapter	General Quality Agreement	ISO/TS 16949:2002
1	Introduction	
1.1	Scope	--
1.2	Purpose	--
1.3	Background / Area of Application	--
1.4	Precedence	--
2	General System Requirements	
2.1	Management System Requirements	4.1
2.2	Sub-Supplier Control	7.4.1.2; 7.3.6.3; 7.4.1.2
2.3	Audits	8.2.2
2.4	Supplier Performance Indicators and Rating	7.4.3.2
2.5	Escalation Process	--
2.6	Record Retention / Archiving Period	4.2.4.1
2.7	Declarable Substances	--
2.8	Contingency plans	6.3.2
3	Advanced Quality Planning	
3.1	Feasibility Commitment, Supplier Component Review (SCR)	7.2.2.2
3.2	Advanced Product Quality Planning (APQP)	7.3.1; 7.1
3.3	Engineering Prototype Sample Submissions	7.3.6.2
3.4	FMEA	7.3.1.1
3.5	Special Characteristics	7.2.1.1; 7.3.2.3; 7.3.3.1; 7.5.1.1
3.6	Qualification	
3.7	Manufacturing Process Review	7.3.2.2.; 8.1.2; 8.2.3.1; 8.2.4
3.8	Production Part Approval Process (PPAP)	7.3.6.3
3.9	Product and Process Release Information	7.5.2; 8.2.4
4	Ramp up Process	
4.1	Pre-Production and Sample Part Requirements	Annex A1
4.2	Safe Launch Concept	--
5	Serial Production	
5.1	Deviation Approval for Product or Process Deviations	7.1.4
5.2	Process Capability and Control	8.2.3.1
5.3	Annual Re-Qualification	8.2.4.1
5.4	Certificates of Conformance	8.1
5.5	Problem Solving Methods	8.2.3
5.6	Non Conforming Components / Corrective Actions	8.3
5.7	Changes to Approved Products and Processes (PCN / PTN)	7.1.4
5.8	Identification and traceability	7.5.3
5.9	Incoming Inspection	7.4.3.1

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8 Abbreviations


8D	Eight Disciplines – Problem Solving Process/Report
AA	Application Approval
AIAG	Automotive Industry Action Group
APQP	Advanced Product Quality Planning and Control Plan
CA	Component Approval
CQR	Category Quality Requirements
DMAIC	Define, Measure, Analyze, Improve, Control (SixSigma)
CSL1/2	Controlled Shipment Level 1/2)
DOE	Design of Experiments
FMEA	Potential Failure Mode and Effects Analysis
GADSL	Global Automotive Declarable Substances List
GASG	Global Automotive Stakeholders Group
GQA	General Quality Agreement
IMDS	Automotive Industry Material Data System
ISO	International Standards Organization
ISO/TS	ISO/Technical Specification
MA	Manufacturing Approval
MSA	Measurement Systems Analysis
NFF	No Failure Found
PCN	Product or Process Change Notification
PDF417	2D-Code for package label description based on ISO/IEC 15438
PTN	Product Termination Notification
PPAP	Production Part Approval Process (QS-9000)
PPF	Produktionsprozess und Produktfreigabe (VDA Volume 2)
PPM	Parts Per Million
PSW	Part Submission Warrant
QPR	Quality Process Requirements
SA	Supplier Approval
SCR	Supplier Component Review
SLC	Safe Launch Concept
SPC	Statistical Process Control
RPN	Risk Priority Number

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9 Record of Changes

Version	Date	Author	Reason of changes	Paragraph and chapter modified
A	01.06.2008	Mr. Will Mr. Laber	Replacement of: Continental Automotive Systems Supplier Requirements (SR1) and VDO Automotive AG General Quality Agreement (GQA)	all

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Annex 1:


Doc.-Number	Incorporated Requirements
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Category Quality Requirements (CQR) for Electronic Components

A2C00052909	Semiconductor components
A2C00052910	Passive Components
A2C00052911	Displays
A2C00052912	Modules
A2C00052913	Relays
A2C00052914	Drives
A2C00052915	Batteries and Accumulators
A2C00052916	Bare Die Components

Category Quality Requirements (CQR) for Mechanical Components


40289197	PCB
40289198	Heat Sink
10098894	Cable Ass. & Wiring Harness
10098895	Connectors
10102768	Overmoulded Parts
10098901	Commutators
10098893	Functional Plastics
40289200	Rubber
10098896	Casting
40289203	Brake Pads
10098899	Bearings
10098897	Stamping
10099898	Magnets
10098900	Sintered Metals
10098902	Fasteners/Screws
10098889	Turned Parts
10098890	Decorative Plastics
10098907	General Requirements

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Quality Process Requirements (QPR)

A2C00052905	Product/Process Change Notification (PCN) of Purchased Components
A2C00052907	Qualification Requirements for Continental Automotive Manufacturing Processes
A2C00052908	Electro Magnetic Compatibility (EMC)

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