

TITLE: QUALITY REQUIREMENTS FOR SUPPLIERS TO CONTINENTAL Page 1 of 5

ECN No.	Rev.	Date	Originator	Details of change
71909	4-6-99	AA	M Fulcher	New Release
NB103527	03-08-01	AB	M. FULCHER	Pages 2, 3, 4, 6
DP120253	11-16-06	AC	R.Jones	Replace Motorola AIEG to Continental, change QS-9000 to ISO/TS16949. Delete Motorola Reference.

Note: All released revision level changes to this document will also require the Originator to update the Revision level of this document in CONTINENTAL specification number 87M42999T85 - "Index of Manufacturer's Requirements and Reference Specifications."

**I. PURPOSE**

The purpose of this document is to define quality systems requirements and supplier development methods that a manufacturer must meet to supply components to CONTINENTAL.

CONTINENTAL's supplier quality goals are to develop best-in-class performance from suppliers and subsuppliers to CONTINENTAL, attain continuous improvement in quality performance of purchased material and provide Total Customer Satisfaction.

**II. SCOPE**

This document applies to all suppliers who provide components or material used in the production of CONTINENTAL products.

**III. REFERENCED DOCUMENTS**

Automotive Industry Action Group (AIAG) ISO/TS16949 reference series

87M42999T85, 'Index of Manufacturer's Requirements and Reference Specifications.'

87M43300S80, 'General Requirements for Suppliers of Purchased Components for CONTINENTAL.'

87M43113U01, 'Supplier Component Change.'

87M43300S51, 'Production Part Approval Process.'

12M41378U01, 'Supplier Report Card Procedure.'

87M44162U01, 'Process Average Testing and Statistical Yield Analysis.'

87M44799F66 'Component Reliability Requirements'

**IV. ADHERENCE TO CONTINENTAL SPECIFICATIONS.**

A. The CONTINENTAL purchase order (P/O) and component or material specification are documents that the supplier must exactly meet in order to provide a quality component or material to CONTINENTAL.

Terms and conditions explicitly listed on the front of the P/O or as general items on the back of the P/O are requirements.

In the event the supplier needs to make a PERMANENT change to the component that the supplier is shipping to CONTINENTAL, the supplier shall initiate a Supplier Component Change (SCC) per 87M43113U01. CONTINENTAL may revise its specification if the form, fit or function of the component is changing. CONTINENTAL may require that suppliers submit PPAP per 87M43300S51.

In the event the supplier needs to make a TEMPORARY change to the form, fit or function of the component that the supplier is shipping to CONTINENTAL, or if the supplier wishes to ship material that does not conform to the CONTINENTAL specification and requirements or the purchase order, the supplier shall notify CONTINENTAL plant purchasing or SQA in order to initiate a Request for Material Deviation (RFD) form.

B. Specifications listed in 87M42999T85, 'Index of Manufacturer's Requirements and Reference Specifications' are a summary of CONTINENTAL's general requirements. These requirements apply to all components and materials even if these specifications are not called out in the P/O or specification.

In the event the supplier cannot meet all applicable specifications listed in the T85, the supplier shall notify CONTINENTAL. All exceptions to specifications in the T85 index must be negotiated and documented with CONTINENTAL before shipment of affected material.

C. Special, critical or safety related parameters in specifications will be identified as such on the component or material specification per 87M43300S51, Production Part Approval Process. Suppliers are required to test these parameters per AIAG PPAP requirements, or per CONTINENTAL instruction. Upon request from CONTINENTAL, in the form of a Special Characteristics Agreement Document (SCAD), suppliers are required to submit data for these parameters with each shipment, or as deemed appropriate by CONTINENTAL plant purchasing or SQA. CONTINENTAL reserves the right to inspect such data at the supplier's site.

D. Suppliers may be held responsible for corrective actions and costs when their products do not conform to the CONTINENTAL purchase order, component specification or specifications listed in 87M42999T85.

#### V. QUALITY SYSTEM REQUIREMENTS

A. CONTINENTAL requires that its suppliers establish and maintain a quality system in compliance to ISO/TS16949 Quality Systems Standard.

B. Every supplier to CONTINENTAL should achieve and maintain third party certification of its quality system to the ISO/TS16949 standard.

Suppliers may be required to submit periodic updates of plans for and ongoing status of quality system assessments. Plans should include detailed milestones, i.e. benchmarks, self-quality system assessments (QSA's), ISO certification, QS assessments, 2nd party assessments, etc.

C. Suppliers must keep CONTINENTAL updated on its quality system in place, and ISO-9000 or ISO/TS16949 certification status. The updates shall be copies of the certificate, including auditor, date and scope of certification.

D. A supplier's own quality system assessment cannot supplant an objective 3rd party ISO/TS16949 audit.

Assessments based on Q1, Pentastar, GM Awards for Excellence, QSR, etc. may be submitted as additional evidence of system compliance to elements of ISO/TS16949.

Because ISO/TS16949 is based on fundamentals of ISO-9000, assessments based on ISO-9000, ISO-9001 or ISO-9002 may be submitted as evidence of system compliance to some elements of ISO/TS16949, but should not be considered as meeting all of the quality systems requirements of suppliers as stated in this procedure.

Assessments based on ANSI Z1.8 (ASQ standard C-1 'General Requirements for a Quality Program') are not accepted as objective evidence of a quality system to the ISO/TS16949 standard.

CONTINENTAL reserves the right to inspect records/evidence of a quality system at the supplier's design and manufacturing sites. This may be included in the scope of a Quality System Assessment (QSA), self assessment, or Process Sign-Off (PSO) site audit.

CONTINENTAL may require suppliers to submit a self-assessed Quality System Assessment (QSA) based on the AIAG standard.

E. Suppliers should use the AIAG methods for Statistical Process Control (SPC), Measurement System Analysis (MSA), Production Part Approval Process (PPAP), etc. in developing and deploying their own systems for design and manufacturing control.

F. Suppliers are required to develop their sub-suppliers' capabilities and quality systems to support the supplier's compliance to 's requirements and specifications.

VI. OTHER ELEMENTS OF ISO/TS16949.

A. Supplier should have a management review process or Quality Operating System (QOS) to drive quality improvement.

B. Suppliers are required to execute specific elements of the AIAG ISO/TS16949 quality system upon request of CONTINENTAL, i.e. FMEA, control plan, MSA, SPC, continuous improvement, etc.

C. Suppliers should control processes with statistical methods, such as Ppk, Cpk, process capability charts, etc.; prototype, preproduction and production control plans; lot acceptance test data; etc. Control plans should be based on design reviews, design FMEA's, process capability studies, and customer specifications.

E. Advanced Product Quality Planning (APQP) should be reviewed with CONTINENTAL in order to assure meeting design and product sampling deliverables periodically throughout the design process.

F. A Process Signoff (PSO) may be conducted at the supplier's site by a CONTINENTAL Product Quality Team to ensure that all control plans, process instructions and gage/test equipment are in place for production.

G. CONTINENTAL reserves the right to inspect purchased material at the supplier's site prior to shipment to CONTINENTAL.

VII. OTHER SUPPLIER DEVELOPMENT METHODS

- A. Design data and records shall be maintained by the supplier during the product development and validation process.
- B. Suppliers must embrace continuous improvement as a business and quality systems methodology. This methodology should include:
1. Campaign to correct and eliminate manufacturing defects.
  2. Design of Experiments for optimization prior to starting production following significant process changes.
  3. Develop '0-Defect' plans where all known or predicted failure modes are evaluated (See AIAG GM GP-12).
  4. Use structured problem resolution and corrective action methods such as the '8-Discipline' (8-D) methodology for problem solution and corrective action.

- C. Process Average Testing (PAT), Statistical Yield Analysis (SYA) and Junction Verification Testing (JVT) are described in 87M44162U01, 'Process Average Testing and Statistical Yield Analysis.'

Meeting the intent of this document, either by performing one or all of these methods or some other similar method, is **required**.

- D. CONTINENTAL's supplier rating procedure is the official feedback on supplier performance. See specification 12M41378U01 for detail on what metrics are tracked and reported by CONTINENTAL.

1. All failures and lot rejections that are attributable to a supplier's design or process are counted.
2. Upon notification of a product problem, suppliers are required to develop containment actions within 48 hours, and must identify root cause and corrective action within 10 working days of the notification.
3. Suppliers are required to meet CONTINENTAL's On-time delivery performance window for 100% of the shipments sent to CONTINENTAL.
4. A supplier's intent and ability to comply to section V of this specification are assessed in the supplier rating procedure.

- E. Suppliers shall identify, maintain and use scheduled and predictive methods to monitor tool performance. These methods should ensure minimal downtime, good correlation to statistical data and minimal product variation.

CONTINENTAL reserves the right to inspect records/evidence of tool maintenance at the supplier's manufacturing sites. This may be included in the scope of a QSA or PSO audit .