

# Chrysler

## Customer-Specific Requirements

### For Use With ISO/TS 16949 Second Edition

September 2008

## 1. Scope

**ISO/TS 16949** and this document define fundamental quality system requirements for organizations supplying production and/or service parts to Chrysler. These requirements shall be included in any scope of registration/certification to **ISO/TS 16949** issued by an IATF-recognized and IATF-contracted certification body in order for the **ISO/TS 16949** certificate to be recognized as satisfying Chrysler organization criteria for third party registration/certification. (See **ISO/TS 16949** Foreword, Remarks for certification).

ISO/TS 16949 is also applicable to assemblers of production parts or materials and to Vehicle Assembly Plants.

Service parts and materials applicability does not include aftermarket (See Definitions 3.2) parts or organizations.

All **ISO/TS 16949** requirements and the requirements of this document shall be documented in the organization's quality system.

The English language version of **ISO/TS 16949** and this document shall be the official version for purposes of third party registration. Translations of ISO/TS 16949 published by SMMT (British), VDA (German), AFNOR (French), ANFIA (Italian), JAMA (Japanese), and STTG (Spanish) are acceptable for purposes of third party registration.

Sanctioned translations of this document shall:

- be for reference only,
- reference the English version as the official language, and
- include Chrysler in the copyright statement.

Any other translations are not authorized.

Copies of this document are available from AIAG.

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## 2. References

- 2.1 Chrysler, Ford, General Motors **Measurement System Analysis (MSA), Third Edition**, March, 2002; Second Printing, May 2003
- 2.2 Chrysler, Ford, General Motors **Production Part Approval Process (PPAP), Fourth Edition**, March, 2006. (Does not apply to Vehicle Assembly Plants)
- 2.3 Chrysler, Ford, General Motors **Advanced Product Quality Planning and Control Plan (APQP): Second Edition** July, 2008. (Required transition by November 1, 2008. Either the 1<sup>st</sup> or 2<sup>nd</sup> Edition may be used until then)  
*[Does not apply to organizations administered by the Chrysler North East Asia (NEA) office. See the SQAP (Supplier Quality Assurance Process) manual]*
- 2.4 Chrysler, Ford, General Motors **Statistical Process Control (SPC)** reference manual, Second Edition, July 2005.
- 2.5 Chrysler, Ford, General Motors **Potential Failure Mode and Effects Analysis (FMEA) Fourth Edition**, June, 2008. (Required transition by November 1, 2008. Either the 3<sup>rd</sup> or 4<sup>th</sup> Edition may be used until then)
- 2.6 **ISO/IEC 17021:2006 “Conformity assessment — Requirements for bodies providing audit and certification of management systems”**
- 2.7 **IAF GD 8:2007 “Informative Guidance on the Transition to ISO/IEC 17021 Accreditation from ISO/IEC Guide 62 and ISO/IEC Guide 66”**
- 2.8 Chrysler Blue Dot Manuals
- PSO (Process Sign-Off) *[Does not apply to organizations administered by the Chrysler North East Asia (NEA) office. See the SQAP (Supplier Quality Assurance Process) manual]*  
Product Assurance Testing  
STAT (Statistical Tools and Analytical Techniques)
- Copies of **APQP, MSA, PPAP, SPC, FMEA** and other related manuals are available from AIAG at 01-248-358-3003 and Carwin at 44-1708-861333.
- 2.9 Other Chrysler Manuals
- SQAP (Supplier Quality Assurance Process) Edition 3, January 2008  
*[Applies only to organizations administered by the Chrysler North East Asia (NEA) office.]*
- Copies of the **SQAP** manual are available from Daniel Design Advertising Co., Ltd. at 86-10-62256365

Additional references are listed as requirements in section 4.

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### 3. Definitions

Where inconsistent terminology exists between **ISO/TS 16949** and this document, this document shall take precedence. Otherwise the definitions from **ISO/TS 16949** apply to this document.

#### 3.1 Active Part

An active part is one currently being supplied to Chrysler for original equipment or service applications. The part remains active until tooling scrap authorization is given by the appropriate Chrysler activity. For parts with no Chrysler owned tooling or situations where multiple parts are made from the same tool, written confirmation from the appropriate Chrysler activity is required to deactivate a part.

#### 3.2 Aftermarket Parts

Replacement parts not procured or released by Chrysler for service part applications, which may or may not be produced to original equipment specifications.

#### 3.3 Consulting

For the purpose of ISO/TS 16949 and supporting documents, consulting is the provision of training, documentation development, or assistance with implementation of quality systems to a specific customer. If these activities are open to the public, advertised, and not customer specific, they are considered training rather than consulting. Other products, processes or services may be offered directly or indirectly, provided they do not compromise confidentiality or the objectivity or impartiality of its certification process or decisions.

#### 3.4 Customer

For the purposes of **ISO/TS 16949** references to "customer" in this document shall be interpreted as Chrysler for organizations pursuing third party registration to **ISO/TS 16949**.

#### 3.5 Initial Process Study

Initial Process Studies are short-term studies conducted to obtain early information on the performance of new or revised processes relative to internal or customer requirements. In many cases, initial process studies should be conducted at several points in the evolution of new processes (e.g. at the equipment or tooling supplier's plant, after installation at the organization's plant). These studies should be based on variables data evaluated using control charts. See **Production Part Approval Process** manual.

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#### 3.6 PPM (Parts Per Million quality metrics)

PPM is a method of stating the performance of a process in terms of actual nonconforming material. PPM data can be used to prioritize corrective actions. Definition of nonconforming units varies with customer (e.g. all sorted, only those found to be wrong, all in box).

#### 3.7 Site

Includes Vehicle Assembly Plants

## 4. Requirements

### 4.1 ISO/TS 16949 Related Requirements

#### 4.1.1 *Records Retention (ISO/TS 16949 cl. 4.2.4.1)*

Production part approvals, tooling records, purchase orders and amendments shall be maintained for the length of time that the part (or family of parts) is active (see 3.1 Definitions) for production and service requirements plus one calendar year unless otherwise specified by Chrysler.

**NOTE:** All Chrysler purchase orders/amendments are included in this requirement.

Organization purchase orders/amendments for Chrysler owned tooling are included in this requirement.

Quality performance records (e.g. control charts, inspection and test results) shall be retained for one calendar year after the year in which they were created.

Records of internal quality system audits and management review shall be retained for three years.

Retention periods longer than those specified above may be specified by an organization in their procedures. The organization shall eventually dispose of records.

These requirements do not supersede any regulatory requirements. All specified retention periods shall be considered "minimums".

#### 4.1.2 *Design Changes (ISO/TS 16949 cl. 7.3.7)*

All design changes, including those proposed by suppliers, shall have written Chrysler approval, or waiver of such approval, prior to production implementation. See **ISO/TS 16949** cl. 7.3.7 and the **Production Part Approval Process** manual.

For proprietary designs, impact on form, fit, function, performance, and/or durability shall be determined with Chrysler so that all effects can be properly evaluated.

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#### **4.1.3 Production Part Approval Process (ISO/TS 16949 cl. 7.3.6.3)**

The organization shall comply with the Chrysler, Ford, & GM **Production Part Approval Process (PPAP)** manual to comply with **ISO/TS 16949**, cl. 7.3.6.3. (Does not apply to Vehicle Assembly Plants who use the Pilot Vehicle Process) The organization shall require PPAP from its suppliers.

#### **4.1.4 Certification Body/Registrar Notification**

deleted

#### **4.1.5 Supplier Quality Management System Development (ISO/TS 16949 cl. 7.4.1.2)**

Assessment by an OEM or an OEM approved second party will be recognized as meeting the supplier compliance requirements to cl. 7.4.1.2. The organization must be certified by an accredited certification body to the current version of the ISO/TS 16949.

#### **Supplier Development of Small Suppliers**

When a supplier (subcontractor) to an organization is so small as to not have adequate resources to develop a system according to ISO/TS 16949:2002 or ISO 9001:2000, the organization shall have decision criteria for designating "small suppliers". Such decision criteria shall be in writing, applied consistently in the application of this provision, and verified by the 3rd party auditor. Small suppliers shall be developed in accordance with 7.4.1.2 of ISO/TS 16949:2002, but can use 2nd party audits (as described below in this section).

NOTE: "Small" may also refer to relative volume supplied to automotive.

#### **Second Party Chrysler Approval Guidelines**

1. The 2nd Party must be ISO/TS 16949 registered.
2. The 2nd Party cannot be on TS Probation.
3. The 2nd Party must utilize a qualified Lead Auditor, or qualified Internal Auditor with evidence of successful completion of training, such as AIAG "Internal Auditing for ISO/TS 16949:2002".
4. The 2nd Party must audit annually each qualifying supplier for whom it has performed the 2nd Party service, and maintain records of these audits.
5. The duration of these audits must conform to the full application of the Audit Day Requirements table of the "Automotive Certification Scheme for ISO/TS 16949:2002".
6. Any of the ISO/TS 16949:2002 accredited Registrars (Certification Bodies) may be utilized as an OEM-approved 2nd Party.

#### **4.2 Chrysler - Specific Requirements**

##### **4.2.1 Third-Party Registration Requirements**

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All Production and Service Part organizations to Chrysler shall be Third-Party Registered to ISO/TS 16949 Second Edition.

#### **4.2.2 Product Creation Process**

*[Does not apply to organizations administered by the Chrysler North East Asia (NEA) office. See the SQAP manual]*

Chrysler has a documented method of **Advance Quality Planning (AQP)**. This method combined with the team's dedication and knowledge is the tool used throughout the product creation process to consistently develop and produce products that will satisfy the customer. All team members including organizations shall participate in producing products using Chrysler's AQP method. On occasions when Chrysler's AQP method is not required, products shall be developed according to the **Advanced Product Quality Planning (APQP) Process**.

#### **4.2.3 Special Characteristics Not Identified with Symbols(ISO/TS 16949 cl. 3.1.12, 7.2.1.1, 7.3.1.1, 7.3.2.3, 7.3.3.1)**

Those product or process characteristics chosen by Chrysler or the organization that affect fit, form, function or appearance which are not identified with a symbol. Suppliers (if applicable) should be knowledgeable of the following standards: PF-Homologation <H>, PS-10125<T>, and AS-10119<A>.

#### **4.2.4 The Shield <S>; also <E>**

The Shield identifies Special Characteristics that require special due diligence since the consequence of a likely assembly or manufacturing variation may cause a non-conformance to safety and regulatory product requirements. Suppliers (if applicable) shall be knowledgeable of the following standards: PF-SAFETY<S>, PF-Emissions<E>. <S> designates product safety/regulatory requirements. <E> designates government regulated vehicle emissions requirements.

#### **4.2.5 The Diamond <D>**

The Diamond identifies Characteristics of a component, material, assembly or vehicle assembly operation that are designated by Chrysler as key to the function and customer acceptance of the finished product. Diamonds also highlight important characteristics on fixtures and gauging procedures during design verification, product validation, or revalidation. The Symbol <D> identifies key but non-Safety/non-regulatory product characteristics or processes that may be susceptible to manufacturing variation and require additional controls to assure conformance to specifications and customer satisfaction. A Diamond <D> requires that a process control plan be developed for that characteristic. (The use of a Diamond as specified in PS-7300 does not automatically require the use of SPC as other methods of control such as error/mistake-proofing may be more able to prevent or detect non-conformances and processes that demonstrate a high degree of capability ( $C_{pk} > 3.0$ , for example) for an extended period of time may require a less frequent method of control. The exact method to be used must be determined in advance and agreed to by the Chrysler Commodity Quality Specialist and Product Engineer.) Presence of a Diamond does not affect the significance to a Shield(s) on the same document. For further detail, organizations shall refer to PS-7300.

#### **4.2.6 Annual Layout**

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To ensure continuing conformance to all Chrysler requirements, a complete annual layout inspection, including all sub-components, shall be required for all parts. (Unless waived in writing by Chrysler)

#### **4.2.7 Design Verification (DV) and Production Validation (PV)**

Design Verification are tests, inspections, and procedures that must be accomplished before production starts to verify design intent. Production Validation are tests validating the production tooling, methods, and processes used to manufacture a component. Refer to PF-8500 and to the Chrysler "Product Assurance Testing" manual. Design Verification and Production Validation must be satisfactorily completed before PSO can be completed.

#### **4.2.8 Continuing Conformance**

Continuing Conformance Inspection/Tests shall be performed during the model year to assure production items or products continue to meet specified requirements and tolerances. Refer to PF-8500 and to the Chrysler "Product Assurance Testing" manual. (Unless waived in writing by Chrysler)

#### **4.2.9 Internal Quality Audits**

The organization shall conduct an internal quality audit at least once per year. The organization shall also perform an annual self-assessment to ensure their Quality Management System is in compliance with the Objectives, Example Metrics and Support Mechanisms defined in Chrysler's document "Elements Of Manufacturing Basics". This self-assessment is mandatory, beginning with the organization's first internal audit occurring on or after 7 January 2008. The document "Elements Of Manufacturing Basics" is available through the Chrysler Global Supplier Portal via the "Quality Management Systems Information" page.

The self-assessment may be performed as a part of the internal quality audit or conducted separately. The self-assessment requirement also applies to the organization's supply base (all suppliers).

The organization (and all suppliers) shall maintain records of this self-assessment including any corrective actions required for compliance.

A special self-assessment form is not required.

#### **4.2.9.1 Layered Process Audits**

Organizations supplying production parts or components to Chrysler shall conduct Layered Process Control Audits on all manufacturing and assembly lines that produce production parts or components for Chrysler. These shall include all error-proofing operations.

Organizations shall provide evidence of compliance to the following requirements:

- Audit process shall involve multiple levels of management, from line supervisor up to top management.
- Top management at plant shall conduct process control audits at least once per week. Delegation of this activity will not be accepted with the exception of extenuating circumstances.
- The organization shall have a documented audit structure with auditor level and frequency of inspection.

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- Process control audits shall be conducted at least once per shift for build techniques and craftsmanship related processes.
- Error Proofing Audits shall be conducted at least once per shift, preferably at the start of shift. Compliance charts shall be completed once per quarter and maintained for the life of the program. The following metrics should be included:
  - audit completion by all auditing layers
  - By-Item percentage conformance by area
- Reaction plans shall be in place to immediately resolve all non-conformances.
- The organization shall show evidence of immediate corrective action, containment (as required), and root cause analysis (as required).
- Communication Procedure is required to address reoccurring non-conformances. Specific areas of focus shall include the following:
  - Resolution of non-conformances
  - Escalation of issue for management review
  - Lessons learned

#### **4.2.9.2 Special Process Assessments**

##### **4.2.9.2.1 Heat Treating Processes**

Clause 8.2.2.2 of ISO/TS 16949:2002 requires that the organization shall audit each manufacturing process to determine its effectiveness. Applicability and effectiveness of heat treating processes shall be determined utilizing *CQI-9 Special Process: Heat Treat System Assessment* published by the AIAG. The effectiveness evaluation shall include the organization's self-assessment, actions taken, and that records are maintained.

This requirement shall also apply to heat treat suppliers to the organization pursuant to Clause 7.4.1.2 (supplier development clause). For Chrysler, all suppliers heat treating components shall comply with CQI-9. Required implementation of *CQI-9 Special Process: Heat Treat System Assessment* was 1 August 2006.

*CQI-9 2<sup>nd</sup> Edition Special Process: Heat Treat System Assessment* was published by AIAG in August 2007. The required implementation date for *CQI-9 2<sup>nd</sup> Edition Special Process: Heat Treat System Assessment* is 7 January 2008.

In the interim, all suppliers shall continue to use either *CQI-9 Special Process: Heat Treat System Assessment* or *CQI-9 2<sup>nd</sup> Edition Special Process: Heat Treat System Assessment*.

Note 1: 2<sup>nd</sup> Party assessment by a competent auditor and meeting the above requirements will satisfy the self-assessment requirement.

Note 2: Implementation effectiveness should be based on evidence that the organization has a process in place that includes elements such as auditors identified, schedule for self-assessment in place including schedule adherence, supplier development process identified for applicable suppliers, monitoring of progress, defined corrective action process and record-keeping.

##### **4.2.9.2.2 Plating Processes**

Clause 8.2.2.2 of ISO/TS 16949:2002 requires that the organization shall audit each manufacturing process to determine its effectiveness. Applicability and effectiveness of plating processes shall be determined utilizing *CQI-11 Special Process: Plating System Assessment* published by the AIAG. The effectiveness evaluation shall include the organization's self-assessment, actions taken, and that records are maintained.

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This requirement shall also apply to plating suppliers to the organization pursuant to Clause 7.4.1.2 (supplier development clause). For Chrysler, all suppliers plating components shall comply with CQI-11. Required implementation of *CQI-11 Special Process: Plating System Assessment* is 7 January 2008.

Note 1: 2<sup>nd</sup> Party assessment by a competent auditor and meeting the above requirements will satisfy the self-assessment requirement.

Note 2: Implementation effectiveness should be based on evidence that the organization has a process in place that includes elements such as auditors identified, schedule for self-assessment in place including schedule adherence, supplier development process identified for applicable suppliers, monitoring of progress, defined corrective action process and record-keeping.

#### **4.2.9.2.3 Coating Processes**

Clause 8.2.2.2 of ISO/TS 16949:2002 requires that the organization shall audit each manufacturing process to determine its effectiveness. Applicability and effectiveness of coating processes shall be determined utilizing *CQI-12 Special Process: Coating System Assessment* published by the AIAG. The effectiveness evaluation shall include the organization's self-assessment, actions taken, and that records are maintained.

This requirement shall also apply to coating suppliers to the organization pursuant to Clause 7.4.1.2 (supplier development clause). For Chrysler, all suppliers coating components shall comply with CQI-12. Required implementation of *CQI-12 Special Process: Coating System Assessment* is 7 January 2008.

Note 1: 2<sup>nd</sup> Party assessment by a competent auditor and meeting the above requirements will satisfy the self-assessment requirement.

Note 2: Implementation effectiveness should be based on evidence that the organization has a process in place that includes elements such as auditors identified, schedule for self-assessment in place including schedule adherence, supplier development process identified for applicable suppliers, monitoring of progress, defined corrective action process and record-keeping.

#### **4.2.10 Corrective Action Plan**

A written corrective action plan following the "Chrysler 8-Step Corrective Action Process" format shall be submitted to the Chrysler Supplier Quality Specialist, as requested, for those issues not already included in the on-line e-CIMS system.

#### **4.2.11 e-CIMS**

An organization shall have at least two individuals at each of their locations that have completed all Chrysler e-CIMS training. These individuals shall regularly access the system. "Service Parts Only" organizations are exempt from this requirement.

#### **4.2.12 Appearance Masters**

Appearance masters for color, gloss and texture shall be approved by Chrysler's Design Office.

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#### **4.2.13 Packaging, Shipping and Labeling**

Organizations shall be familiar and comply with Chrysler Packaging, Shipping and Labeling Instructions.

#### **4.2.14 Process Approval**

*[Does not apply to organizations administered by the Chrysler North East Asia (NEA) office. See the SQAP manual]*

A systematic and sequential review of the organization's process shall be completed through a Process Sign-Off (PSO) performed by the Product Team. The purpose is to verify the organization's process readiness and to assure understanding of complete program requirements, prior to a PPAP submittal.

A Chrysler-led Process Sign-Off shall be performed for parts that have a high or medium initial risk evaluation as identified by the Product Team. Low risk parts shall have an organization-led PSO to establish production readiness. Parts that have been out of production for 12 months or more, shall have an organization led PSO unless otherwise determined by the Product Team. PSO should be completed prior to providing S2 level parts to Chrysler. The PSO shall be completed prior to S2 Start Readiness. PSO shall be completely approved prior to a PPAP submission.

#### **4.2.15 PFMEAs & Control Plans**

PFMEAs and control plans are required for prototype, pre-launch, and production phases. A Chrysler representative's signature is not required on Control Plans, unless specifically requested by the Buyer or Quality Specialist.

#### **4.2.16 "Forever" Requirements-Extended Enterprise™**

The role of the organization in the Extended Enterprise™ network: The organization shall proactively communicate with Chrysler regarding changes that may impact product quality. Specifically, notification to Engineering, Supplier Quality and Purchasing shall be completed verbally with written follow up, via the "Forever Requirements Form" within the Change Notice System (webCN) before any of the following can be implemented at the organization's location or any supplier location:

- Proposed Material Changes
- Proposed Process Changes
- Proposed Manufacturing Location Changes
- Supplier Issues
- Potential Supply or Capacity Issues

#### **4.2.17 Electronic Communication**

The organization shall establish a connection for electronic communication with Chrysler through the Chrysler Global Supplier Portal. The Chrysler Global Supplier Portal can be accessed through Covisint at <https://portal.covisint.com/portal/public/tp/daimlerChrysler/>. Instructions for registering for the portal can also be found at this site. Assistance is available by calling the Covisint help desk at 866.273.5038. Note that the Chrysler Global Supplier Portal has replaced the Extended Enterprise Network.