Automotive Components Holdings, LLC

Customer Specific Requirements (CSR)

For Use With ISO/TS 16949: 2002
(Second Edition Corrected Version 2003 -12-15)

ACH, LLC Customer Specific Requirements (CSR)
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I. Introduction

The content of this document was developed using the Customer Specific Documents of several automotive OEMs and with the consultation of the Joint Task Force for Supplier Quality, Automotive Industry Action Group (AIAG). Contact the Supplier Quality Engineer assigned to your site for questions related to the requirements listed in this document.

II. Customer requirements document structure

This document is structured as a companion document to ISO/TS 16949:2002. The paragraphs to this document mirror the paragraphs to ISO/TS 16949:2002. Where guidance by ACH referenced, a requirement will be stated to clarify the ACH interpretation. The requirements of all documents must be met where applicable.

III. Reference documents

The latest edition of the following AIAG reference manuals shall be used to develop the supplier's Quality system:

Advanced Product Quality Planning and Control Plan, (APQP)
Materials Management Operations Guideline, (MMOG)
Measurement Systems Analysis, (MSA)
Potential Failure Mode and Effects Analysis, (FMEA)
Production Part Approval Process, (PPAP)
Statistical Process Control, (SPC)
CQI-9 Special Process: Heat Treat System Assessment

1. Scope

ISO/TS 16949:2002 and this document define the fundamental Quality system requirements for the ACH, LLC supply chain. This document contains the company specific requirements supplemental to Technical Specification, ISO/TS 16949:2002. These supplemental requirements may also apply to similar registrations as applicable and developed within this document. These supplemental requirements shall be in the scope of the registration/certification audit in order to be recognized as satisfying the ACH supplier criteria for third-party certification by an IATF recognized and contracted certification body.

All ISO/TS 16949:2002 requirements and the requirements of this document shall be documented in the supplier's Quality system. See 7.4.1.2 for further clarification of other applicable standards and the requirements.

The English language version of this document shall be the official version for purposes of third party registration. Any translations of this document shall be for reference only.

Copies of this document are available at the ACH Scorecard website: http://www.visteon-tpnet.com/cgi-bin/sim/scd/index2.cgi under the Forms and Guidelines heading.

2. Normative references

See III above for a listing of references.

3. Terms and definitions

ACH VPDS
This is the ACH Product Development System. It includes a series of performance gates to validate readiness to move to the next gate in the product development process. These gates include evaluation of supply chain readiness.

AIAG
The Automotive Industry Action Group is an organization founded to develop guidelines and reference materials for the automotive industry.
Automotive Industry Action Group
26200 Lahser Rd., Suite 200
Southfield, MI 48033-7100 USA (248) 358-3570

ASAMS
The ACH Supplier APQP Management System is the ACH APQP process used by the supplier to launch new products to ACH. See related topic, ACH VPDS.

ASDE
Advance Supplier Development Engineering (ASDE) is the group of ACH supplier Quality engineers that are responsible for assisting suppliers with parts they will be supplying for new programs through the launch process.

Bulk Material
Bulk materials are those materials that are purchased, typically, in large quantities and are used across multiple end item products. A listing of typical bulk materials is contained in Appendix F of the AIAG PPAP manual.

Capacity verification
A verification methodology to demonstrate that a supplier can meet the capacity planning volume requirements as defined in the purchasing Request for Quote (RFQ).

DVPR
This is the Design Validation Plan and Report. It contains the validation plan and subsequent report of the results.

ELV
End of Life Vehicle requirements is an initiative by several governments to establish recycling requirements for vehicles deemed as no longer usable. See related topic below: IMDS.

Family Parts
These are groups of parts processed at the same location on the same production line using the same control plan, PFMEA and process equipment. PPAP submissions for “families” of parts are acceptable only when approved by ACH.

IATF
The International Automotive Task Force is a group of automotive manufacturers and their respective trade associations, formed to develop a consensus regarding international fundamental Quality system requirements. IATF members include the following vehicle manufacturers: BMW, DaimlerChrysler, Fiat, Ford Motor Company, General Motors (including Opel Vauxhall), PSA Peugeot-Citroen, Renault SA, Volkswagen and their respective trade associations - AIAG (U.S.), ANFIA (Italy), FIEV (France), SMMT (U.K.) and VDA (Germany).

IMDS
The International Material Data System available at https://mdsystem.com. This is a material reporting system used by several vehicle manufacturers. For ACH requirements for reporting, see paragraph 7.2.

MMOG
The Materials Management Operations Guidelines (MMOG) is an MP&L related document jointly created by the Automotive Industry Action Group (AIAG), OEM representatives, and automotive suppliers.

MTBF
Mean Time Between Failure is a metric to measure the reliability of equipment.

OEE
Overall Equipment Effectiveness is a metric to determine the utilization of equipment in a manufacturing process.

OEM
Original Equipment Manufacturer (OEM) is intended to be the end item producer of the vehicle.

Paynter Chart
A Paynter Chart tracks specific defects or issues over time to verify effectiveness of containments and corrective actions.

QOS
A Quality Operating System is a business management process that is data based and focused on continuous improvement. ISO/TS 16949:2002is an example of a Quality Operating System.

Quality Roadmap
A Quality roadmap is a tool that is developed to reduce Quality defects. This tool includes the use of trend lines, performance goals, Pareto charts, Paynter charts and 8Ds.

RMA
A returned material authorization is a tracking number supplied from an organization authorizing the return of material.

Scorecard
The on-line information system that provides Quality and Delivery performance and rating information for suppliers to ACH, LLC. The external website to access this data is http://www.visteon-tpnet.com/cgi-bin/sim/scd/index2.cgi

SDE
Supplier Development Engineering (SDE) is the group of ACH supplier Quality engineers who are responsible for assisting suppliers with Quality system guidance and with the resolution of current model Quality issues. Supplier manufacturing sites are assigned to specific SDEs.

Shall
Denotes a mandatory requirement.

Should
Indicates a mandatory requirement with some flexibility allowed in compliance methodology.

Subcontractor
A Subcontractor provides production materials, production parts or production services (e.g., assembly, heat treating, plating, painting or other finishing services, etc.) directly to a supplier of ACH, LLC.

Supplier
A Supplier provides production materials, production parts, service parts or production services (e.g., assembly, heat treating, plating, painting or other finishing services, etc.) directly to ACH, LLC.

4. Quality management system

4.1 General requirements

4.1A All ISO/TS 16949:2002 requirements and the requirements of this document shall be documented in the supplier's Quality system. See 7.4.1.2 for further clarification of other applicable standards and the requirements.

NOTE: Documentation of all the requirements is not intended to be stand alone documents for ACH requirements. A cross reference of the requirements to supplier's document system is sufficient to provide an audit path and document review of requirements imbedded in the document system.

The entire facility (producing products for ACH, LLC) must be registered to the applicable standard. Where the entire facility does not produce products for ACH, LLC, a clear definition of what product lines are registered shall be included in the registration scope.

4.2 Documentation requirements

4.2.2A Quality manual

See 4.1A for document system requirements.

4.2.3.1 Engineering Specifications

Suppliers providing heat treated product and heat-treating services shall demonstrate compliance to the most current edition of CQI-9 "Special Process: Heat Treat System Assessment" which is available through AIAG http://www.aiag.org/. The supplier shall maintain the assessment reports and other evidence of compliance to CQI-9 at the supplier's site and make them available to ACH upon request. Compliance to CQI-9 does not relieve the supplier of full responsibility for the Quality of supplied product.

4.2.4A Control of records

Production Part Approval (PPAP) packages and samples shall be retained as specified in the latest edition of the AIAG PPAP Manual. Production inspection and test 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 inspection shall be maintained for each inspection or test performed. Where practical, the actual test result (variables or attributes) should be recorded. Simple pass/fail records of inspection are not acceptable for variables measurements.

Records for internal Quality audits and management review shall be retained for three years.

Some programs may require longer retention periods than specified above. The supplier should specify the retention period in its procedures or specifications.

The above does not supersede any regulatory requirements.

5. Management responsibility

5.2A Customer focus

The supplier shall demonstrate customer satisfaction through meeting continuous improvement objectives consistent with a well-developed Quality Operating System (QOS). See 5.6 for additional information on content and frequency. A self-assessment of QOS effectiveness shall be done yearly. Annex A contains a suggested outline of QOS metrics.

5.5 Responsibility, authority and communication

5.5.2.1A Customer representative

The supplier's customer representative is the primary interface to ACH, LLC. When the customer representative changes, the supplier shall notify ACH Supplier Quality and Commodity Purchasing, and shall update Scorecard contacts as appropriate.

NOTE: The customer representative to ACH is not normally the representative for a registration audit. The corporate Quality manager, manufacturing site Quality manager or account manager may be the primary interface.

If the supplier changes senior management responsible for Quality or company ownership, ACH Commodity Purchasing shall be notified within 10 business days of announcement. This notification may be completed through an email and copied to the SDE of record on Scorecard.

5.6 Management review

5.6A Supplier management shall hold regular QOS performance meetings. These meetings shall review all relevant facets of the business including design, manufacturing, logistics, customer satisfaction, subcontractor performance and new business development. The meetings need not be held as one meeting, but may be a series of meetings covering each of the metrics each cycle. The QOS process shall be documented as part of the supplier documentation. All QOS metrics shall be reviewed quarterly, at a minimum.

6.2 Human resources

6.2.2.2A Training

Suppliers shall ensure that only trained and qualified personnel are involved in all aspects of the design and manufacture of ACH products. This training shall include the use of appropriate ACH systems.

NOTE: The training is primarily intended to cover key interface with ACH, such as but not limited to new program reporting documents, 8-D reports, PPAP requirements and other key documents. Manufacturing requirements such as control plans and PFMEAs are also intended to be included.

Records of training shall be traceable to the revision of the source training material (e.g., policy, procedure, work instruction).

6.3 Infrastructure

6.3.1V Plant, facility and equipment planning

The supplier shall have lean manufacturing implementation plans.

6.3.2A Contingency plans

The supplier shall prepare a contingency plan following guidelines available in Annex B. Upon request, the supplier shall provide a copy of their contingency plans to ACH.
The supplier shall notify ACH receiving plants, the buyer(s) and the SDE of record per Scorecard within 24 hours of supplier production interruption. The nature of the interruption shall be communicated with the immediate actions taken to assure supply of product. Production interruptions may include (but are not limited to) natural disasters, political unrest, war, capacity issues, Quality issues, labor strikes or other events that may prevent the supplier from meeting the specified capacity volumes

6.4 Work environment

6.4.2A Cleanliness of premises

This requirement includes the dunnage (including returnable dunnage) used to transport the product.

7. Product realization

7.1A Planning of product realization

The latest edition AIAG Advanced Product Quality Planning and Control Plan reference manual shall be used as a guide to develop and report progress on new programs. Reporting of APQP status shall utilize the forms and

process flows provided by the responsible ASDE which are available in Scorecard. Normally, the reporting will be on parts designated as high impact, but consult with the assigned ASDE to confirm the reporting requirements.

7.2 Customer-related processes

End of life vehicle (ELV) reporting requirements are required as follows: Report into IMDS (or ACH downloadable spreadsheet) prior to PPAP of the product and confirm completion for PPAP. Please go to the ACH tab within the Visteon Supplier Portal at http://vsp.covisint.com/for contact information for the ACH IMDS group.

7.2.1.1A Customer-designated special characteristics

OEMs develop symbols for the definition of critical characteristics (safety or emissions related) and significant characteristics (performance related). ACH has defined specific symbols for use on control plans, drawings or FMEAs and are documented within internal ACH procedures. Some OEM programs may dictate the use of the OEM symbols. If so, the ASDE will notify the supplier of those requirements.

7.2.2.1A Review of requirements related to product- supplemental

Waiving of the requirement to review product requirements shall be obtained from the Commodity Buyer.

7.2.2.2A Organization manufacturing feasibility

Manufacturing feasibility reviews (see AIAG, Advanced Product Quality Planning and Control Plan, Appendix E) shall include supplier and ACH personnel as appropriate. The supplier shall manage short-term product volume changes of less than 20%. The supplier shall notify ACH for volume changes of a more permanent nature, identify any capacity constraints and provide an evaluation of any risks to ACH, LLC.

7.2.3.1A Customer communication-supplemental

During the request for quote response, the supplier shall verify the data exchange formats with ACH. The Buyer will assist in the coordination of the definition of these requirements.

7.3 Design and development

7.3.1.1A Multidisciplinary approach

a. Personnel

The supplier shall ensure that new ACH programs are properly managed and resourced within their organization. A supplier Program Manager shall be appointed for each ACH Program and an Organization Chart of their support team provided.

b. Advanced Product Quality Planning

The supplier shall carry out APQP on all new (more than 50 % new tooling) ACH components. The supplier Program Manager or their designee will lead the APQP Process for any new ACH component and shall provide monthly (unless otherwise specified) updates of the APQP Status Report (and any supporting notes) to the ACH Program Buyer. The APQP Status Report is contained within the ASAMS document, available on Scorecard. If a component has been designated as High Impact, the supplier shall also provide updates to the ACH Advance Supplier Development Engineer or other designated person. All members of the supplier's support team shall be suitably trained in the particular APQP Process as defined by ACH. An alternative Quality planning process may be specified when required.

c. Launch readiness reviews

The Supplier Program Manager or their designate shall ensure that the ASAMS process is carried out on any new ACH component that has been identified as high impact. The Launch Readiness Review is contained within the ASAMS document, which is available on Scorecard. All data integral to this process in addition to MMOG shall be made available to ACH for confidential review. ACH shall specify the type of Review Process to be followed and the reporting frequency.

d. PSW submission

PSW submissions shall follow the latest edition of the AIAG PPAP manual. The PSW warrant used shall be the ACH PSW form available on Scorecard. The supplier's PPAP Submission Level will be defined by ACH in the APQP Process. This is normally set at the level identified in Scorecard but may differ according to program or other requirements. An alternative approval process may be specified when required by ACH's Customer Input Requirements.

e. Launch support

Supplier personnel will either be on-site at ACH or on 24 hr call to support an ACH plant's needs during a Launch Phase. ACH will define the duration of this Phase.

f. FMEA and control plan approvals

ACH Design engineering and SDE/ASDE approval is required for FMEAs and control plans for designated safety or regulatory items regardless of the supplier site's PPAP level. SDE/ASDE approval may take the form of PSW approval, but the preferred method is to sign the documents. Design engineering and SDE/ASDE approval of changes to these documents after initial acceptance is also required.

ACH reserves the right to require approval of FMEA and/or control plans for any ACH purchased part from any supplier organization.

g. FMEAs

The supplier shall prepare documented process FMEAs for all part numbers supplied to ACH.
Where the supplier is responsible for design, the supplier shall prepare a documented design FMEAs for all parts it designs for ACH. A formally documented design FMEA may be waived by the SDE/ASDE manager for parts that are commercial off the shelf items or which use computer aided design checks to check design integrity (e.g., design rule and manufacturability checks).

FMEAs may be written for families of parts where batch processes and common tooling are used. Families shall be clearly defined and have a full part number listing of the family. ACH engineering shall approve the family designations.

Upon request by ACH, the supplier shall provide a copy of the FMEA documents for review. If the document is considered proprietary, the supplier will provide qualified technical support and bring the FMEA to the requestor for review without retention of copies.
FMEAs shall be prepared using the latest edition AIAG Potential Failure Mode and Effects Analysis reference manual as a guide.

h. Control plans

All ACH parts shall have Control Plans. Family control plans may be used for parts with common processes. The family shall be clearly defined on the control plan so that applicability is defined. The latest edition AIAG Advanced Product Quality Planning and Control Plan reference manual shall be used as a guide for the development and format of Control Plans.

Design and process controls shall focus on prevention rather than detection and correction. Special attention shall be placed on the identification of input control characteristics rather than on post-processing inspection and containment.

Repaired and/or reworked product shall be re-inspected to assure that it conforms to all control plan requirements and documented procedures.

i. Control Plans for Control Items (Critical Characteristics)

Changes to control plans for control items require the approval of the ASDE/SDE as appropriate and Product Engineering. Before implementation, the supplier shall modify the control plans and submit them to ASDE/SDE and Product Engineering for signatures.

Heat-treated parts shall conform to the most current edition of the AIAG CQI-9 standard. Traceability shall be maintained for lot control to the chemical composition and/or quenched hardness testing. External laboratories used to test material shall conform to the Laboratory Requirements of 7.6.3.2S.

7.3.2.3A Special characteristics

Many of the OEMs use special symbols to highlight special characteristics on control plans and drawings. ACH uses the symbol set defined in the internal ACH Special Characteristics Identification Process. Notification of special characteristics is normally accomplished through the use of a Special Characteristic Identification Form. See your assigned ASDE for information on the special characteristics requirements.

If ACH does not designate any special characteristics, the supplier shall identify appropriate product and process special characteristics consistent with their FMEAs. These special characteristics shall be used and designated on the control plans.

7.3.4A Design and development review

The supplier shall use a Design and Development process similar to the ACH VPDS process when reviewing product design and development stages. These reviews shall also include the APQP tracking documents available in Scorecard.

NOTE: The ACH Product Development System (ACH VPDS) is a phased approach to product development that includes several gates to establish readiness to move to the next phase. Supplier involvement is typically monitored through the APQP process, but may include design review participation.

7.3.5A Design and development verification

The supplier shall perform design verification to show conformance to ACH Design Validation Plan and Report (DVPR) requirements. At component levels, the supplier shall develop a qualification plan with the design engineering activity at ACH. Verification methods shall be recorded with the test results. Go/No-Go results shall be avoided and where applicable the actual value for variable data must be recorded. Requirements documents are available from Engineering or Purchasing. If applicable, the supplier shall also meet all heat treat requirements in section 4.2.3.1 of this document.

7.3.6.2A Prototype program

The supplier shall be responsible for the Quality of the parts it produces and subcontracted services including subcontractors directed by ACH. Prototype requirements shall be documented through the ACH Program Purchasing Buyer.

The supplier shall request confirmation of the need for prototype control plans from ACH SDE/ASDE.

NOTE: Prototype control plans are normally required on High Impact parts during program development.

7.3.6.3A Product approval process

a. The supplier shall comply with the latest edition AIAG Production Part Approval Process (PPAP) manual. Subcontractors are to meet all requirements of PPAP. For example, suppliers of subcomponents will use PPAP and the supplier shall PPAP the final assembly. Copies of supplier or subcontractor PPAPs shall be made available to ACH upon request.

b. All proposed design, process, site, and sub-supplier changes, including supplier proprietary designs, shall be submitted to ACH and approved prior to implementation. The ACH Supplier Change Request (SCR) procedure or approved CR (WERS concern) shall be utilized for all proposed supplier changes. The ACH SCR form is an electronic document used to present the details of the requested change to the appropriate ACH personnel and is available in Scorecard.

NOTE: When PPAP submission is required, the ACH SCR form or CR is used only to approve the supplier's plan to implement the change. The supplier cannot ship parts changed per the SCR or CR until the PPAP is approved and part Functional Approval is either granted (using the ACH FCR form) or waived by the appropriate using ACH manufacturing plant(s). The initial shipment of a changed part shall have the packaging marked to identify it to the change. Contact the using ACH plant for acceptable marking requirements.

NOTE: When a PPAP identifies that a part does not fully conform to all specifications, ACH Product Development Engineering may raise an alert to authorize the supplier to ship this product. The issue that required the alert must be corrected within 90 days or a second alert must be raised. Alternate processes may be used when customer requirements dictate.

c. PPAP packages shall be submitted to the PPAP level designated for the supplier's site code on ACH's Scorecard system. ACH reserves the right to change the PPAP submission level on individual submittals. When level 4 is requested, the PPAP shall contain all PPAP elements excluding sample parts.
The supplier shall retain PPAP packages and samples and make them readily available to ACH upon request. The current PPAP package and samples shall be made available to ACH within 24 hours. PPAP packages and samples shall be retained as specified in the latest edition of the AIAG PPAP Manual.

d. PPAP documents shall be reviewed yearly for current applicability and updated as necessary. This review shall include, but not be limited to: reliability monitors, capability data, control charts, lay out inspection data, internal yield data, customer failure rates, warranty and conformance to engineering drawings. PSWs shall be entered into the supplier's PPAP files after successful completion of the review and made available to ACH on request.
This may be linked to the annual lay-out requirements (8.2.4.1A).

e. When specified in the APQP process, run at rate shall be performed as production capacity verification.

NOTE: Commodity or batch based products may demonstrate run at rate by a process analysis to determine constraints and showing sufficient capacity is in place to support the product release rates.

7.4 Purchasing

7.4.1.1A Regulatory conformity

See 7.2 for End of Life Vehicle (ELV) reporting requirements for prohibited and reportable substances.

7.4.1.2A Supplier Quality management

For suppliers and sub-contractors to ACH suppliers:

a. The supplier is responsible for ensuring that the Quality and conformance of their supplier/sub-contractor material or service meets ACH's requirements. Evidence of conformance of the supplier's supplier/sub-contractor material or service shall be made available at ACH's request.
b. ACH reserves the right to audit the supplier's suppliers/sub-contractors in the presence of the supplier's representative. Coordination of the audit will be through the supplier's representative.
c. The supplier shall ensure product delivered to ACH is traceable back to its suppliers/sub-contractors according to the requirements of ISO/TS 16949 and any program specific requirements.

d. The supplier shall cascade the intent of these customer specific requirements to their suppliers/sub-contractors where applicable.
e. Suppliers/sub-contractors to the supplier shall meet the base ISO/TS 16949:2002 requirement of being 3rd party registered to the ISO 9001: 2000 Quality system standard.

NOTE: Bulk material suppliers typically do not attain ISO/TS 16949:2002 registration. Requirements for those designated suppliers are to attain ISO 9001:2000 and (as appropriate) use the ACH Customer Specific Requirements. PPAP requirements for bulk suppliers will follow the Appendix F of the AIAG PPAP manual.

In summary, ACH requires its direct suppliers to be certified to ISO/TS 16949:2002. ACH considers subcontractors to be an extension of the supplier's process/product and extends the requirement to them.

ACH satisfies the goal of supplier conformity to ISO/TS 16949: 2002 as follows:

a. The supplier must be registered to ISO/TS 16949:2002 (preferred) or ISO 9001:2000 (approved Request for Waiver is required). In addition, suppliers certified to the ISO/TS 16949 standard must also comply with and be certified by a 3rd party registrar to this customer specific document.

Those suppliers not currently registered to ISO/TS 16949:2002 shall submit an ACH ISO/TS 16949 CSR Request for Waiver form (available in the ACH Scorecard site) which will detail a credible work plan to attain registration in a timely manner or which will allow ongoing approval for the site to operate at the less desired ISO 9001:2000 Quality system level.

NOTE: The registration type selected by the supplier will significantly influence their Quality rating and may potentially influence their sourcing opportunities. Third party certification does not relieve the supplier of the full responsibility of the Quality of the product supplied.

7.4.3.1A Incoming product Quality

The supplier shall have incoming inspection of material consistent with the risk and Quality impact of the material. These inspections shall include variables data where appropriate and be used as a key indicator of subcontractor Quality management.

7.4.3.2A Supplier monitoring

ACH customers expect 100% on time Delivery/up to schedule. In support of this, ACH requires 100% on time Delivery/up to schedule from our suppliers. Delivery metrics shall be included in QOS reviews and shall use 100% on time/up to schedule as a goal. The Quality roadmap process of Trend, Pareto, Paynter charts and Action Plans shall be used to track and resolve issues when on time/up to schedule Delivery goals are not attained. Delivery Performance is monitored in ACH Scorecard.

7.5 Production and service provision

7.5.1.1A Control plans

The latest edition AIAG Advanced Product Quality Planning and Control Plan reference manual shall be used as a guide in developing and maintaining control plans. A change history shall be maintained as part of the control plan to document implementation of changes.

a. The supplier shall follow the control plan submitted in the PPAP (except for internally or externally approved changes). Any proposed changes to Special Characteristics (defined by the ACH Special Characteristics Identification Process) shall be approved by the ACH Supplier Change Request (SCR) Process.
b. If any Significant or Critical Characteristics have been identified, the supplier shall ensure ongoing process capability as defined in the latest edition AIAG PPAP and SPC manuals. Records of this data shall be maintained according to the requirements of ISO/TS 16949:2002 for a minimum period of 1 year. They shall also be made available for review by ACH on request.
c. The supplier shall identify ongoing process improvements, for example through process and product audits, to ensure ongoing conformance to ACH requirements.

The supplier shall carry out an annual layout for each component. This shall be made available to ACH upon request. The annual layout data shall be included in the parts PPAP records. (See 7.3.6.3A.d.)

NOTE: Some ACH customers require yearly updates to the PSW. The annual layout may satisfy this requirement and should include a PSW update. The review should also include reliability monitors for unfavorable trends. (See 8.2.4.1A)

7.5.1.2A Work instructions

Operators shall use the most current work instructions or those consistent with the revision level of the product.

7.5.1.3A Verification of job set-ups

Set-up verification requirements include manual tooling exchanges. Records of all job set-up verifications shall be maintained for one year.

7.5.1.4A Preventive and predictive maintenance

The supplier shall have a documented system for preventive maintenance. This shall include a timely review of planned maintenance activities and a documented action plan to address any backlog. The Management Review process shall include a review of key metrics such as OEE, MTBF, on-time maintenance, and others as appropriate to determine the effectiveness of the program. Wherever possible, the supplier shall use predictive maintenance techniques. When used, the techniques shall be based on statistical techniques and consider the cost of Quality prior to implementation. Examples of predictive maintenance include the replacement of saw blades after a number of cuts based on the edge chipping of the product or the replacement of a mold after a predetermined number of shots based on known wear on the tool.

7.5.5.1A Storage and inventory

The supplier shall use the latest edition AIAG MMOG process as a guide to maintain an orderly Delivery system. The ACH Scorecard system provides a Delivery rating system. The supplier shall utilize the Scorecard Delivery rating system to monitor performance. Delivery ratings from customer sites shall be used as a metric in the Management Review process. Adverse trends and performance shall require corrective action via the ACH Global 8-D process.

NOTE: A RED Delivery rating for 3 consecutive months will result in the supplier site automatically being included on the ACH Scorecard No-Quote list. Once a site is automatically added to the No-Quote list for RED Delivery performance they will remain on the list until they obtain Non-RED Delivery ratings for 3 consecutive months. This No-Quote status may result in the loss of both current and future model business opportunities.

a) The supplier shall agree on a packaging specification with the appropriate plant packaging engineer. It is the responsibility of the supplier to ensure that material is delivered to the ACH customer plant in accordance with the packaging specification approved by ACH. The general ACH packaging specification can be found on the ACH tab within the Visteon Supplier Portal at http://vsp.covisint.com/.
b) Each package should be labeled according to ACH labeling standards, which can be found on the ACH tab within the Visteon Supplier Portal at http://vsp.covisint.com/.
If Delivery dates are not specified in a Purchase Order, the supplier shall ship only as authorized in shipment releases issued to the organization by ACH.

7.6 Control of monitoring and measuring devices

7.6.1A Measurement System Analysis

All gauges used for checking a Special Characteristic (significant, critical or supplier identified) shall have a gauge study performed in accordance with the methods described in the latest AIAG Measurement Systems Analysis (MSA) Manual to determine measurement system capability. Gauges not meeting the specification in the MSA

must have a containment plan (such as 100% inspection, gauge improvement, or other means) that is approved by ACH Supplier Development or Advanced Supplier Development Engineering. Gauge study records shall be maintained for the time that the part is active for production and service requirements plus one **c**alendar year and repeated at least yearly for their respective products unless otherwise specified by ACH.

NOTE: It is strongly encouraged that a MSA be performed on all equipment used in the control of processes and acceptance of product regardless if they are identified as an SC. The intent above is to identify the minimum requirement. Gages that have reference standards and on-going regular verification cycles to check validity and stability of the measurement equipment do not require gage studies.

7.6.3.2A External laboratory

Commercial/independent laboratory facilities used by the supplier for product testing, product validation or other acceptance processes shall be registered to ISO/IEC 17025:1999 and have a scope and capability for the laboratory consistent with the test to be performed.

NOTE: Use of a laboratory included in the registration to ISO/TS 16949:2002 is an acceptable alternative to the above requirement.

8. Measurement, analysis and improvement

8.1.1A Identification of statistical tools

The supplier shall use the latest editions of the AIAG SPC manual for manufacturing process controls and AIAG MSA for measurement system equipment management.

8.2.1.1A Customer satisfaction -supplemental

The ACH Supplier Scorecard shows the monthly Quality and Delivery performance of each supplier's manufacturing location through the web at the Scorecard login page. The supplier shall register to access their Scorecard at Scorecard Registration. The Scorecard generates a Green, Yellow or Red Quality Rating Status per the Quality Rating score. Maintaining a good Quality rating is integral to be considered for future business as part of the commodity strategy. A RED Quality rating for 3 consecutive months will result in the supplier site automatically being included on the ACH Scorecard No-Quote list. Once a site is automatically added to the No-Quote list for RED Quality performance they will remain on the list until they obtain Non-RED Quality ratings for 3 consecutive months. This No-Quote status may result in the loss of both current and future model business opportunities.

The supplier shall commit to reviewing and maintaining their Scorecard entries weekly. Where the supplier shows consistent underperformance, it is expected that they will initiate the Quality Improvement Roadmap process to facilitate improvements. This can be found in the ACH supplier Scorecard website. Scorecard Quality performance shall be included in the regular management review.

The Third Party Controlled Shipping process will be considered by ACH Supplier Quality management when Quality improvement actions enacted by the supplier do not stop the flow of non-conforming material to either ACH plants or their Customers. The Third Party Controlled Shipping process will be initiated based on, but not limited to, any of the following criteria being confirmed:

a. Part Quality non-conformance issue resulting in production line disruption or stop shipment at an ACH plant or at a customer plant.
b. Part Quality non-conformance issue requiring 3rd party containment to assure continuous supply of conforming parts.
c. Reoccurring Quality Rejection (QR) issues following ineffective corrective action.
d. Quality issues impacting new product launches at either ACH plants or at our Customer's.

NOTE: If the supplier is placed under either the Third Party Controlled Shipping process by the Supplier Quality management group, the supplier will be required to pay the all costs associated with the Third Party Process.

When this program is implemented, the supplier shall notify their registrar in writing and copy the assigned SDE. In cases of breach of trust or continued chronic Quality spills, ACH should take action to notify the certification/registration body and/or the accrediting body to inform them of the systemic issues. When a Supplier Major Significant Quality Event (SQE) occurs, (breach of trust or chronic Quality spill), the supplier shall notify the registrar in writing and copy the assigned SDE.

8.2.2A Internal audit

Internal auditors shall have completed an external or internal auditing training class. The supplier should have at least one lead auditor who has passed an accredited lead auditor class. The lead auditor may support several sites within the supplier's corporate organization. When the supplier does not have a lead auditor meeting these requirements a contracted third party with the above qualifications shall perform the audits. Audit records shall be retained for a minimum of three calendar years.

NOTE: The Lead Auditor training should be RAB Accredited or Supplier Auditor Certification or a proven equivalent.

For larger suppliers, any nonconformance found in registrar audits and internal audits shall be summarized and communicated to the supplier's site Quality leads. The local management representative shall evaluate the need to implement a similar corrective action at the respective site.

8.2.4A Monitoring and measurement of product

Engineering Specification (ES) Test Performance Requirements

In-process testing to the ES is typically specified through an In Process (IP) test plan/control plan or in the ES. The supplier shall develop a plan to meet those requirements and submit them for approval as part of the PPAP package. Reaction plans to failures shall be included in the IP test plan.

Surrogate data shall not be used unless it can demonstrate that the products are a "family" that uses the same process equipment and process specifications. Clarification or approval of the use of surrogate/family data shall be through the appropriate SDE/ASDE.

8.2.4.1A Layout inspection and functional testing

A layout inspection and functional verification (includes all dimensionals) shall be performed annually and made available to ACH upon request. All cavities shall have one sample each with layout data. As part of this process, the supplier will update the PPAP document files including the PSW. The dimensions to be measured shall include all significant characteristics as a minimum and all key functional dimensions as agreed upon by the supplier and SDE (see 7.3.6.3.A.d.).

NOTE: If adequate data are taken during the normal production, this may be summarized and serve as the annual layout.

Surrogate or "family" may be used if developed within the prior twelve months and if it meets the requirements of 8.2.4A. The ACH SDE/ASDE will approve the use of surrogate/family data by signature of the PSW.

8.2.4.2A Appearance items

Appearance items will be designated on the design record. For specific direction on appearance item requirements, contact the respective ACH Product Development group.

8.3A Control of nonconforming product

The supplier shall have processes and systems in place to prevent shipment of non-conforming material to any ACH facility or to ACH customer locations. ACH requires the supplier to embrace the "Zero Defect" philosophy. The supplier shall ensure that ongoing product Quality shall meet the commodity expectations and continually improve

towards zero defect expectations. Management of Quality "spills" and control of nonconforming material is as follows:

NOTE: The timing of events in each of the paragraphs below are guidelines which represent extraordinary events such as a line down condition, customer returns or critical warranty concerns. ACH customers normally expect 24 hour response to assure containment for vehicle operations failures. Customer warranty failures typically require a 20 day cycle that will result in closure of the 8D. Consult with the ACH plant returning the product to determine the timing needed for each event.

Identified by the supplier:

a. If there are any instances of non-conforming product in the production of ACH material, the supplier shall react according to the following requirements:
   i. The supplier shall ensure that adequate containment is in place to prevent receipt by ACH. The supplier shall also ensure that the root cause is investigated and corrective actions are implemented to prevent recurrence.
   ii. If there is any opportunity that the non-conforming product has escaped the supplier's process, the supplier shall notify the effected ACH plant(s) and the SDE at once. The supplier shall immediately take all reasonable measures, with the assistance of ACH if necessary, to ensure that the product is intercepted and quarantined.

b. If ACH has already received or used the suspect product:
   i. The supplier shall implement immediate containment for the concern at the supplier's location and agree the terms for immediate containment at the effected ACH plant(s) and evaluate the risk of any material contained in the supply chain. The supplier shall open an 8D investigation and report D0 "Emergency Response Actions" immediately and then update down to D3 "Interim Containment" within 24 hours.
   ii. The supplier shall organize their own representatives or agree with the affected plant how to continue containment and sorting at the effected ACH facility within 12 hours.
   iii. The supplier, in consultation with the effected ACH Plant(s) and ACH Supplier Quality, shall immediately replace the non-conforming stock if required.
   iv. Completion of the investigation shall be timely and agreed upon by ACH.

Identified by ACH:

a. If non-conforming product has been identified by ACH or it's customer, the supplier shall react according to the following requirements:
   i. The supplier shall implement immediate containment for the concern at the supplier's location and agree the terms for immediate containment at the effected ACH plant.
   ii. The supplier shall report the mechanism for ongoing containment and/or sorting at the ACH facility within 12 hours.
   iii. The supplier, in consultation with ACH Supplier Quality, shall immediately replace the non-conforming stock if required.
   iv. The supplier shall open an 8D investigation into the issue and report down to D3 which is denoted as "Interim Containment" within 24 hours.
   v. Completion of the investigation shall be timely and agreed upon by ACH.

b. Confirmation of corrective actions:
   i. ACH normally requires 5 consecutive batches of product (or 5000 pieces if in the launch phase) free from the non-conformity before any exceptional containment measures at ACH's receiving area will be removed. The duration of the containment measures shall be at ACH's discretion given the due weight of the concern.
   ii. If the level of containment is considered inadequate and the corrective actions are ineffective, a reduction may be made in the supplier's Scorecard rating by using the Significant Quality Event Process. The Third Party Controlled Shipping process may also be invoked.

Any non-conforming product or process output shall be analyzed using the ACH 8D methodology to ensure root cause corrective action and problem prevention. The supplier shall respond to Quality rejects (QRs) within 24 hours with containment (D3) and with root cause (D4) targeted within 4 days. A corrective action plan shall be in place

within 8 days. Containments shall not be removed until internal data shows the effective implementation of corrective action.

8Ds shall be submitted to the plant issuing the QR and to the SDE of record in Scorecard. When a QR is issued for a lot quantity, the supplier will respond with an RMA and replenishment of unaffected product within 48 hours. Every effort shall be made to assure the plant is not using non-conforming product.

8.3.4A Customer waiver

When the supplier requires a waiver to ship nonconforming material, there are two methods to use:

a. For a temporary change bounded by time or a lot of material, the supplier shall request an "alert" from the ACH using plant or the responsible PD organization. An alert is bounded for a specific amount of material or for a maximum of 90 days. The approved "alert" number is to be added to the shipping documents.

b. For a permanent change, the supplier shall submit and have approved a Supplier Change Request (SCR). Guidelines for preparing and submitting an SCR are available in the ACH Scorecard Supplier Guidelines and Forms section. The permanent change may affect the PPAP records and may require the submittal of a revised PPAP.

Revision History

September 21, 2007
Changed "ACH Corporation" to "ACH, LLC" throughout document. Replaced "customer" with "ACH" and "organization" with "supplier" throughout document; removed same from definitions. Removed "BOS" from references to "QOS/BOS"; added QOS to definitions. Removed references to the ACH Third Party Supplier Improvement process (addressed in the ACH Third Party Controlled Shipping Process).
Section 4.2.3.1 Engineering Specifications, added "most current edition of" to CQI-9 reference.
Section 5.5.2.1A, Customer Representative, Note: Replaced "Field Quality Manager" with "corporate Quality manager".
Section 7.3.1.1A, Multidisciplinary approach, item b: Advanced Product Quality Planning – allow for monthly or otherwise specified updates of APQP status.
Section 7.3.6.3A, Product Approval Process, item c: Removed allowance for alternate process.
Section 7.3.6.3A, Product Approval Process, item d: Corrected reference (8.2.4.1S) to (8.2.4.1A).
Section 7.4.1.2.A, Supplier Quality management, item a: Added "…suppliers must comply with and be certified by a 3rd party registrar to this customer specific document."
Section 7.5.5.1A Storage and inventory, added Note: "A RED Delivery rating for 3 consecutive months….may result in the loss of both current and future model business opportunities".
8.2.1.1.A Customer satisfaction – supplemental: Specified that Scorecard will show monthly Quality and Delivery supplier performance ratings and added an explanation for the consequences of carrying a red quality rating for three consecutive months.
Section 8.2.4.1A Layout inspection and functional testing – added that annual layout inspection and verification results to be made available to ACH upon request. Added (See 7.3.6.3 A).

Annex A

QOS/BOS Suggested Metrics

The QOS/BOS should be developed to provide a link to Customer Expectations through setting objectives that are measures of consensus customer expectations. These metrics should be mapped to known customer expectations such as this document. The below should be used as a guideline in development of a QOS/BOS.

The QOS/BOS should encompass the entire business operations. It should include internal indicators, external indicators, and field indicators and advanced Quality/design. A sample structure is listed below. For metrics adverse to goal, the supplier shall have an improvement work plan.

External Customer Focus

Quality rating
Delivery rating
QRs per month
PPM
8-D closure status
8-D backlog and time to close (aging)
Warranty R/1000 trends
On time PPAP
Premium freight cost
Status of open customer concerns/QRs
Others as necessary

Internal Customer Focus

Process Capability (Cpk/Cp)
Process Yields (First Time Thru)
Cumulative Process Scrap
Overall Equipment Efficiency
Safety (lost days for accidents)
Internal audit actions open
Customer committed corrective actions open
Absenteeism
Training status
Housekeeping audit results
Gage studies done to schedule
Others as necessary

Preventive Focus

Subcontractor evaluation (capability)
Subcontractor ratings, actions
Advanced Quality Planning, LRR review summary
Control Plan Compliance (Layered Audits)
Delivery self assessment, improvement plan
FMEA corrective action tracking
New equipment or changes first time success
On time Delivery of samples
PV testing complete on time with success
Others as necessary

Annex B Generic Contingency Plan

The outline of a typical contingency plan follows below and should be used as a guide in development of the site Contingency Plan

1. General Description of the Manufacturing Facility

Include: Location, products, customers and International/National standards attained.

2. Maintenance Systems

Identify systems in place including frequency of work for preventive maintenance and types of checks for predictive maintenance. Include a list of key spare parts.

3. Utilities

Identify the suppliers of water, electricity, gas etc and what alternative sources would be used if supply was disrupted. What has been the history of disruption, if any?

4. Labor Controls

Specify labor contracts, their expiration dates, and identify work patterns and how labor shortages would be addressed. Describe training policies for new employees.

5. Material Control Systems

Identify back up network/computer systems to ensure continuity of manufacturing and shipping to the customer

6. Sub-supplier Control

Describe how sub-supplier products and processes are qualified and what plans exist to introduce alternative sources if necessary.

7. Transport

Describe transport arrangements for product that is not 'ex Works' and also for tooling/machinery. Include back-up plan details.

8. Flooding

Describe the history of flooding and any relevant plans.

9. Manufacturing Flow Diagram

Describe each manufacturing process step (process flow chart).

10. Contingency Plans for Key Equipment

In the event of breakdown of each piece of key equipment and tooling detail how alternative equipment would be used either within the Facility or offsite. Describe what additional working could be carried out to regain lost production.

11. Approval cover sheet

Prepared by: Approved by:
Date: Date: