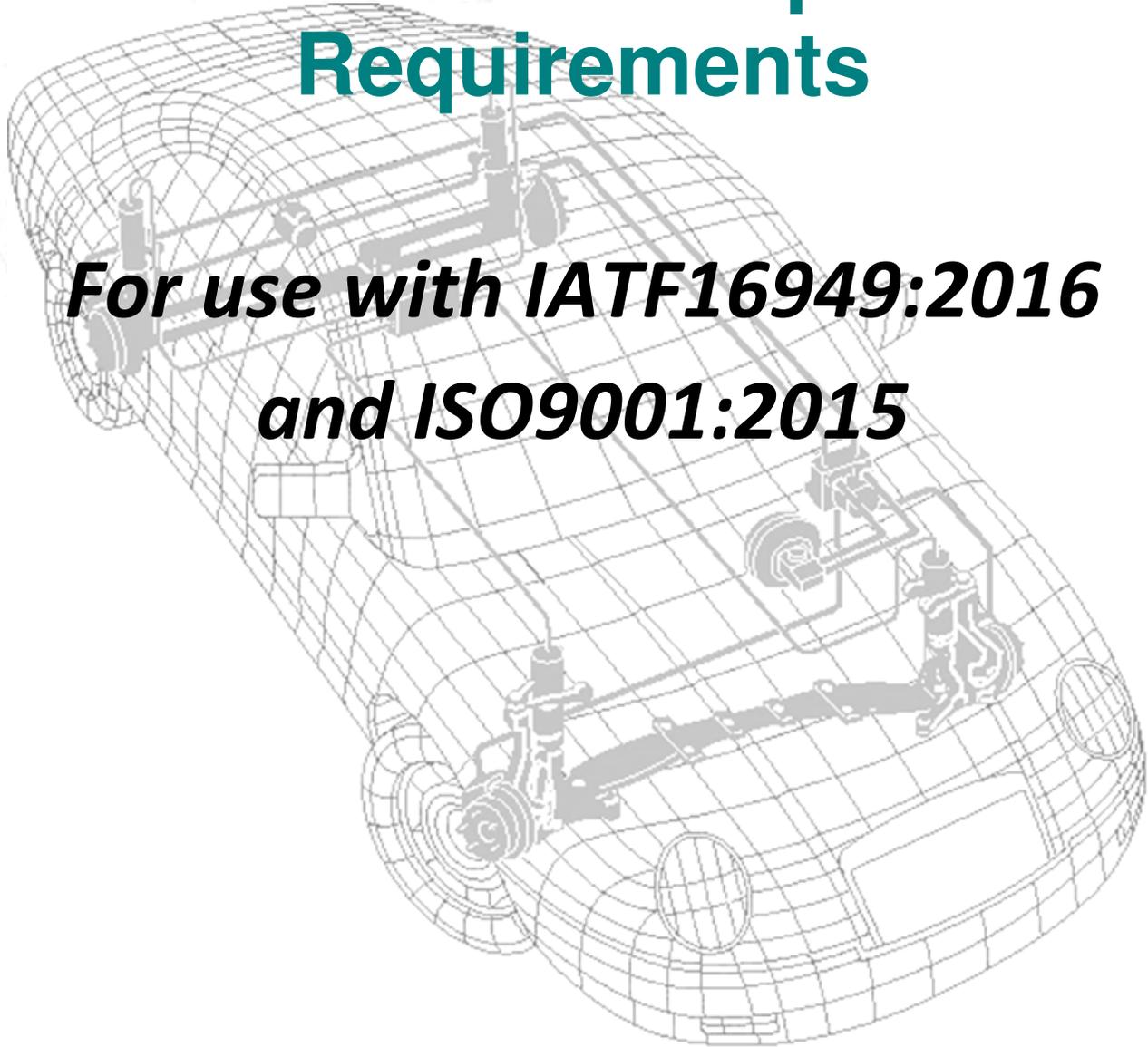




BWI Customer Specific Requirements

***For use with IATF16949:2016
and ISO9001:2015***



BWI Procedure 849
Revision 1, Effective 16-Nov-2017

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* Denotes additional BWI customer-specific content

1 Scope

1.1 Scope General

IATF16949:2016, First Edition, Oct 1, 2016, “Automotive Quality Management System Standard,” **ISO9001:2015, Fifth Edition**, 2015-09-15, “Quality Management Systems – Requirements”, and this document defines BWI fundamental quality system requirements for organizations where automotive customer-specified parts, for production and/or service are manufactured. Third

party certification to IATF16949 must be conducted in compliance with the IATF recognized automotive certification scheme by a certification body currently contracted and recognized by an IATF Oversight office.

All **IATF16949:2016** requirements including the requirements of this document shall be addressed in the organization's quality management system.

The English language version of IATF16949:2016 or related reference documents shall be the official version for purposes of third party registration.

Sanctioned translations shall:

- Be for reference only
- Reference the English language as the official version

Any other language translations are not authorized.

This document contains BWI companion requirements to IATF 16949:2016. Each requirement within IATF 16949:2016 that has a more specific BWI requirement is listed below the IATF 16949:2016 requirement. All BWI direct material suppliers, regardless of whether or not they are certified to IATF 16949:2016 are required to comply with the requirements of IATF 16949:2016 and the BWI Customer Specific Requirements stated in this document.

Exceptions to any part of these requirements must be approved in writing by the appropriate BWI Group functional area contact.

This document applies only to external automotive direct suppliers to BWI Group

All BWI automotive direct material suppliers, regardless of whether or not they are certified to IATF 16949:2016 are required to comply with the requirements of IATF 16949:2016 and the BWI Customer Specific Requirements stated in this document.

Indirect and services providers are not included in this requirement, e.g. logistics, sequencers, parts packagers, tooling & equipment, BWI Group aftermarket suppliers.

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

All requirements listed in this document apply unless otherwise authorized in writing by BWI

NOTE 1: Suppliers of non-automotive product should contact their BWI buyer for specific requirements.

NOTE 2: Third party certification does not relieve the supplier of full responsibility for the quality and

delivery of the product supplied.

An electronic copy of this document is available from <http://www.BWIGroup.com/suppliers/>.

2 Normative references

2.1 Normative and informative references

No additional requirements.

3 Terms and definitions

3.1 Terms and definitions for the automotive industry

Aftermarket Parts

Aftermarket parts are replacement parts not procured or released by OEM for service part applications which may or may not be produced to original equipment specifications.

Accessory Parts

Parts manufactured to GM standards, that are procured or released by GM, and are mechanically attached or electronically connected to the vehicle before or after final delivery to the customer.

Customer

References to “customer” in **IATF16949:2016** and this document shall be interpreted as BWI for suppliers pursuing third party registration to **IATF16949:2016** to satisfy BWI **sourcing requirements** third party quality system assessment registration.

Organization

Organizations are defined as providers to BWI of: a) production materials, b) production or service parts, or c) heat treating, plating, painting or other finishing services, providing directly to BWI.

NOTE: See **IATF16949:2016**, Section 3, *Terms and definitions*.

Service parts

Replacement parts manufactured to OEM specifications, which are procured or released by the OEM for service part application.

Suppliers

Suppliers are defined as organizations that are providers of production materials, or

production or service parts, directly to an organization who is a provider of BWI or other customers subscribing to this document. Also included are organizations who are providers of heat-treating, painting, plating or other finishing services.

4. Context of the organization

4.1 Understanding the organization and its context

No additional requirements.

4.2 Understanding the needs and expectations of interested parties

No additional requirements.

4.3 Determining the scope of the quality management system

No additional requirements.

4.3.1 Determining the scope of the quality management system - supplemental

No additional requirements.

4.3.2 Customer-specific requirements

No additional requirements.

4.4 Quality management system and its processes

4.4.1

No additional requirements.

4.4.1.1 Conformance of products and processes

No additional requirements.

4.4.1.2 Product safety

No additional requirements.

4.4.2

No additional requirements.

5 Leadership

5.1 Leadership and commitment

5.1.1 General

No additional requirements.

5.1.1.1 Corporate responsibility

No additional requirements.

5.1.1.2 Process effectiveness and efficiency

No additional requirements.

5.1.1.3 Process owners

No additional requirements.

5.1.2 Customer focus

No additional requirements.

5.2 Policy

5.2.1 Establishing the quality policy

No additional requirements.

5.2.2 Communicating the quality policy

No additional requirements.

5.3 Organizational roles, responsibilities and authorities

5.3.1 Organizational roles, responsibilities, and authorities – supplemental

No additional requirements.

5.3.2 Responsibility and authority for product requirements and corrective actions

No additional requirements.

6 Planning

6.1 Actions to address risks and opportunities

No additional requirements.

6.1.1 and 6.1.2

No additional requirements.

6.1.2.1 Risk analysis

No additional requirements.

6.1.2.2 Preventive action

No additional requirements.

6.1.2.3 Contingency plans

When the supplier becomes aware of an impending production interruption, the supplier shall make every attempt to notify the BWI receiving plant's Production Control & Logistics contact or member of that department within 24 hours. The nature of the problem shall be communicated with the immediate actions taken to assure continuous 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 or circumstances that prevent the supplier from meeting the specified capacity volumes. The supplier shall advise BWI of the plan for recovery and work toward minimizing its effect on the BWI plant.

6.2 Quality objectives and planning to achieve them

6.2.1 and 6.2.2

No additional requirements.

6.2.2.1 Quality objectives and planning to achieve them – supplemental

No additional requirements.

6.3 Planning of changes

No additional requirements.

7 Support

7.1 Resources

No additional requirements.

7.1.1 General

No additional requirements

7.1.2 People

No additional requirements

7.1.3 Infrastructure

No additional requirements

7.1.3.1 Plant, facility, and equipment planning

No additional requirements

7.1.4 Environment for the operation of processes

No additional requirements

7.1.4.1 Environment for the operation of processes – supplemental

No additional requirements

7.1.5 Monitoring and measuring resources

No additional requirements

7.1.5.1 General

No additional requirements

7.1.5.1.1 Measurement system analysis

The supplier shall use the latest edition of AIAG MSA Manual to evaluate all measurement techniques listed in their Control Plans unless otherwise approved by the BWI Buyer, AQE or SQE.

7.1.5.2 Measurement traceability

No additional requirements

7.1.5.2.1 Calibration/verification records

No additional requirements

7.1.5.3 Laboratory requirements

No additional requirements

7.1.5.3.1 Internal laboratory

No additional requirements

7.1.5.3.2 External laboratory

No additional requirements

7.1.6 Organizational knowledge

No additional requirements

7.2 Competence

7.2.1 Competence - supplemental

No additional requirements

7.2.2 Competence - on-the-job training

No additional requirements

7.2.3 Internal auditor competency

No additional requirements

7.2.4 Second-party auditor competency

No additional requirements

7.3 Awareness

No additional requirements

7.3.1 Awareness – supplemental

No additional requirements

7.3.2 Employee motivation and empowerment

No additional requirements

7.4 Communication

No additional requirements

7.5 Documented information

7.5.1 General

7.5.1.1 Quality management system documentation

No additional requirements

7.5.2 Creating and updating

No additional requirements

7.5.3 Control of documented information

In certain cases, you may be advised by your BWI buyer that some BWI customers require longer retention periods.

If within the required retention period, a supplier is exiting business through liquidation or closure, they are required to provide BWI with copies of all of the records referred to above.

In the event BWI requests a review of supplier or sub-tier supplier records (e.g. a quality concern) the supplier is required to produce these records for review within 24 hours of the request.

If a sub-tier supplier exits business through liquidation or closure, it is the responsibility of the supplier to maintain all of the sub-tier supplier records as noted above.

7.5.3.1 and 7.5.3.2

No additional requirements

7.5.3.2.1 Record retention

No additional requirements

7.5.3.2.2 Engineering specifications

Official prints and specifications for use in quoting and production are only issued through your

BWI purchasing buyer. Prints and specifications received from any other BWI source, including engineering shall be considered “for reference only”.

8 Operation

8.1 Operational planning and control

No additional requirements.

8.1.1 Operational planning and control - supplemental

No additional requirements

8.1.2 Confidentiality

No additional requirements

8.2 Requirements for products and services

No additional requirements

8.2.1 Customer communication

Suppliers shall notify their BWI Buyer immediately for changes in any of the following:

- Ownership Change.
- Planned Manufacturing Site Change.
- Representative Change.
- Change in status of ISO 9001 or IATF 16949 certification such as expiration, renewal, being revoked, being placed on suspension.
- Other pertinent information that could impact BWI either directly or indirectly.

8.2.1.1 Customer communication - supplemental

Examples of communication systems between suppliers and BWI are:

The use of Electronic Data Interchange (EDI) and the following messages:

- 1) Requirement planning information via the transaction set EDIFACT DELFOR
- 2) Shipping schedules via the EDIFACT DELJIT.
- 3) Advanced shipping notices (ASN's) via the EDIFACT DESADV.
- 4) ASN failure reporting via the EDIFACT APERAK.
- 5) Remittance advice information to the suppliers at time of payment via the EDIFACT REMADV.

Alternately EDI can also be exchanged via BWI's web portal, upon request from the supplier, for the same documents for suppliers unable to exchange EDI.

- 1) The same documents are available and mapped to XML for portal viewing.

8.2.2 Determining the requirements for products and services

No additional requirements

8.2.2.1 Determining the requirements for products and services - supplemental

No additional requirements

8.2.3 Review of the requirements for products and services

No additional requirements

8.2.3.1

No additional requirements

8.2.3.1.1 Review of the requirements for products and services - supplemental

No additional requirements

8.2.3.1.2 Customer-designated special characteristics

When BWI's final customer has special requirements for key characteristics the supplier shall apply those requirements to all tiers within their supply chain.

8.2.3.1.3 Organization manufacturing feasibility

The BWI buyer shall be notified and approve of any operating plan using more than 100 hours per week. Suppliers shall be responsible to have capability to provide 15% above the quoted volume without additional investment from BWI.

Some BWI customers have additional capacity requirements. You will be notified by your BWI buyer if this is the case.

Run at Rate. When specified in the APQP process, Run at Rate shall be performed as a method for production capacity and quality system verification.

Note: Product volume increases of more than 15% from BWI over a previously verified volume capability may require full volume feasibility studies. Study parameters shall conform with previously agreed to operating parameters

8.2.3.2

No additional requirements

8.2.4 Changes to requirements for products and services

No additional requirements

8.3 Design and development of products and services

8.3.1 General

No additional requirements

8.3.1.1 Design and development of products and services – supplemental

No additional requirements

8.3.2 Design and development planning

No additional requirements

8.3.2.1 Design and development planning – supplemental

No additional requirements

8.3.2.2 Product design skills

No additional requirements

8.3.2.3 Development of products with embedded software

No additional requirements

8.3.3 Design and development inputs

No additional requirements

8.3.3.1 Product design input

No additional requirements

8.3.3.2 Manufacturing process design input

No additional requirements

8.3.3.3 Special characteristics

The supplier shall have a process to identify critical operations within their manufacturing process.

If BWI’s customer has unique key characteristic symbols, the supplier and their sub suppliers shall create a table showing BWI’s customer’s key characteristic symbols and the supplier or sub supplier comparable key characteristic symbols.

An acceptable level of process capability must be demonstrated for PPAP approval for all special/important characteristics (KPCs and QCIs). See the chart below for BWI capability requirements.

Acceptance Criteria for Initial Process Study:

Results (Ppk)

Interpretation

Index >= 2.0

The process meets KPC requirements

1.67 >= Index Value < 2.0

The process meets QCI requirements, but may require some improvement to meet KPC requirements

1.33 >= Index Value < 1.67

The process does not meet acceptance criteria for KPCs

or QCIs, but may be acceptable per for standard characteristics.

Index value<1.33

The process does not currently meet acceptance criteria for standard or critical characteristics – ok for “reference” characteristics only.

Processes With One-Sided Specifications or Non-Normal Distributions: Refer to the current revision of the AIAG PPAP manual for further details regarding acceptance criteria. At any point in the life of the program, if the supplier finds that it is unable to meet the BWI approved capability index, the supplier shall notify BWI immediately.

Acceptance Criteria for Cpk capability index of a serial stable process, used for an existing product / process:

<u>Results (Cpk)</u>	<u>Interpretation</u>
Index >= 1.67	The process meets KPC requirements
1.33 >= Index Value < 1.67	The process meets QCI requirements, but may require some improvement to meet KPC requirements
Index value<1.33	The process does not meet acceptance criteria for KPCs or QCIs and require improvement

8.3.4 Design and development controls

No additional requirements

8.3.4.1 Monitoring

No additional requirements

8.3.4.2 Design and development validation

No additional requirements

8.3.4.3 Prototype program

Prototype requirements shall be documented through the BWI Buyer

8.3.4.4 Product approval process

The supplier shall comply with the current edition of AIAG Production Part Approval Process (PPAP) manual unless otherwise specified by the BWI AQE, SQE, or Buyer. BWI requires all certified suppliers to include a copy of their IATF certification.

PPAP will either be fully approved or may be approved at an interim level. The following interim approval levels apply to BWI supplier PPAPs:

Interim A: Parts are produced using 100% production tooling and meet design record specifications. However, not all production approval requirements have been met.

Interim B: Parts are produced using 100% production tooling and require rework to meet design record specifications.

Interim C: Parts are produced using non-production tooling and/or process, but meet design record specifications.

Interim D: Parts do not meet (or have not yet been verified to meet) design record specifications.

Interim E: Parts do not meet design record specifications. Interim E is non-saleable, meaning these parts are not suitable for use in production. All interim E parts will need to be retrofitted with parts approved to a saleable level". Copies of PPAP documentation will immediately be made available by the supplier upon request from BWI.

Notification of PPAP approval by BWI does not authorize shipment. Shipping authorization for the initial shipment will be issued by BWI Production Control & Logistics and will contain the delivery due date, quantity to be shipped, and change level to which the material will comply.

8.3.5 Design and development outputs

No additional requirements

8.3.5.1 Design and development outputs – supplemental

No additional requirements

8.3.5.2 Manufacturing process design output

The supplier shall have a method to identify, control, and monitor the high risk items on those critical operations.

There shall be rapid feedback and feed forward between inspection stations and manufacturing, between departments, and between shifts.

8.3.6 Design and development changes

All proposed changes including but not limited to design, process, component, packaging, component suppliers, or facilities, and site changes including supplier proprietary designs shall be submitted to BWI buyer for approval, using the BWI Supplier Change Request Form available at the following link: <http://www.bwigroup.com/suppliers/>. The supplier shall not make any changes without prior written notification and approval from BWI.

8.3.6.1 Design and development changes – supplemental

No additional requirements

8.4 Control of externally provided processes, products and services

No additional requirements.

8.4.1 General

The supplier shall be responsible for all sub-supplier's quality and delivery performance, including sub-suppliers directed by BWI.

8.4.1.1 General - supplemental

No additional requirements

8.4.1.2 Supplier selection process

No additional requirements

8.4.1.3 Customer-directed sources (also known as "Directed-Buy")

No additional requirements

8.4.2 Type and extent of control

No additional requirements

8.4.2.2 Statutory and regulatory requirements

Substances of Concern and Recycled Content: Materials disclosure is required as follows. Global legal requirements and customer specifications necessitate material content and substance disclosure. The reporting requirements are detailed in the BWI Substances of Concern and Recycled Content specification. This requirement applies to all parts and raw materials that become part of a BWI saleable product or end item unless otherwise specified. Please contact buyer for details.

Conflict Minerals:

BWI is required by some customers to report conflict minerals. Suppliers to BWI shall provide this information in a timely manner upon request. BWI encourages the use of *Conflict Free Smelters*.

Suppliers Shipping Into the United States: Customs-Trade Partnership Against Terrorism (C-TPAT):

To the extent any good to be supplied by the supplier are to be imported into the United States of America, the supplier shall comply with all applicable recommendations or requirements of the Bureau of Customs and Border Protection's Customs-Trade Partnership Against Terrorism ("C-TPAT") initiative. Upon request, the supplier shall certify in writing its compliance with the C-TPAT initiative. Any questions regarding this requirement should be directed to the supplier's BWI Buyer or PC&L representative.

Suppliers within North America (NAFTA - North American Free Trade Agreement): It is the responsibility of suppliers of direct automotive parts to provide the most current, valid, and appropriate Certificates of Origin and Manufacturer's Affidavit by part number and manufacturing site to BWI. It is the responsibility of suppliers of direct automotive parts to BWI to renew NAFTA

Certificates of Origin by January 1st of each new year. Suppliers shall forward all completed NAFTA / Manufacturer's Affidavit / Additional Plant Shipping forms as requested by their BWI Buyer or PC&L representative.

Country of Origin for BWI Declarations: BWI relies on the supplier provided Country of Origin information for our Country of Origin declarations. The supplier is responsible to provide BWI the correct information in writing. Shipping containers shall be identified with the material's Country of Origin. The containers the material is shipped in must also be identified with their Country of Origin.

Notice to All Suppliers Shipping Goods Across International Frontiers or Borders:

To minimize the possibility of tariff classification errors and duty rate calculation errors, all BWI suppliers shipping goods across international frontiers or borders must include BWI part number(s) and a detailed plain language English description of the goods on all invoices.

Note: Should a supplier's non-compliance with this requirement be the contributory cause of administrative penalty action against BWI or any revenue loss to BWI, BWI may seek indemnification from such supplier for all additional costs and expenses incurred by BWI that arise out of such supplier's non-compliance with this requirement, as allowable under law.

8.4.2.3 Supplier quality management system development

This clause applies to suppliers of the organization who are providers of: a) production materials, b) production, service, and accessory parts, or c) heat treating, plating, painting or other finishing services.

This clause does not apply to indirect or providers of services that add no manufacturing value which include, but is not limited to distributors, logistics, sequencers, parts packagers, tooling and equipment.

8.4.2.3.1 Automotive product-related software or automotive products with embedded software

No additional requirements

8.4.2.4 Supplier monitoring

No additional requirements

8.4.2.4.1 Second-party audits

No additional requirements

8.4.2.5 Supplier development

Supplier Development and Management Process (SDMP) BWI's Advanced Product Quality Planning (APQP) process is called SDMP. The BWI AQE or SQE will work with the supplier throughout the product realization process utilizing BWI's SDMP or other APQP system if directed by BWI's customer.

8.4.3 Information for external providers

No additional requirements.

8.4.3.1 Information for external providers - supplemental

No additional requirements

8.5 Production and service provision

8.5.1 Control of production and service provision

No additional requirements

8.5.1.1 Control plan

A change history shall be maintained as part of the control plan to document implementation of changes. 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 easily identified. Family designations must receive the prior approval of BWI.

NOTE: 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 the post processing inspection and containment.

The supplier shall provide measurement, test, and inspection data which demonstrates that control plan requirements, sample sizes, and frequencies are being met when requested.

Sample sizes and frequencies shall be determined based on risk and occurrence of failure modes, and to ensure that the customer is adequately protected from receiving the product represented by the inspection/tests before the results of the inspection/tests are known.

8.5.1.2 Standardized work – operator instructions and visual standards

Standardized work should include the what, how, and why tasks are performed. All standardized work shall be followed.

8.5.1.3 Verification of job set-ups

Set-up verification shall be performed for all tool replacements (e.g. dull, worn, or broken tools).

8.5.1.4 Verification after shutdown

No additional requirements

8.5.1.5 Total productive maintenance

No additional requirements

8.5.1.6 Management of production tooling and manufacturing, test, inspection tooling and equipment

Where warehouses or distribution centers (distributors) are remote sites, the requirements for management of production tooling may not be applicable.

8.5.1.7 Production scheduling

BWI expects its suppliers to accept schedules and communicate shipments through formal electronic communications. BWI prefers to communicate with its key suppliers using Traditional EDI. This method allows suppliers to utilize their normal ERP processes to view orders, schedule production, and process shipments. A second tool that is available to our suppliers is our BWI Supplier Web Portal. This tool enables suppliers to receive shipment authorizations, schedules, and forecasts; and to create shipment ASNs (Advance Ship Notice) using a web based tool. The BWI Supplier Web Portal is offered to our suppliers at no cost to them. At the time of sourcing, each supplier is expected to commit in writing which method of communication preferred. From there, your purchasing contact will coordinate to establish the preferred form of communication. Suppliers utilizing Traditional EDI or the BWI Web Portal are expected to receive schedules and shipment authorizations electronically, and shall send ASNs at the time of shipment.

Suppliers who fail to provide valid, timely, and accurate ASNs are subject to a cost recovery by the receiving BWIGroup location and suppliers will be expected to participate in the Problem Case resolution process with the BWIGroup team. BWIGroup expects ASN's will be sent a maximum of 30 minutes after the shipment leaves the dock.

Fabrication Authorization terms will be 2 weeks and Material Authorization will be 2 additional weeks for a total of 4 weeks. All information beyond 4 weeks is for planning purposes only. Exceptions to these terms shall be agreed upon during the quoting process and documented in the purchase agreements.

BWIGroup will establish the shipping frequency for each production part. The supplier shall be able to ship daily at a minimum. Supplier shall ship to the exact quantities, dates, and times specified on the release: no over, under, early or late shipments and no freedom of the week delivery. All BWIGroup schedules shall be in standard pack quantities in the smallest approved standard pack container. Suppliers shall have shipping capability that matches the BWIGroup receiving plants normal production schedule. At the time of pick up, the supplier shall allow the authorized carrier's driver to check the shipping quantities against the scheduled quantities. Over-

shipments will not be accepted, if an over-shipment occurs it will be returned at the expense of the supplier.

If for any reason the supplier is unable to meet the schedules communicated, it is the responsibility of the supplier to notify proper BWIGroup PC&L personnel immediately and receive authorization for the under-shipment. Suppliers will make up all under-shipments via supplier paid premium transportation on BWIGroup authorized carriers to meet the originally scheduled destination window.

If BWIGroup and/or its customer's production is interrupted by the failure of the supplier to deliver contracted goods within the terms of the contract, all costs that are incurred by BWIGroup and/or its customers will be the sole responsibility of the supplier and corrective action taken in the form of a Problem Case. Refer to section 10.2 below for the definition of problem case.

Scheduling Lead Time

The scheduling lead-time will be quoted in calendar days and should quantify the time from receipt of order to ship availability. Steady state lead-time (when schedule and/or forecast are routinely available) is 10 calendar days or less. Exceptions to this lead-time requirement must be approved by PC&L and Purchasing, and must be documented in the purchase agreement.

8.5.2 Identification and traceability

No additional requirements

8.5.2.1 Identification and traceability — supplemental

Materials shall be identified in accordance with the appropriate BWI Shipping/Parts Identification Label Standard. NOTE: A sample or facsimile of your label should be provided with your PPAP package.

8.5.3 Property belonging to customers or external providers

BWI Property Returnable Containers - Regardless of ownership, the supplier shall be responsible for tracking and maintaining (including repairs and cleaning) returnable containers in their possession.

Tool inventory/Disposal

The supplier shall furnish evidence at PPAP, and upon request, that all tooling owned by BWI or BWI's customer is identified in accordance with BWI's, or BWI's customer's requirement.

BWI will determine the disposition of tooling owned by BWI or BWI's customer. Tooling disposition will be communicated to the supplier in writing by the BWI buyer.

8.5.4.1 Preservation

Packaging: Packaging must meet BWI Global Packaging & Shipping Standards for Production Parts (contact buyer for details).

8.5.5.1 Feedback of information from service

No additional requirements

8.5.5.2 Service agreement with customer

No additional requirements

8.5.6 Control of changes

No additional requirements

8.5.6.1 Control of changes – supplemental

The documented process shall require consideration of a production trial run for every product and process change. Results of the trial run shall be documented.

8.5.6.1.1 Temporary change of process controls

The supplier shall keep a list of all error proofing devices and identify which can be bypassed and which cannot (also see clause 8.5.6.1.1). A bypass list for error proofing devices identifies what the bypass method (alternate method) is before a device failure so that when a failure occurs, the list can be referenced for action to be taken. This list shall be available to all associates with the decision responsibility to bypass. Implemented bypasses are reviewed in daily leadership meeting(s) with the goal to return to normal operation. Processes/devices in bypass shall have a quality focused audit performed and documented.

8.6 Release of products and services

8.6.1 Release of products and services — supplemental

No additional requirements

8.6.2 Layout inspection and functional testing

Annual layouts, raw material certifications and functional verification to all engineering material performance, and durability requirements, may be required and are the responsibility of the supplier. All results shall be reported via e-mail or other BWI requested format. Discrepancies found shall be addressed in accordance with applicable sections of IATF16949 and these BWI Customer Specific Requirements.

Family data may be used if developed within the prior twelve months and if it meets the requirements of AIAG.

BWI's customer may require additional requalification beyond the standards outlined above. These requirements, if applicable, will be communicated by the BWI buyer/ AQE / SQE.

8.6.3 Appearance items

No additional requirements

8.6.4 Verification and acceptance of conformity of externally provided products and services

No additional requirements

8.6.5 Statutory and regulatory conformity

The reporting requirements are detailed in the BWI Substances of Concern and Recycled Content, specification 10949001 at BWI Website (<http://www.BWIGroup.com/suppliers/>).

8.6.6 Acceptance criteria

No additional requirements

8.7 Control of nonconforming outputs

8.7.1

No additional requirements

8.7.1.1 Customer authorization for concession

No additional requirements

8.7.1.2 Control of nonconforming product – customer-specified process

No additional requirements

8.7.1.3 Control of suspect product

No additional requirements

8.7.1.4 Control of reworked product

Reworked parts, as well as parts produced outside of the PPAP approved process shall require additional inspection and controls to ensure these parts meet all design record requirements. All such processes and controls must be approved in writing by BWI prior to shipment to a BWI plant.

8.7.1.5 Control of repaired product

Repaired parts, as well as parts produced outside of the PPAP approved process shall require additional inspection and controls to ensure these parts meet all design record requirements. All such processes and controls must be approved in writing by BWI prior to shipment to a BWI plant.

8.7.1.6 Customer notification

No additional requirements

8.7.1.7 Nonconforming product disposition

No additional requirements

8.7.2

No additional requirements

9 Performance evaluation

No additional requirements.

9.1 Monitoring, measurement, analysis and evaluation

9.1.1 General

During the APQP process, the BWI AQE, SQE or Buyer, will share BWI's receiving inspection control plans in most cases. Suppliers of non-catalogue components are expected to include in their control plans, at a minimum, all measurements shown in the BWI receiving inspection control plan.

Gages and measurement methods specified in the supplier's control plan are to be reviewed and approved by the BWI AQE, SQE, or Buyer prior to their purchase. Gages found to be inadequate at PPAP shall be the responsibility of the supplier to replace with an adequate device.

It is BWI's intent to use identical gages where feasible. To accomplish this BWI reserves the right to use supplier's gage drawings and gage vendors, where practical, to make duplicate gages for use in BWI's receiving inspection process. The purpose of this is to eliminate issues with gage correlation.

BWI reserves the right to request all data collected by the supplier defined in any control plans associated with the production of BWI parts.

9.1.1.1 Monitoring and measurement of manufacturing processes

The organization shall have a method for the employee to call or notify for help when an abnormal condition on the equipment or product occurs. A method to call or notify shall be available in all operational areas of the organization.

Sufficient alarm limits shall be established for escalation of abnormal conditions and shall match the reaction plan identified in the product's control plan.

9.1.1.2 Identification of statistical tools

The supplier shall use the latest edition of AIAG SPC for manufacturing process controls unless otherwise approved by BWI.

9.1.1.3 Application of statistical concepts

No additional requirements

9.1.2 Customer satisfaction

No additional requirements

9.1.2.1 Customer satisfaction – Supplemental.

Suppliers shall use zero defects and 100% on time deliveries as their BWI customer satisfaction targets

Scorecards

BWI uses a Supplier Scorecard database to monitor supplier performance for a number of critical metrics. Note: Suppliers interested in obtaining a copy of their Scorecard should contact their BWI buyer.

New Business Hold

The Certification Body (CB) of record to the supplier shall take the decision to place the supplier on immediate suspension * upon receiving notice of BWI New Business Hold – Quality.

See **Automotive Certification Scheme for IATF16949, Rules for Achieving and Maintaining IATF Recognition.*

1. In the event of certification suspension as a result of a supplier receiving notice of BWI New Business Hold – Quality, the supplier shall complete a corrective action plan. The supplier shall submit the corrective action plan to the Certification Body of record and to the affected customer(s) within 10 business days of the date of the letter of notification of probation. The corrective action plan of the supplier shall be consistent with the affected customer(s) requirements including correction steps, responsibilities, timing information, and key metrics to identify effectiveness of the action plan.
2. Before any suspension can be lifted, the Certification Body of record shall take the decision to conduct an on-site assessment of appropriate length to verify effective implementation of all corrective actions. If suspension is not lifted within four months of its issuance, the Certification Body of record shall revoke the IATF16949 certificate of the supplier. Exceptions to this revocation shall be justified in writing by the Certification Body based upon its on-site review of the effectiveness of the supplier's corrective action plan and agreement obtained in writing from the authorized BWI customer representative.

NOTE 1: When a supplier is placed in NBH after a recertification site audit but before the certificate for recertification is issued:

- The Certification Body shall issue the certificate in accord with the IATF *Rules*.
- The Certification Body shall then place the new certificate in immediate suspension with the rules for lifting such suspension appropriately applied.

CSII (Controlled Shipping Level 2)

The supplier shall notify its Certification Body within 5 business days after being placed in Controlled Shipping – Level 2 (CS II) Status. Controlled Shipping - Level 2 (CS II) is a performance indicators of a supplier's product realization problems. Such status should have resolution, or corrective action plans in place, which are agreed to by BWI.

9.1.3 Analysis and evaluation

No additional requirements

9.1.3.1 Prioritization

No additional requirements

9.2 Internal audit

No additional requirements.

9.2.1 AND 9.2.2

No additional requirements

9.2.2.1 Internal audit program

No additional requirements

9.2.2.2 Quality management system audit

No additional requirements

9.2.2.3 Manufacturing process audit

AIAG Designated Special Processes

For suppliers of parts that are processed using any AIAG designated Special Process (commonly referred to as CQIs), including suppliers at any tier in the value stream, the supplier shall ensure that the appropriate AIAG special process assessment is completed prior to PPAP and the results reported to BWI with the PPAP unless otherwise authorized in writing by your BWI AQE, SQE, or buyer. CQI's requiring annual reevaluations are the responsibility of the supplier, and shall also be reported to the BWI buyer or quality representative as required. Assessments must be performed by a competent auditor as defined by the AIAG.

BWI may require carrying out additional process audits depending on OEM customer requirements (e.g. VDA 6.3)

Currently required AIAG Special Process List (see AIAG website for latest information).

Heat Treating Processes	CQI-9 Heat Treat System Assessment
Plating Processes	CQI-11 Plating System Assessment
Coating Processes	CQI-12 Coating System Assessment
Welding Processes	CQI-15 Welding System Assessment
Solder Processes	CQI-17 Soldering System Assessment
Plastics Molding Processes	CQI-23 Molding System Assessment

Casting Process	CQI-27 Casting System Assessment
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9.2.2.4 Product audit

No additional requirements

9.3 Management review

9.3.1 General

No additional requirements

9.3.1.1 Management review - supplemental

No additional requirements

9.3.2 Management review inputs

No additional requirements

9.3.2.1 Management review inputs – supplemental

No additional requirements

9.3.3 Management review outputs

No additional requirements

9.3.3.1 Management review outputs – supplemental

No additional requirements

10 Improvement

10.1 General

10.2 Nonconformity and corrective action

Problem Case (PPR) Response:

Suppliers shall respond to all problem cases issued by BWI.

Suppliers shall complete a BWI 8D problem solving form (or other structured problem solving process as agreed to by BWI) as a means of ascertaining and communicating root cause analysis and verification activities.

Below are the response time rules after receiving a PPR (Product Problem Report) with the associated step in the 8D methodology:

Required Response Timing:

Suppliers are required to provide:

24 hours - D3 Interim Containment Action - An initial response within 24 hours of receiving this document. Initial response must include plan to contain and provide certified material to BWI plant.

14 calendar days - D5 with root cause analysis and a plan to implement corrective and preventative actions with supporting data.

30 calendar days - D8 report closure with evidence of implementation and validation of the Permanent Corrective Actions.

Cost recovery may be communicated through a cost recovery notice from BWI. Suppliers are required to respond to cost recovery notices within 15 days.

10.2.1 and 10.2.2

No additional requirements

10.2.3 Problem solving

No additional requirements

10.2.4 Error-proofing

Error proofing devices shall be tested to failure or simulated failure at the beginning of each shift at a minimum when feasible, otherwise according to the control plan.

The supplier shall keep a list of all error proofing devices and identify which can be bypassed and which cannot (also see clause 8.5.6.1.1). The bypass determination shall consider safety, severity and overall RPN rating.

10.2.5 Warranty management systems

No additional requirements

10.2.6 Customer complaints and field failure test analysis

No additional requirements

10.3 Continual improvement

10.3.1 Continual improvement - supplemental

No additional requirements

BWI 849 CSR Change Log:

Revision Number / Description of change	Date	Modified by:
0 / Issued to correspond with IATF 16949:2016 and ISO 9001:2015 Quality Specifications.	27-Oct-2017	G. Holder
1 / 8.5.4.1 Preservation - Removed reference to BWI Website address http://www.BWIGroup.com/suppliers for packaging standard. Replaced with "contact buyer".	16-Nov-2017	G. Holder