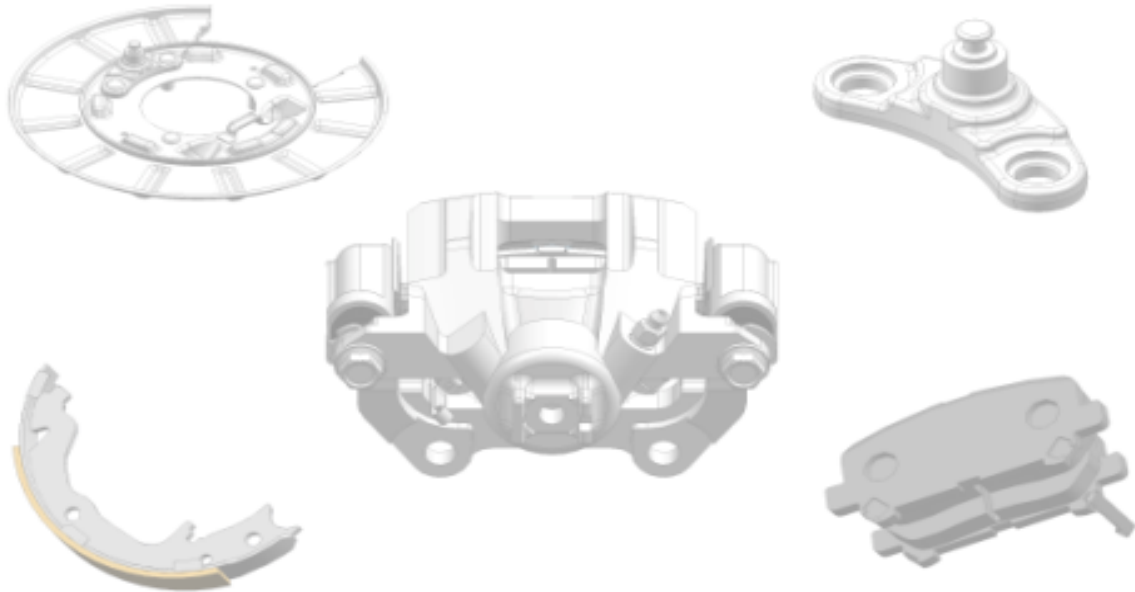


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AKEBONO BRAKE CORPORATION NORTH AMERICA



"Building Quality Together"

Supplier Quality Assurance Manual

AKEBONO SUPPLIER QUALITY ASSURANCE MANUAL



Supplier Quality Assurance Manual

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AKEBONO is committed to quality through continual improvement in an effort to maintain a world-class quality system. This manual is based on a quality system intended to encourage and implement a spirit of cooperation and continual improvement. Akebono Brake Industry Co. Ltd of Japan is a world leader in the design and manufacture of technologically advanced, high quality, precision automotive brakes and components in both domestic and international markets.

AKEBONO's Suppliers performs a major role in our Quality System. Our quality depends on your products. It is our desire to encourage a partnership atmosphere that unites a strong Supplier/ Customer relationship that produces a quality, on time, competitive product.

The following facilities comprise the Akebono Brake Corporation located in North America referred to in this manual as AKEBONO. Requirements set forth in this manual are approved by Akebono Quality Management.

4.1.1.1. AKEBONO Brake Corporation (ABC) 310 Ring Road Elizabethtown, Kentucky 42701 Ph. (270) 234-5500
4.1.1.2. AKEBONO Engineering Center (AEC) - R&D Center 34385 West Twelve Mile Road Farmington Hills, Michigan 48331 Ph. (248) 489-7400
AKEBONO Brake Corporation- Glasgow (ABG) 1765 Cleveland Avenue Glasgow, Kentucky 42141 Ph. (270) 678-1765 Fax: (270) 678-5659
AKEBONO Brake Corporation- Elizabethtown (ABE) 300 Ring Road Elizabethtown, Kentucky 42701 Ph. (270) 737-4906 Fax: (270) 737-3044
AKEBONO Brake Corporation- Tennessee (ABCT) 780 International Blvd. Clarksville, TN 37040 USA Ph. (931) 553-6500
AKEBONO Brake Corporation- South Carolina (ABCS) 201 Metropolitan Drive West Columbia, SC 29170 USA Ph. (803) 227-1300
AKEBONO Brake Mexico S.A. de C.V. (ABM) Av. Mineral De Valenciana 186 Fracc, Industrial Santa Fe, Guanajuato Puerto Interior, Silao, Guanajuato, C.P. 36275, Mexico Ph. +52 472-748-9116

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Revision History

Revision Date	Description	Comments
02/28/2005	Initial Publication – This manual supersedes Document No. 002 issued April 24, 2003.	Establish common requirements between Akebono Corporation North America, Akebono Subsidiaries, and Partnerships
05/02/2005	Reformatted document to PDF	none
4/4/2008	Added applicable form numbers to context of requirements. Redefined Quality Philosophy.	none
8/15/08	Deleted 1.67 Ppk requirement from page 13, Section 7.3.4.f.5 and added "should follow AIAG-PPAP Manual".....; Changed the minimum capability study qty from 100 pieces to 125, see 7.3.4.f.6; Changed 7.4.B.2 from ten consecutive shipments to five, see page 18.	To align requirements with AIAG-PPAP and SPC Manuals and Customer-Specific-Requirements
7/14/09	Revised Pg 16 (5) to reflect PPAP status sheet ABC-F033 certified pallet. Revised Pg 14, 7.3 (m) to Mini-Tab preferred. For suppliers without Mini-Tab use form SPC 3x10 Gage Study ANOVA (#ABC-F093	none
11/12/09	Updated reflecting the release of ISO9001:2008 /TS16949:2009	No new requirements.
4/7/10	Added ABCT and ABCS to manufacturing sites (Pg 2-3). Added ABCT and ABCS to Section 9.0, Facility Specific Requirements (Pg 26).	none
12/13/10	7.3- o. Safe Launch Revision 7.3- 4. Limited & Full PPAP Approval revision 7.3-J, 2-3 Pre-Launch (Pre-Production) Control Containment Revision 7.4- 5, Quality Awards and Supplier of the Year Revisions 7.5- G, Service Agreement	Major Process, System Changes
8/2/11	Change and rewording of all sections to adhere to current processes and procedures	none
9/16/11	Change of Reference from ABC-W007 to ABC-E007 Elimination of Reference to ABC-F061 Reformatted Document (above section references invalid, for current reference see Table of Content)	none



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6/12/12	Change of Terminology from "Technical Meeting Minutes" to "Supplier Kick-Off Meeting" (ABC-F050)	none
12/14/12	Revised Annual PPAP Resubmission handling, Akebono is now placing responsibility on supplier to complete annual layout and maintain evidence to be provided upon request. Changed SCR Rank explanation and added reference to PFMEA Severity criteria.	none
8/12/2014	Revised approach to align with ISO/IATF 16949 manual to highlight Akebono Specific Requirements. Moved Production Part Approval Requirements to a separate document to clarify requirements more clearly.	Section numbering matches ISO/IATF 16949 manual.
10/6/15	Section 7.5.5 changed e-mail address for packaging changes. Added to section 8.5.2.4 "(*Supplier requested extensions may be granted by Akebono SQA depending on justification for request. Ex: Corrective action will require purchase of new equipment scheduled for specified future date.)"	none
6/1/17	Updated section 8.5.2 removing reference to ABC-F128 as the form is superseded by the system generated SCR report from Elements. Reworded 8.5.2.1 to indicate problem solving shall be in accordance with automotive industry standard formats.	none
1/9/18	Revised and reformatted for IATF 16949	none
5/1/18	Updates to page 9 sections 6.1.2.1 and 6.1.2.3. And to page 19 section 8.4.1.2	none

4. Content of the Organization

4.1. Understanding the organization and its content

No Akebono Brake Corporation specific requirement for this section.

4.2. Understanding the needs and expectations of interested parties

No Akebono Brake Corporation specific requirement for this section.

4.3. Determining the scope of the quality management system

This manual is intended to provide our valued Supply Partners documented information to understand the quality requirements of Akebono Brake Corporation. It establishes the minimum requirements for all direct material suppliers of production materials and processing services purchased by Akebono Brake Corporation.

Several section headers are followed by the statement “No Akebono Brake Corporation specific requirement for this section.” The presence of this statement does not mean that no other commercial or technical requirements exist for the subject addressed in the section, or that this statement supersedes existing commercial or technical requirements.

This manual applies to all companies that have a contractual direct material purchase agreement with AKEBONO and is a supplement to all terms and conditions covered by purchase documents, specified warranty agreements, and requirements of engineering drawings/specifications and process instructions. The requirements set forth in this document are based on ISO 9001 and IATF 16949 standards.

Suppliers are expected to have a quality system that is conforming to the ISO 9001 / IATF 16949 Technical Specification. Conformity with ISO 9001 is the first step in achieving this goal.

AKEBONO and its customers reserve the right to visit Suppliers with the express purpose of reviewing all processes that pertain to the production of contracted products to confirm compliance with stated requirements.

4.3.1. Determining the scope of the quality management system – supplement

No Akebono Brake Corporation specific requirement for this section.

4.3.2. Customer specific requirements

While this manual defines the requirements of Akebono Brake Corporation those of our customers may flow to sub-suppliers when applicable.

4.4. Quality management system and its processes

4.4.1.

No Akebono Brake Corporation specific requirement for this section.

4.4.1.1. Conformance of Products and processes

No Akebono Brake Corporation specific requirement for this section.

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4.4.1.2. Product safety

No Akebono Brake Corporation specific requirement for this section.

4.4.2.

No Akebono Brake Corporation specific requirement for this section.

5. Leadership

5.1. Leadership and Commitment

5.1.1. General

No Akebono Brake Corporation specific requirement for this section.

5.1.1.1. Corporate Responsibility

No Akebono Brake Corporation specific requirement for this section.

5.1.1.2. Process Effectiveness and Efficiency

No Akebono Brake Corporation specific requirement for this section.

5.1.1.3. Process Owners

No Akebono Brake Corporation specific requirement for this section.

5.1.1.4. Customer Focus

No Akebono Brake Corporation specific requirement for this section. However, Top management shall monitor customer satisfaction as published on the Akebono Supply Partner Performance scorecard and take action when appropriate.

5.2. Policy

5.2.1. Establishing the quality policy

No Akebono Brake Corporation specific requirement for this section.

5.2.2. Communicating the quality policy

No Akebono Brake Corporation specific requirement for this section.

5.3. Organizational Roles, Responsibilities and Authorities

No Akebono Brake Corporation specific requirement for this section.

5.3.1. Organizational Roles, Responsibilities and Authorities – supplemental

Suppliers shall notify Akebono Brake Corporation Supply Chain Quality & Development in writing within 10 working days of and changes to senior management responsible for Product Quality or company ownership.

5.3.2. Responsibility and authority for product requirements and

corrective actions

No Akebono Brake Corporation specific requirement for this section.

6. Planning**6.1. Actions to address risks and opportunities****6.1.1.**

No Akebono Brake Corporation specific requirement for this section.

6.1.2.

No Akebono Brake Corporation specific requirement for this section.

6.1.2.1. Risk Analysis

- Suppliers shall develop risk assessment and risk management plans and procedures designed to identify risks to Supplier's/Akebono's business and set forth actions to be taken in the event such risks should materialize.

6.1.2.2. Preventive Action

No Akebono Brake Corporation specific requirement for this section.

6.1.2.3. Contingency Plans

- Suppliers shall develop contingency plans and procedures designed to identify risks to Supplier's/Akebono's business and set forth actions to be taken in the event such risks should materialize.
- Examples of contingency planning include, but not limited to: key equipment failures; interruption from externally provided products, processes, and services; recurring natural disasters; fire; utility interruptions; labor shortages; infrastructure disruptions; capacity issues.
- Suppliers shall notify the Akebono Brake Corporation receiving plant, their Supply Chain Buyer, and their Supply Chain Quality Engineer within 24 hours of production interruption. Be prepared to communicate the nature of the problem and to discuss immediate actions to assure continued supply of product. Akebono Brake Corporation reserves the right to review the Contingency Plans of our suppliers upon request.

6.2. Quality Objectives and planning to achieve them**6.2.1. Quality Objectives**

No Akebono Brake Corporation specific requirement for this section.

6.2.2. Plans to achieve Quality Objectives

No Akebono Brake Corporation specific requirement for this section.

6.2.2.1. Quality Objectives and planning to achieve them –

Supplemental

No Akebono Brake Corporation specific requirement for this section.

6.3. Planning of changes

No Akebono Brake Corporation specific requirement for this section.

7. Support

7.1. Resources

7.1.1. General

No Akebono Brake Corporation specific requirement for this section.

7.1.2. People

No Akebono Brake Corporation specific requirement for this section.

7.1.3. Infrastructure

No Akebono Brake Corporation specific requirement for this section.

7.1.3.1. Plant, Facility and Equipment Planning

No Akebono Brake Corporation specific requirement for this section.

7.1.4. Environment for the operation of processes

No Akebono Brake Corporation specific requirement for this section.

7.1.4.1. Environment for the operation of processes – supplemental

No Akebono Brake Corporation specific requirement for this section.

7.1.5. Monitoring and Measuring Resources

7.1.5.1. General

No Akebono Brake Corporation specific requirement for this section.

7.1.5.1.1. Measurement System Analysis

In addition to ISO 9001 & IATF 16949 requirements, Gage R&R Studies shall be ANOVA Method unless otherwise approved. Akebono Brake Corporation form ABC-F093 (Gage Study ANOVA Method may be used however Mini-tab is preferred.

7.1.5.2. Measurement Traceability

No Akebono Brake Corporation specific requirement for this section.

7.1.5.2.1. Calibration/ Verification Records

No Akebono Brake Corporation specific requirement for this section.

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7.1.5.3. Laboratory Requirements

7.1.5.3.1. Internal Laboratory

No Akebono Brake Corporation specific requirement for this section.

7.1.5.3.2. External Laboratory

No Akebono Brake Corporation specific requirement for this section.

7.1.6. Organizational Knowledge

No Akebono Brake Corporation specific requirement for this section.

7.2. Competence

No Akebono Brake Corporation specific requirement for this section.

7.2.1. Competence – Supplemental

No Akebono Brake Corporation specific requirement for this section.

7.2.2. Competence – on-the-job Training

No Akebono Brake Corporation specific requirement for this section.

7.2.3. Internal Auditor Competency

No Akebono Brake Corporation specific requirement for this section.

7.2.4. Second-Party Auditor Competence

No Akebono Brake Corporation specific requirement for this section.

7.3. Awareness

In addition to ISO 9001 and IAFT 16949 requirements, suppliers shall ensure that personnel are aware of the consequences for nonconformity to quality requirements of automotive brake components.

7.3.1. Awareness – Supplemental

No Akebono Brake Corporation specific requirement for this section.

7.3.2. Employee Motivation and Empowerment

No Akebono Brake Corporation specific requirement for this section.

7.4. Communication

No Akebono Brake Corporation specific requirement for this section.

7.5. Documented Information

7.5.1. General

No Akebono Brake Corporation specific requirement for this section.

7.5.1.1. Quality Management System Documentation

No Akebono Brake Corporation specific requirement for this section.

7.5.2. Creating and Updating

No Akebono Brake Corporation specific requirement for this section.

7.5.3. Control of Documented Information

7.5.3.1.

No Akebono Brake Corporation specific requirement for this section.

7.5.3.2.

No Akebono Brake Corporation specific requirement for this section.

7.5.3.2.1. Records Retention

In addition to ISO 9001 and IATF 16949 requirements, Quality Records shall be maintained for a minimum of ten years. This applies to PPAP, evidence of on-going product conformance (material and reliability), change control records, purchase orders, and traceability.

7.5.3.2.2. Engineering Specifications

No Akebono Brake Corporation specific requirement for this section.

Note: Suppliers should understand that Akebono Brake Corporation Engineering Drawings for Production Materials are identified by the following prefixes:

PROTOTYPE

- OB = Disc Brake
- OC = Drum Brake
- PX = Friction Pad Assemblies
- OM = Wheel End
- 9X = Common Component Parts

PRE-PRODUCTION

- AB = Disc Brake
- AC = Drum Brake
- PZ = Friction Pad Assemblies
- AM = Wheel End
- 9Z = Common Component Parts

PRODUCTION

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- 51 = Disc Brake
- 52 = Drum Brake
- P1 = Friction Pad Assemblies
- 63 = Wheel End
- 90 = Common Component Parts

AKEBONO drawings have the following nomenclature:

5	1	-	B	1	2	3	4	-	4	7	0	0	3	-	0	1
Level or Prefix			Theme or Model				Part (brake) type				Rev Level					

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8. Operation

8.1. Operational planning and control

In addition to the requirements of ISO 9001 and IATF 16949, Suppliers shall ensure the effective and efficient operation of product realization and support processes and related processes. Relevant activities, actions, and resources shall be defined in order to achieve customer satisfaction through all phases of product realization.

Quality planning is conducted in accordance with the AIAG Advanced Product Quality Planning and Control Plan manuals.

8.1.1. Operational Planning and Control - Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.1.2. Confidentiality

Suppliers are required to sign Confidentiality agreements.

8.2. Requirements for products and services

8.2.1. Customer Communication

In addition to ISO 9001 and IATF 16949 requirements, in order to facilitate ongoing communication, suppliers will be required to complete and return a Supplier Contact Profile (ABC-F034).

8.2.1.1. Customer Communication – Supplemental

A Supplier Kick-Off Meeting (per Form ABC-F050) will be scheduled and conducted by the appropriate Supply Chain Buyer with support of Supply Chain Quality representative to ensure all requirements for new part launch are communicated to and understood by Supplier. Preferred attendance: Representatives to cover Commercial, Manufacturing and Quality topics.

8.2.2. Determining the Requirements for Products and Services

Suppliers are required to participate in design reviews and will have the opportunity to clarify any questions about the intended use of the component. The supplier is therefore expected to fully understand the intended use prior to the acceptance of a contract.

8.2.2.1. Determining the Requirements for Products and Services – Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.2.3. Review of the Requirements for Products and Services

8.2.3.1.

In addition to ISO 9001 and IATF 16949 requirements:

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- Requirements related to the product extend to agreements as stated in the contract and Purchase Order Terms and Conditions.
- Any requirements differing from the quotation shall be resolved.
- ABC Supply Chain Buyers are the approving authority for changes to a Purchase Order (PO) that revises the terms and conditions, packaging specification requirements, quantity, delivery, and/or cost requirements from the original contract agreement.
- Effective arrangements must be implemented to facilitate efficient communications, electronic or other with AKEBONO regarding product information, inquires, production orders, and feedback; including quality, delivery, and cost concerns.

8.2.3.1.1. Review of the Requirements for Products and Services – Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.2.3.1.2. Customer-Designated Special Characteristics

Akebono drawings may contain special characteristics and in some cases specified methods of control. During the development of the Safe Launch plan additional Special Characteristics may be established. The deployment of special characteristics within the suppliers’ manufacturing process is required.

Akebono drawings use these symbols to designate special characteristics:		
	Safety Characteristic	Safety related product characteristics for which variation out of specification could affect the product’s safety or its compliance with government regulations.
	Key Characteristic	Key related product characteristics such as fit, performance or appearance, for which variation out of specification could affect customer satisfaction with the product or the ability to build or process the part.
	SPC Control	The characteristic shall be controlled through Statistical Process Control (SPC) methods.
	Monitoring Control	The characteristic shall be controlled through monitoring methods developed and agreed upon during the APQP process.
	PV Control	The characteristic shall be controlled and verified through the initial Product Validation

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		(PV).
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8.2.3.1.3. Organization Manufacturing Feasibility

No Akebono Brake Corporation specific requirement for this section.

8.2.3.2.

No Akebono Brake Corporation specific requirement for this section.

8.2.4. Changes to requirements for Products and Services

No Akebono Brake Corporation specific requirement for this section.

8.3. Design and Development of Products and Services

8.3.1. General

No Akebono Brake Corporation specific requirement for this section.

8.3.1.1. Design and Development of Products and Services – Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.3.2. Design and Development Planning

No Akebono Brake Corporation specific requirement for this section.

8.3.2.1. Design and Development Planning – Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.3.2.2. Product Design Skills

No Akebono Brake Corporation specific requirement for this section.

8.3.2.3. Development of Product with embedded software

No Akebono Brake Corporation specific requirement for this section.

8.3.3. Design and Development Inputs

No Akebono Brake Corporation specific requirement for this section.

8.3.3.1. Product Design Input

No Akebono Brake Corporation specific requirement for this section.

8.3.3.2. Manufacturing Process Design Input

In addition to ISO 9001 and IATF requirements, during manufacturing process design and development, consideration shall be given to “Special/ Critical” characteristics identified internally by the supplier, by Akebono Brake Corporation, and by customers of Akebono.

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8.3.3.3. Special Characteristics

No Akebono Brake Corporation specific requirement for this section.

8.3.4. Design and Development Controls

No Akebono Brake Corporation specific requirement for this section.

8.3.4.1. Monitoring

In addition to ISO 9001 and IATF 16949 requirements, product and process design reviews will be held periodically with the supplier to ensure effective communication and progress according to plan.

Product / Process designs shall be verified by line trials etc., validated by the Run @ Rate and initial lot containment activities in accordance with planned arrangements. (ABC-F052 or approved equivalent) Records shall be maintained and available for review as required by Akebono.

8.3.4.2. Design and Development Validation

No Akebono Brake Corporation specific requirement for this section.

8.3.4.3. Prototype Program

In addition to the requirements of ISO 9001 and IATF 16949:

- Prototype requirements will be included with the prototype order. In addition to Drawings, inspection requirements will be communicated at the time of order using form ABC-F353, the inspection results must be provided as instructed. A ballooned drawing shall be provided in instances where 100% layout has been requested using ABC-F031 or equivalent.
- Prototype samples that do not meet design requirements must be approved in writing (Deviation) by the design responsible engineer (refer to contact on ABC-F353).
- In addition to any other labels, a minimum of two "Special Handling Required" (ABC-F046) labels, printed or copied on "ORANGE PAPER" must be attached on adjacent sides of each container. The "Special Handling Required" label is not a substitute for, but in addition to standard Bar Code Labels.
- When prototype samples are shipped on a skid, they must not be combined with any production approved materials.
- Contact the ABC Supply Chain buyer if there are questions concerning Prototype Samples labeling or shipping requirements.
- Additional documentation including a Prototype Control Plan may be required. These additional requirements will be communicated through the Supply Chain prototype buyer.

8.3.4.4. Product Approval Process



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In coordination with ISO 9001 and IATF 16949 requirements, Akebono must require our suppliers to conform to the product and manufacturing process approval procedure required by our customer. Refer to “Akebono Customer Specific Requirements for PPAP”, Document number ABC-M002A, for specific information.

8.3.5. Design and Development Outputs

No Akebono Brake Corporation specific requirement for this section.

8.3.5.1. Product Design Outputs – Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.3.5.2. Manufacturing Process Design Output

No Akebono Brake Corporation specific requirement for this section.

8.3.6. Design and Development Changes

In coordination with ISO 9001 and IATF 16949 requirements:

Planned changes to process and/or material must be submitted in writing using Supplier Process Change Request (SPCR) form (ABC-F057). This requirement is inclusive of sub-supplier changes.

- All requests shall be submitted as early as possible to: SupplierPCR@akebono-usa.com.
- The supplier responsible section must be filled out completely to avoid immediate rejection.
- Submissions will need to include sufficient information for Akebono to evaluate; instances where additional information has to be requested will only delay the process.
- Each SPCR will be evaluated and given an initial disposition which will be communicated back to the originator. This communication step is NOT authorization to proceed; it is acknowledgement of receipt and indication of either rejection or the continuation of the requested change within the Akebono change management process.
- As the SPCR advances through the Akebono process you will be contacted to work out change management details such as, PPAP requirements, submission timing, and implementation timing.
 - Change implementation timing can be sensitive in our industry and as such, it is expected that the Supplier will adhere to established dates confirmed after change request approval. Failure to maintain schedule could delay the PPAP approval and subsequent implementation.

8.3.6.1. Design and Development Changes - Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.4. Control of externally provided products and services

8.4.1. General

No Akebono Brake Corporation specific requirement for this section.

8.4.1.1. General –Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.4.1.2. Supplier Selection Process

In addition to IATF 16949 requirements, Akebono uses the following tools for initial and on-going selection and evaluation.

- Prospective / new suppliers are required to complete and submit a Supplier Pre-assessment Survey (ABC-F051) issued by ABC Purchasing or ABC Supplier Quality.
- Suppliers must comply with Akebono EDI requirements in order to be eligible for new business award.
 - All suppliers non-compliant with EDI requirement are placed on New Business Hold.
- Quality Systems and/or Process Audit(s) are completed, by ABC Supplier Quality or another qualified Akebono associate.
- Supplier shall permit Akebono to conduct onsite assessments as deemed necessary to confirm their ability to supply products in accordance with requirements.
- Supplier shall cooperate and respond to Risk Management / Mitigation initiatives in a timely manner as well as requests resulting from any financial assessments.

8.4.1.3. Customer Directed Sources

No Akebono Brake Corporation specific requirement for this section.

8.4.2. Type and Extent of Control

No Akebono Brake Corporation specific requirement for this section.

8.4.2.1. Type and Extent of Control – Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.4.2.2. Statutory and Regulatory Requirements

In consideration of this section, applicable Statutory and Regulatory requirements include but may not be limited to the following:

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- Safety Data Sheet (SDS) for component and/or other items such as rust preventatives, oils, adhesives, etc. shall be submitted.
- IMDS Submissions for Environmental compliance are required and are submitted via MDSsystem.com as identified below.
 - On initial PPAP Submission
 - Revised Drawing Releases (Pre-production level to Production level part number)
 - Supplier or sub-supplier changes, Mass change > 5%, Material / Chemistry change(s) including coating/plating etc.

Knowledge regarding IMDS submission is part of doing business. A supplier needing assistance should use the public pages of mdsystem.com and also enroll in training. The following address provides initial introduction/training to suppliers on inputting IMDS. <https://public.mdsystem.com/web/imds-public-pages/reading/>

Conflict Minerals: Supplier must report compliance to HR4173 Regulation 1502 regarding prohibition of Conflict Minerals. (Where applicable)

8.4.2.3. Supplier Quality Management System Development

No Akebono Brake Corporation specific requirement for this section.

Note: Suppliers are expected to have a quality system that is conforming to ISO 9001 and IATF 16949. Suppliers are required to provide evidence of 3rd party registration. Failure to provide a current (non-expired) certificate may result in New Business Hold.

8.4.2.3.1. Automotive Product Related Software or Automotive Products with Embedded Software

No Akebono Brake Corporation specific requirement for this section.

8.4.2.4. Supplier Monitoring

No Akebono Brake Corporation specific requirement for this section.

8.4.2.4.1. Second Party Audits

No Akebono Brake Corporation specific requirement for this section.

8.4.2.5. Supplier Development

No Akebono Brake Corporation specific requirement for this section.

8.4.3. Information for external providers

No Akebono Brake Corporation specific requirement for this section.

8.4.3.1. Information for external providers – Supplemental

No Akebono Brake Corporation specific requirement for this section.

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8.5. Production and Service Provision

8.5.1. Control of Production and Service Provision

No Akebono Brake Corporation specific requirement for this section.

8.5.1.1. Control Plan

In addition to IATF 16949 requirements, prior to implementation, notification is required when updating the control plan. Appropriate notification methods include communication via a Supplier Process Change Request (SPCR), or an approved Supplier Concern Report (SCR) and may require the submission of a new PPAP.

8.5.1.2. Standardized Work-Operator Instructions and visual standards

No Akebono Brake Corporation specific requirement for this section.

8.5.1.3. Verification of Job Set-ups

No Akebono Brake Corporation specific requirement for this section.

8.5.1.4. Verification after Shutdown

No Akebono Brake Corporation specific requirement for this section.

8.5.1.5. Total Productive Maintenance

No Akebono Brake Corporation specific requirement for this section.

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

In addition to and in support of IATF 16949 requirements, a Purchase Order for tooling will normally be accompanied by a purchase order for a specific quantity of parts manufactured or processed by the tooling.

- Upon receipt of a tooling PO, the Supplier will prepare a critical path schedule showing the main elements of the schedule including both start and completion dates.
- The schedule must include the following elements: Tool design, Tool build, Sample run, Data acquisition (layout, testing, etc.), PPAP submission
- Suppliers may be expected to provide an updated schedule as specified during the Supplier Kick-Off Meeting.
- Unless otherwise negotiated, Suppliers are responsible for and shall provide lifetime maintenance of tooling. This should be clearly indicated in the quotation process.

8.5.1.7. Production Scheduling

In addition to and in support of IATF 16949 requirements, suppliers are expected to comply to purchase orders, release quantities, due dates, and to utilize forecasts and production releases to establish a production schedule that ensures on time

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delivery. Release dates are the date of shipment arrival. Shipments implemented on a milk-run pick-up system will have a specified window.

- A Supplier must notify the affected Production Control Scheduler as soon as it appears that a shipment may be late or short of the quantity due.
- Any shipment not ready for pick up within the defined window will be considered incomplete, leaving the supplier responsible for freight cost to meet release requirements.
- Unless agreed to in writing by either Production Control, quantities specified on releases must be exact to avoid delivery performance infractions.
- Releases will be in multiples of the established standard quantity. All containers must contain the standard quantity set up for that part
- Excessive over-shipments (above 10%) and excessively early shipments (more than two days early) are subject to return at Supplier cost.

8.5.2. Identification and Traceability

No Akebono Brake Corporation specific requirement for this section.

8.5.2.1. Identification and Traceability – Supplemental

In addition to IATF 16949 requirements, records of lot control shall be retained for a minimum of 10 years unless otherwise stipulated in writing.

8.5.3. Property Belonging to Customers or External Providers

In addition to the production tooling management requirements of IATF 16949 section 8.5.1.6, property owned by either Akebono Brake Corporation or its Customer, shall be identified as required by the owner. Property includes but is not limited to tooling, gages, test equipment, inspection jigs, dunnage, intellectual property and data.

- AKEBONO owned property shall be permanently marked and identified by theme number unless otherwise specified. (Reference above section 7.5.3.2.2)
- Tool Acceptance Report (ABC-F036), is required to document Akebono owned tooling. The form must be completed and provided with the PPAP submission.

8.5.4. Preservation

No Akebono Brake Corporation specific requirement for this section.

8.5.4.1. Preservation-Supplemental

In addition to IATF 16949 requirements, suppliers need to understand that preservation of product begins with a robust packaging plan. The planning for production packaging begins during the design review process and when the supplier is responsible for packaging they are expected to bring a proposal to the Kick-Off meeting. General Packaging and labeling Requirements are listed below but are subject to negotiation with the final requirements established by an approved Packaging Data Sheet (ABC-F045)

- Skids should not exceed 48" x 48", the proposed size should be selected to take up the minimum amount of trailer space.
- Maximum weight per individual container is 35 lbs. unless approved in advance in writing. An individual container for this purpose is one meant to be lifted by a human such as cardboard box or returnable tote. This weight limit excludes bulk containers.
- Bar Codes must be produced using AIAG B-10 compliant, CODE 39 BAR CODES. Labels are required on at least two adjacent sides of the container. White is the default color, alternate colors may be requested or proposed. Sample packaging and labels may be required in advance of product shipment.
- When Master labels are used, they must NOT be attached to individual containers, when allowed, a mixed load label for each part number on the skid is required on two sides.
 - For mass production parts, each shipment must include a master bar code label for each part number in the shipment.
 - Multiple master labels may be placed in an envelope with the packing list. (A separate sheet with the required bar coded data may be substituted for the master labels if approved in advance by the receiving plant.)
- Upon approval, ABC buyer will submit a copy of the Packaging Data Sheet (ABC-F045) to the Supplier for inclusion with the PPAP submission. If the parts are symmetrical in shape, with the same intended packaging, only one Packaging Data Sheet is required; however, samples of all bar code labels must be submitted.
- Where suppliers are responsible for packaging design, they assume product preservation responsibility and are expected to conduct packaging design validation trials, prior to use in shipping PPAP parts. Akebono approval of the Packaging Data Sheet does not absolve the supplier of this obligation.
- Packaging changes may be submitted using a Supplier PCR (ABC-F057) emailed to "SupplierPCR@akebono-usa.com". A revised Packaging Data Sheet (ABC-F045) should be included with the request.
- If Akebono furnished returnable containers are in need of repair, return container EMPTY, labeled to the attention of "Material Control" and state nature of problem.

8.5.5. Post-Delivery Activities

No Akebono Brake Corporation specific requirement for this section.

8.5.5.1. Feedback of Information from Service

No Akebono Brake Corporation specific requirement for this section.

8.5.5.2. Service Agreement with Customer

No Akebono Brake Corporation specific requirement for this section.

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8.5.6. Control of Changes

No Akebono Brake Corporation specific requirement for this section.

8.5.6.1. Control of Changes – Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.5.6.1.1. Temporary change of process controls

No Akebono Brake Corporation specific requirement for this section.

8.6. Release of Products and Services

No Akebono Brake Corporation specific requirement for this section.

8.6.1. Release of Products and Services - Supplemental

No Akebono Brake Corporation specific requirement for this section.

8.6.2. Layout Inspection and Functional Testing

In support of IATF 16949 requirements, annual submission of dimensional layout from each cavity, tool or center may be required to support the requirement of an Akebono Brake Corporation customer. This requirement may be included as part of an annual PPAP.

8.6.3. Appearance Items

No Akebono Brake Corporation specific requirement for this section.

8.6.4. Verification and acceptance of conformity of externally provided products and Services

In addition to IATF 16949 requirements, suppliers are required to maintain quality records and traceability to the raw material certificates of analysis as appropriate.

8.6.5. Statutory and Regulatory Conformity

No Akebono Brake Corporation specific requirement for this section.

8.6.6. Acceptance Criteria

No Akebono Brake Corporation specific requirement for this section.

8.7. Control of Nonconforming Outputs

8.7.1. Control of Nonconforming Outputs – Supplement

No Akebono Brake Corporation specific requirement for this section.

8.7.1.1. Customer authorization for concession

In support of IATF 16949 Requirements, whenever the product or manufacturing process is different from that which is currently approved, a Deviation request (ABC-F059) submission is required from the supplier. In the event that a request is

approved, quantity, duration, and product identification terms will be provided as part of the authorization notification.

8.7.1.2. Control of Nonconforming product - customer-specified product

No Akebono Brake Corporation specific requirement for this section.

8.7.1.3. Control of Suspect Product

No Akebono Brake Corporation specific requirement for this section.

8.7.1.4. Control of Reworked Product

No Akebono Brake Corporation specific requirement for this section.

8.7.1.5. Control of Repaired Product

No Akebono Brake Corporation specific requirement for this section.

8.7.1.6. Customer Notification

No Akebono Brake Corporation specific requirement for this section.

8.7.1.7. Nonconforming product disposition

No Akebono Brake Corporation specific requirement for this section.

8.7.2. Retain documented information

No Akebono Brake Corporation specific requirement for this section.

9. Performance Evaluation

9.1. Monitoring, measuring, analysis and evaluation

9.1.1. General

No Akebono Brake Corporation specific requirement for this section.

9.1.1.1. Monitoring and Measurement of Manufacturing Processes

No Akebono Brake Corporation specific requirement for this section.

9.1.1.2. Identification of Statistical Tools

No Akebono Brake Corporation specific requirement for this section.

9.1.1.3. Application of statistical concepts

No Akebono Brake Corporation specific requirement for this section.

9.1.2. Customer Satisfaction

No Akebono Brake Corporation specific requirement for this section.

9.1.2.1. Customer Satisfaction – Supplemental

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Supplier performance scorecards are compiled monthly and sent to all active direct material suppliers as one measure for your evaluation of customer satisfaction.

9.1.3. Analysis and Evaluation

No Akebono Brake Corporation specific requirement for this section.

9.1.3.1. Prioritization

No Akebono Brake Corporation specific requirement for this section.

9.2. Internal Audit

9.2.1.

No Akebono Brake Corporation specific requirement for this section.

9.2.2.

No Akebono Brake Corporation specific requirement for this section.

9.2.2.1. Internal Audit Program

No Akebono Brake Corporation specific requirement for this section.

9.2.2.2. Quality Management System Audit

No Akebono Brake Corporation specific requirement for this section.

9.2.2.3. Manufacturing Process Audit

In addition to IATF 16949 requirements, suppliers are required to complete and provide Akebono Brake Corporation with annual self-assessments to AIAG Special Process assessments CQI-9, CQI-11, and CQI-12 as applicable for all processes being used to manufacture production materials. Additional CQI self-assessments may be requested based on industry changes and supplier performance.

9.2.2.4. Product Audit

No Akebono Brake Corporation specific requirement for this section.

9.3. Management Review

9.3.1. General

No Akebono Brake Corporation specific requirement for this section.

9.3.1.1. Management Review Supplemental

No Akebono Brake Corporation specific requirement for this section.

9.3.2. Management Review Inputs

No Akebono Brake Corporation specific requirement for this section.

9.3.2.1. Management Review Input – Supplemental

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No Akebono Brake Corporation specific requirement for this section.

9.3.3. Management Review Outputs

No Akebono Brake Corporation specific requirement for this section.

9.3.3.1. Management Review Outputs – Supplemental

No Akebono Brake Corporation specific requirement for this section.

10. Improvement

10.1. General

No Akebono Brake Corporation specific requirement for this section.

10.2. Nonconformity and Corrective Action

10.2.1.

In support of ISO 9001, a request for investigation will be communicated to a Supplier on a Supplier Concern Report (SCR). A SCR is the official communication tool used to inform a supplier of a nonconformance. It will indicate the level of response required as well as any immediate actions that should be taken to protect the supplier from further exposure as well as Akebono and our customer.

Suppliers will be charged for sorting and/ or reworking of their product. Charges shall include but are not limited to the following:

- Administrative Cost for any discrepant material received at Akebono.
- Any sorting/rework activity at an hourly rate including travel and shipping cost.
- Associated line downtime incurred by specific Akebono plant site.
- Necessary tool replacement or machine repair that is associated with the nonconformity.

When applicable, third-party containment may be required at the supplier's expense.

10.2.2.

No Akebono Brake Corporation specific requirement for this section.

10.2.3. Problem Solving

In support of IATF 16949, an automotive industry problem solving report, such as an 8D, is required for evidence of effective root cause determination, correction, prevention, and verification of effectiveness

10.2.4. Error-Proofing

No Akebono Brake Corporation specific requirement for this section.

10.2.5. Warranty Management System

No Akebono Brake Corporation specific requirement for this section.

10.2.6. Customer complaints and field failure analysis

In support of IATF 16949 requirements, timely corrective action response is required. Typical expectations are:

- 24 hours – Containment in place
- 14 days – Root Cause identified and report provided
- *30 days – Irreversible permanent corrective action implemented and effectiveness verified (*Supplier requested extensions may be granted by Akebono SQA depending on justification for request. Ex: Corrective action will require purchase of new equipment scheduled for specified future date.)

10.3. Continual Improvement

No Akebono Brake Corporation specific requirement for this section.

10.3.1. Continual Improvement – Supplemental

No Akebono Brake Corporation specific requirement for this section.