SUPPLIER

QUALITY MANUAL

YAZAKI Europe Group

YAZAKI

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Glossary of Terms

APQP	Advanced Product Quality Planning
BOS	Business Operating System
BU	Business Unit
CLP	Classification, Labeling and Packaging
CPA	Connector Position Assurance
EDI	Electronic Data Interchange
EH&S	Environmental Health and Safety
ELV	End of Life Vehicle
GADSL	Global Automotive Declarable Substance List
GQRS-C	YAZAKI Global Quality Reporting System for Components
HIS	High Impact Supplier
IMDS	International Material Data System
IS	Initial Sample
KPI	Key Performance Indicator
MAM	Manufacturing Auxiliary Materials
MDS	Material Data Sheet
NDA	Non-Disclosure Agreement
OCM	Original Component Manufacturer
OEM	Original Equipment Manufacturer
OHSAS	Occupational Health and Safety Assessment Series
PO	Purchase Order
PTC	Porto Technical Centre
PPA	Production Process and Product Approval
PPAP	Production Part Approval Process
PPM	Parts Per Million
PSW	Part Submission Warrant
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
SD	Supplier Development
SDS	Safety Data Sheet
Shall	Mandatory requirement
Should	Recommendation
SICR	Supplier Initiated Change Request
SoC	Substance of Concern
SPDM	Supplier Performance Deviation Management

SPN	Supplier Part Number
SQA	Supplier Quality Assurance Engineer
SQE	Supplier Quality Engineer
SQIP	Supplier Quality Improvement Plan
SVHC	Substances of Very High Concern
PTC-SDM	Porto Technical Center - Supplier Data Management
XRF	X-Ray Fluorescence
YAZAKI	YAZAKI Europe Group
YPN	YAZAKI Part Number

1 Scope

The requirements defined in this Supplier Quality Manual apply to all suppliers of safe and marketable goods and services, in particular production parts and materials to Plants and BU customer locations within the YAZAKI Europe Group.

The YAZAKI Supplier Quality Manual is valid for the supply of production materials, software and Aftermarket products.

It is also valid for services that affect customer requirements such as sub-assembly, sequencing, sorting, rework, and calibration services.

It applies to all suppliers along the supply chain providing products to YAZAKI. It is also applicable for customer directed suppliers (directed buy).

YAZAKI suppliers are expected to extend the requirements of YAZAKI Supplier Quality Manual to their own suppliers.

This Quality Manual also applies to intra-Yazaki business to YAZAKI.

2 Purpose

The purpose of the YAZAKI Europe Group's Supplier Quality Manual is to clearly define the quality system procedures and disciplines to ensure and maintain a successful and professional relationship between YAZAKI Purchasing and suppliers.

These expectations are YAZAKI specific and are based upon and in addition to the latest editions of the following International and Global Management Standards: ISO9001, IATF16949, ISO14001, ISO 45001, Core Quality Tools (APQP, PPAP, FMEA, SPC and MSA), OEM/Customer Specific Requirements as well as applicable European Union environment legislation, and any applicable local legal requirements.

Requirements listed in this Manual do not constitute a restriction or exception to any stated regulations or legal requirements.

YAZAKI Europe Group depends on the quality, cost, delivery and environment provided by our suppliers. We are committed to developing strong supplier partnerships through mutual trust and commitment.

3 Management Systems requirements

3.1 Quality / Environmental / Health & Safety Management System

YAZAKI Europe Purchase Policy is wherever possible to only purchase goods & services from suppliers that hold third party certification for their Quality, Environmental and Occupational Health & Safety Management Systems. Ultimately, all suppliers will be required to hold third-party certification to latest editions of **IATF 16949**, **ISO 14001** and **ISO 45001**.

In the case of a certificate suspension decision from the supplier's IATF recognized Certification body, YAZAKI shall be informed by the supplier within 30 days of the decision. If no recertification is planned, the supplier shall inform YAZAKI, at least 3 months prior to the expiration date.

All suppliers of YAZAKI shall be third party registered to ISO 9001 (latest edition) by an accredited third-party certification body. YAZAKI Europe Group reserves the right, whenever deemed necessary, to carry out its own assessments on suppliers and / or their subcontractors (by agreement with the supplier).

IATF 16949 certificates are considered as valid only if provided by an **IATF recognized certification body.** Non-compliant suppliers shall provide a timing/transition plan to move as soon as possible to an approved IATF Certification Body - official list at the IATF site.

3.1.1 Certificate Management – YAZAKI Supplier Portal

Suppliers are required to manage their certificates of all active sites (Manufacturing locations, Sales offices & Logistic/ Warehouses/ Distribution Centres) in the YAZAKI Supplier Portal. Latest versions of Management System certificates shall be uploaded in this portal, as a minimum ISO 9001, IATF 16949, ISO 14001 and ISO 45001 certificates, other certificates are optional. Automatic system messaging to supplier users is activated once certificate expiry dates are entered. For further details refer to the ´ YAZAKI Europe Group Certificate Manual´ posted at the Supplier Portal

3.2 Regulatory and Statutory Compliance

The supplier shall apply the legal requirements of the production location and of the country of use (if named by YAZAKI) during the APQP phase to all products, processes or services (internal and external). This process shall be completed at the latest by PPA/PPAP submission.

YAZAKI suppliers shall adhere to and pass down all applicable statutory and regulatory requirements to their suppliers in the entire supply chain.

3.3 Environmental Protection

The supplier shall take responsibility to ensure compliance to all relevant environmental legislation, both applicable to the regions where goods are produced and/or sold or services are performed, as well as any additional specific requirements from customers. When necessary, investigations within the supply chain shall be done to assure all requirements are communicated effectively and complied with.

Effective environmental management, which ensures compliance with the respective applicable environmental regulations and improves continuously and efficiently the environmental conditions of the supplier, is an essential contribution towards supply security.

YAZAKI is committed to the protection of the environment. All YAZAKI plants are ISO 14001 certified. We therefore expect our suppliers to show voluntary commitment to environmental protection by implementing an environmental management system.

Upon request, suppliers shall provide recycling and disposal concepts appropriate for their products and related quantities. Additional data such as water consumption and wastewater, energy consumption and emissions (CO_2, VOC) may be requested for life cycle assessment of YAZAKI products.

All products and materials (including packaging thereof) delivered to YAZAKI shall be conform with below regulatory requirements:

- ELV, Directive 2000/53/EC
- REACH, Regulation (EC) No. 1907/2006
- RoHS (Restriction of Hazardous Substances), Directive 2011/65/EU
- CLP, Regulation (EC) No. 1272/2008
- Biocidal Products, Regulation (EU) No. 528/2012

- Packaging and Packaging Waste, Directive 94/62/EC
- Ozone Depletion Substances, Regulation (EC) No. 1005/2009
- POP (Persistent Organic Pollutants), Regulation (EU) No. 2019/1021
- Waste Framework, Directive 2008/98/EC
- Turkey REACH – KKDIK Regulation, Official Gazette No. 30105
- Turkey CLP – SEA Regulation, Official gazette No. 28848
- Turkey SDS – GBF Regulation, Official Gazette No. 29204
- Russia REACH – EURASIA TR EAEU 041/2017
- Russia SDS – GOST Standard 30333-2007
- GADSL (Global Automotive Declarable Substance List)
- YAZAKI Group Self-Control Substance List

plus all applicable revisions and amendments to the legislation that affect products in the supply chain and other local applicable legislations.

IMDS - International Material Data System, see http://www.mdsystem.com

In order to collect the necessary material data information, YAZAKI requires that suppliers report it through the International Material Data System directly.

YAZAKI´s IMDS Company ID# is 223417. YAZAKI's acceptance criteria are based on IMDS recommendations.

Supplier must be aware of updates to the GADSL and ensure that information submitted is correct and comply with the recommendations of the IMDS system.

YAZAKI can request clarifications and corrections to previously submitted and accepted IMDS data.

EU REACH Regulation (EC) No. 1907/2006

The Supplier must fulfill all obligations due to Registration, Evaluation, Authorization and Restriction of Chemicals. This includes communication obligations of SVHC in articles, even for spare parts and packaging.

Suppliers located outside the European Union have to name an Only Representative (OR) if they deliver products defined as ´substances´ or ´mixtures into the area of validity of the REACH regulation. The OR ensures that the REACH obligations are met. The OR's name has to be notified to the YAZAKI.

REACH SVHC

All substances added to the Candidate List and present in products above 0.1% w/w must be notified to YAZAKI. When the Candidate List is updated and new Substances of Very High Concern (SVHC) are added then the obligation for suppliers to inform their customers becomes immediately effective.

The supplier is requested not to use SVHC in articles and mixtures delivered to YAZAKI.

REACH Annex XIV (Authorization List)

Supplier shall not use any substance included in this list.

REACH Annex XVII (Restriction List)

Supplier shall only use substances from the list if it complies with the restrictions.

Safety Data Sheet (SDS)

For chemical products and raw materials suppliers are required to send an updated SDS to YAZAKI in English language and in the local language of the YAZAKI affiliates using these products. The SDS must be in accordance with REACH and CLP legislation requirements.

3.4 Corporate Social Responsibility and Supplier´s Code of Conduct

YAZAKI follows Corporate Social Responsibility activities based on the global YAZAKI Group Corporate Social Responsibility Policy and Strategy. YAZAKI specifies detailed requirements towards its suppliers in the document `Supplier's Code of Conduct´. The whole set of documents is available on YAZAKI's homepage, section `Suppliers - Purchasing Documents`.

3.5 Product Safety

Product safety and product liability are particularly significant for companies in the automotive industry. The supplier has producer responsibility (product liability) for their parts and processes, including parts or processes from sub-suppliers, which YAZAKI purchases to build their final products. Therefore, in order to prevent product liability risks, it is the responsibility of the supplier to do everything in their power, in terms of organization and technical matters, to guarantee the product safety.

The supplier shall have a documented process for the management of "product safety" related products and manufacturing processes.

YAZAKI Europe Group requires their suppliers to designate a Product Safety Representative (PSR) to be in charge of all related tasks described in IATF 16949 section 4.4.1.2.

Furthermore, the supplier shall apply these requirements to their supply chain.

3.6 Cybersecurity

Supplier must be able to demonstrate an Information Security Program which is formal, supported and maintained. This includes, but is not limited to:

- Information Security policies and controls
- Security Incident Response and Communication Plan
- Security Awareness Program which includes simulations and user training
- Identification and Management of security risks

Evidence of compliance may include an Information Security Certification (e.g., ISO27001, TISAX, SOC 1 or 2) from an external auditing body or a security assessment initiated by Yazaki which may be performed onsite or remote.

Supplier agrees to respond to requests about policies and timely report any cybersecurity breaches that could impact YAZAKI.

4 New Parts/Products

For each new part / product or first time buy for YAZAKI, the supplier must submit initial samples (IS) with a complete report, handling manuals and other supporting documents in accordance with requirements of IATF 16949, related AIAG / VDA manuals APQP & PPAP (latest edition) and any other OEM/Customer specific requirements specified during contract release free of charge. The report must contain YAZAKI part number, technical engineering level and clear and complete supplier identification data. PPAP packages must be complete, accurate and up to date for the products / parts in question always. Samples shall be provided free of charge to PTC Testing Centre for SoC testing, to the relevant YAZAKI manufacturing plant for assembly trials, and to the SQE upon request (see 4.6).

The suppliers of proprietary or other products /parts must provide documented evidence of formal OEM / customer approval of product validation, which clearly demonstrates conformance to YAZAKI requirements and OEM/customer requirements, including a signed PSW. Where PSW's must be updated on a regular basis, according OEM requirements e.g. annual lay-outs, suppliers will be notified by PTC-SDM to submit updated PPAP documentation free of charge. Initial Samples must be sent as scheduled and always before the start of volume production. Samples must be identified with "Initial Sample" labels and accompanied by appropriate documentation. YAZAKI Purchasing, SQE or PTC-SDM may define samples delivery to the relevant YAZAKI `Pilot Plant`.

Unless otherwise specified by YAZAKI, the submission of PPAP shall be according AIAG Level 3 or VDA2 with all applicable deliverables submitted.

4.1 YAZAKI Designed Products

For all YAZAKI designed products / parts and upon request of YAZAKI, APQP or VDA MLA/RGA methodology, must be applied by the supplier and follow upped by ASQE.

Project Management must be tracked via the **Integrated Supplier Quality Management System**. Supplier shall register to **Integrated Supplier Quality Management System** if required. In that case, **Integrated Supplier Quality Management System** -membership fee, is applicable, is at the cost of the supplier. Projects will be kicked off by the SQE who specifies APQP and PPAP scope.

Additionally, a Process Sign Off (including VDA 6.3 Process Audit, R@R, Capacity Check) must be carried out by the SQE (or by supplier) before initial sample submission, in order to validate the process and product (in accordance with IATF 16949 and any other OEM / Customer specific requirement. See also Section 4.2.

4.2 Customer Specific Requirements

Supplier is responsible to follow and implement latest revision of Customer Specific Requirement, available on https://www.iatfglobaloversight.org/oem-requirements/customer-specific-requirements/.

General customer specific requirements included in this Manual shall be implemented.

Additional customer specific requirements issued by YAZAKI OEM customers will be communicated on a project basis. Their application will be subject to an agreement between YAZAKI and the supplier.

4.3 Reasons for Initial Samples

The PPA/PPAP Approval Process is required if any of the following changes apply at the supplier or sub-supplier:

- if a product is ordered for the first time
- after the supplier has changed a subcontractor
- for all affected characteristics after any product modification
- for all affected characteristics following a drawing index modification
- following an interruption in delivery after a stop shipment (business on hold)
- following an interruption in delivery of more than one year
- following an interruption in production of more than one year
- if production procedures/processes have been changed

- following the introduction of new/modified molding equipment (e.g. stamping, rolling, pressing, forging, molding equipment, in the case of several dies/molds and/or multiple dies/molds, for each cavity/cluster)
- following any type of relocation of PPA/PPAP- approved production or the use of new or relocated machinery and/or operating materials
- after use of alternative materials and design changes in product appearance attributes
- change in test/inspection method or new technique (no effect on acceptance criteria). For change in test method, supplier should have evidence that the new method provides results equivalent to or better than the old (previous) method
- Production following upgrade, refurbishment, rearrangement of existing tooling or equipment, if requested by YAZAKI
- Re-qualification is not successful

Exceptions to approach and scope are only permissible in agreement with YAZAKI, for example in the following cases:

- interruption in delivery or production of more than one year
- small production batches, after-sales service parts
- standard and catalogue parts

Initial and SoC-samples (see 4.6) must follow the requirements with first submission to YAZAKI.

Documents, records, and initial sample parts may only be submitted if all specifications are fulfilled. In case of deviations, the supplier shall first obtain written permission from YAZAKI using the requested form CDAR, the CDAR form (Component Deviation Approval Request). The CDAR form is available at the YAZAKI Europe Supplier Portal and attach it to the submitted documentation. Initial samples with deviations that have no deviation approval will not be processed by YAZAKI.

The following shall be submitted along with the deviation request, if CDAR is approved for a limited quantity or time period:

- 8D report
- An action plan to return to planned serial conditions
- Risk Assessment
- The planned point of time when normal production can be resumed

4.4 Special Characteristics

Special Characteristics are specified by YAZAKI/OEM and documented on the drawings and/or specifications. They are to be identified as well, from the risk analysis of the supplier, e.g. from the product and/or process FMEA, based on the supplier's experience and knowledge.

Deviations in these characteristics can seriously affect product safety, product lifetime, assembly capability, product functionality, quality and can violate official or legal regulations.

The supplier shall agree to conduct the machine capability study and process capability study according to one of the automotive standards VDA Volume 2, VDA Volume 4 or AIAG book SPC.

If no other requirements are specified on drawings or OEM CSR, supplier shall use the following explanation according to VDA or alternative definition in AIAG.

- Machine capability/short-term process capability Cm/Cmk 1.67
- Preliminary process capability Pp/Ppk 1.67
- Process capability/long-term process capability Cp/Cpk 1.33

Until process capability has been verified, the characteristics shall be tested 100 % by the Supplier.

4.5 IMDS

For each new part an MDS according to IMDS recommendations must be submitted to YAZAKI via IMDS system and the information of MDS ID-number must be stated in the PPAP documentation. For all products / parts supplied, the supplier must automatically provide any changes to MDS.

4.6 Evidence of SoC-conformity

In order to restrict or eliminate hazardous substances and ensure that all components, materials and manufacturing auxiliary materials (MAM) used by YAZAKI fully comply with ELV/ RoHS directives, all suppliers shall submit one of the following two deliverables:

1) Samples free of charge to PTC Testing Centre for SoC compliance testing

The minimum Samples Quantities, that is necessary to send to PTC Testing Centre to perform SoC tests are the following:

- Components:
  - Connectors, grommets, plastic parts, metal parts, assemblies, fuse box, housings, CPAs: 4
  - Labels: 20
  - LCD's, PCB's: 6
  - Terminals, springs, nuts, bolts; fuses: 15
  - Only Plastic Protectors, covers (≥ 200 mm): 1
  - Small electronic parts (resistors, diodes, etc): 100
- Tube / Wire: 500 mm
- Tape: 1 Roll
- Liquid: 100 ml
- Powder sample: 10g
- Metal Sheet sample: total size ≥ 50 cm2
- Plastic Sheet sample: total size ≥ 10 cm2
- Raw Material (granulate): 50g

Tests performed in the YAZAKI PTC Testing Centre are XRF-screening and / or Thermal Desorption Mass Spectrometry (semi-quantitative tests) and are conducted for each homogeneous material. If one or more elements under analysis were detected above YAZAKI Screening limits during these tests, a more accurate technique is required (quantitative test).

In this case supplier shall submit samples of the affected single component for the additional tests free of charge. Quantities of the additional samples required, depend on the substance to be measured:

Element	Testing technique	Minimum quantities required (equivalent to)
Cadmium (Cd)	ICP-OES	0.1g
Lead (Pb)	ICP-OES	0.1g
Hexavalent Chromium (Cr6+) - metal	Colorimetric method using UV-Vis	25cm2 (superficial area)
Hexavalent Chromium (Cr6+) - nonmetal	Colorimetric method using UV-Vis	0.35g
Mercury (Hg)	ICP-OES	0.1g
PBB / PBDE	GC-MS	0.1g
Phthalates	GC-MS	1.0g

or

2) Evidence of SoC process conformity of the product:

Test report (not older than 12 months) with data measured by a laboratory that is accredited ISO17025 for these specific tests

The valid legal limits can be found in the latest version of the on ELV/ RoHS directives

4.7 Capacity Verification (Run at Rate)

A Run at Rate (R@R) is a performance driven trial run under serial production conditions, this can be one-day production or an agreed deviating time period, by Advance Supplier Quality Engineer.

The purpose of R@R is to demonstrate that YAZAKI requirements for supplier capacity are met, to provide evidence that the supplier can produce the required volumes to specification with existing capacity and to identify potential process weaknesses.

Potential reasons for performing R@R:

- new product/ new supplier
- changes in product, process or equipment
- capacity increase
- relocation of tool and/or equipment
- supplier performance problems

Unless otherwise agreed, the R@R shall be applied to all production material supplied to YAZAKI. The R@R Tool specified by YAZAKI shall be used.

Catalogue parts are excluded from this R@R requirement. In case of any exception from performing a R@R, supplier capacity for the respective parts shall then be assured and documented with a separate capacity commitment signed by the supplier.

The R@R shall be conducted either on all process steps or on individual bottleneck/critical process steps. When limited to individual process steps, the reason(s) shall be documented.

R@R result shall be provided using the YAZAKI R@R Verification Form signed by the Supplier.

The signed form R@R Verification is required for PPA/PPAP documentation.

4.8 CQI/Qualification of Special Processes

The AIAG (Automotive Industry Action Group) is publisher of the CQI guidelines (Continuous Quality Improvement). CQI formats are available at http://www.aiag.org/.

For suppliers and sub-suppliers dealing with special processes according to AIAG, relevant CQI-guidelines shall be considered.

If the result shows findings of the type “Need for Immediate Action” or “Fail Findings”, the supplier shall inform YAZAKI immediately and provide an action plan.

4.9 Customer’s Property

All tools for manufacturing, testing or inspection equipment belonging to YAZAKI or customers of YAZAKI shall be permanently marked to clearly show that they are property of YAZAKI or of the customer of YAZAKI. These tools shall only be used for YAZAKI products, unless an authorization in writing exists.

Tools cannot be relocated to other manufacturing location or subcontracted to 3rd parties without prior written approval from YAZAKI.

4.10 Packaging

Material packaging is part of the PPA/PPAP and as such to be agreed and validated during project phase, prior to PPA/PPAP approval. Packaging material must be according to REACH regulation, Packaging directive, customer and local requirements. A **`Packaging Specification`** template is available at the YAZAKI Supplier Portal. For further details see `YAZAKI Supplier Logistics Manual´

4.11 Communication of Approval

SQE will notify supplier with a documented approval or rejection of the IS and PPAP submission. In the event of rejection, YAZAKI Purchasing will be notified for consideration in tool payments. Until Full Approval, Green PPAP, complete tool payment to supplier will not be done.

4.12 Safe Launch

Safe Launch planning is designed to protect both YAZAKI and the supplier during the initial phases of product supply. A Safe Launch process shall be implemented to detect symptoms of potential issues in new processes and to ensure that new launches are defect free. To accomplish this, a Safe Launch Plan shall be agreed during the planning phase. During Safe Launch, an increased frequency of inspection and monitoring shall be performed on designated and other agreed characteristics.

The supplier nominates an empowered interdisciplinary team with defined responsibilities to ensure the conformity of the parts and to analyze and eliminate internal rejects in a timely manner.

In general, the Safe Launch phase starts with the PPA/PPAP submission and extends until start of production (SOP of the YAZAKI customer) + 90 days, unless otherwise specified by YAZAKI. The program duration may also be specified by a quantity of product.

Zero defect supplies during the entire Safe Launch phase and fulfillment of all agreed criteria qualify the supplier for an exit out of the Safe Launch phase.

Any defect discovered during the Safe Launch Phase resets the event to “0” and the Safe Launch Phase is restarted.

Filled in Safe Launch forms, inspection raw data and capability charts shall be submitted on agreed frequency to YAZAKI by means of the information exchange platforms defined by YAZAKI.

5 Electronic components

For suppliers who develop and/or produce, assemble or test electronic components (particularly semiconductor devices, passive components and LED components) the additional, specific requirements described in section 5 shall be applied

5.1 AECQ

Suppliers who develop and/or produce, assemble or test electronic components shall at a minimum fulfill the respective qualification standard from the Automotive Electronics Council (AEC; e.g. AECQ 100; AECQ 101; AECQ 200). Exceptions or deviations to above, shall be communicated to and agreed with YAZAKI.

5.2 IPC Standards

IPC enables reliable, high-quality electronics by developing the trusted standards that drive the global electronics industry's success. Implemented industry-wide, our standards simply communicate and clarify expectations for everyone within the industry. IPC standards help ensure superior quality, reliability and consistency in electronics manufacturing. (https://ipc.org/).

Consider the requirements of last issued IPC Tree to the comparable mode of component type (ex. PCB Panel, Full Assembly PCB)

5.3 Robustness Validation

The supplier shall provide their approach to robustness validation in the development phase. In addition, the procedure of robustness validation shall be made available to YAZAKI for review and approval. For further information, refer to ZVEI – Handbook of Robustness Validation.

5.4 Mission Profile for Electronic Components

YAZAKI may issue a series of work documents to be considered by the supplier:

- Mission Profile
- Statement of Work (SOW) and/or
- Manufacturing Process items at customer (PCB Assembly, Displays, etc Technical Manufacturing Rules and Conditions)
- Technical Cleanliness Requirements according VDA19

5.5 Software and Components with Embedded Software

Suppliers who develop or supply software or electronic components with integrated software shall demonstrate the capability of their software development process according to Automotive SPICE or an equivalent standard. Unless otherwise agreed, the software development capability level 3 needs to be fulfilled according to the VDA Volume “Automotive SPICE Process Assessment Model” for processes which are part of the “VDA process scope.

YAZAKI retains the right to carry out an assessment at the supplier’s location.

If the agreed software development process capability level cannot be achieved, the supplier shall provide an action plan including an adequate time schedule to achieve the agreed software development process capability level.”

5.6 Functional Safety

When safety-relevant electronics and/or software (product or services) are included in the scope of supply, then supplier shall be “state-of-the-art” and comply with ISO 26262.

Safety-relevant parts, their documentation and the drawings shall be marked as such so that they can be clearly identified throughout the development phase and series production process.

On RFQ, the SoW defines the roles, schedule and ISO 26262 requirements applicable.

5.7 Counterfeit electronic components

Distributors / suppliers of electronic components shall provide evidence of genuine components prior to supplying YAZAKI. Based on the receiving YAZAKI manufacturing plant requirements, supplier must submit minimum evidence, but not limited to, pictures of component packaging, packaging label and component marking. The affected YAZAKI manufacturing plant can verify the evidence provided with the original component manufacturer (OCM) and all related costs (warranty field cost, revalidation, etc.) will be charged in case any deficiency is detected.

Distributors / suppliers are obliged to demonstrate capable component management to avoid any infiltration of counterfeit components at any time.

6 Production Requirements

While the production operations ultimately determine the quality of product, ensuring consistent quality also depends on the capability of supporting processes. The processes described in this section do not directly determine or improve product quality, but failure of these processes has the potential to adversely affect product quality.

6.1 Modified Parts

For YAZAKI-nominated (design) parts, no modifications will be accepted without YAZAKI’s written approval. This applies to all modifications suggested or requested by supplier, YAZAKI and OEM. For non-YAZAKI nominated parts, supplier shall inform YAZAKI in writing according to the Supplier Initiated

Change Request (SICR) process (see 6.1.3) with appropriate documentation about any modification, 90 days, prior to first shipment of parts. In all cases a new PPA/PPAP shall be submitted.

The effects of any change, including those changes caused by sub-suppliers, shall be assessed, verified and validated to ensure compliance with YAZAKI requirements prior to implementation. The evidence of risks associated with the change shall be documented and assessed.

Any intended change, deviating from the latest PPA/PPAP approval, shall be communicated to YAZAKI to allow for a timely review and approval by YAZAKI.

A "Change" refers to all situations referenced in AIAG PPAP Manual and/or VDA Volume 2, Trigger matrix of Part history.

6.1.1 Change Categories

A modification may be due to any of the following which could affect fit, form or function:

A. Part modifications:
- Dimensions
- Raw material
- Technical specification (Performance / Test method / Handling Manuals)

B. Change of supplier or site (Material or service)

C. Process change:
- New tool
- Tool modification
- Process modification
- New process / technology

D. Plant change:
- Production / Tool transfer to a different plant
- Pick-up location change

For any above **modification affecting the material of supplied components,** a new MDS shall be submitted to YAZAKI via IMDS system and samples shall be sent by the supplier to PTC testing Centre for SoC testing free of charge or provide a SoC test report. See also 4.6.

The supplier is responsible for any modification (independent from originator of the change) affecting the product they supply.

6.1.2 Change Notification across the Supply Chain

YAZAKI Europe must also be informed in advance with **submission of a SICR in the YAZAKI Supplier Portal** when products / parts manufactured by suppliers' subcontractors and when a modification (see 6.1.1) is proposed in response to a subcontractor request or any OEM request via sub-tiers.

6.1.3 Process Steps

A. Submission of SICR form, duly filled out, **at least 90 days** prior to implementation date on the **YAZAKI Supplier Portal** including detailed information explaining the change / modification. See also specific info at the YAZAKI Supplier Portal.

B. SICR info will be analyzed upon receipt. Depending on the modification type, additional samples might be required at YAZAKI Europe Pilot plant for functional testing (see 4.3) and at PTC Testing Centre for SoC tests. Alternatively, to the submission of samples for the SoC test, supplier shall provide a SoC test report (see 4.6). Please contact the YAZAKI SQE.

C. Provision of a change implementation schedule to affected YAZAKI manufacturing plants.

D. Provision of evidence about security stock level to ensure parts delivery during any change related production down time. In the event of irreversible modifications, the security stock must be validated together with affected YAZAKI manufacturing plants prior to implementation of the modification, and records kept and made available to YAZAKI (if required).

E. Identification of new / changed part level. Whenever a change occurred packaging of the next three consecutive deliveries to YAZAKI manufacturing plants must be identified with an orange or otherwise agreed label with information, the SICR ID, SICR description, YPN and SPN.

6.2 Annual Product Verification

Verification testing shall be performed annually to ensure the intended design requirements are maintained. All applicable documents shall be updated to reflect product performance throughout production, including updates to the original PPAP (or equivalent) submission and dimensional annual layout. All appropriate design verification documentation must be made available within 48 hours upon YAZAKI's request.

This Annual Requalification shall be agreed with AQSE for every specific project by mentioning it in the Control Plan and needs to be linked also with OEM specific requirements.

6.3 Deviations / Concessions

Deviations / Concessions will only be considered for a specific quantity of parts / products or a specific time frame and must be documented and signed by a YAZAKI Design Engineer and YAZAKI SQE

6.3.1 Deviation

A Deviation is a written request from a supplier to knowingly manufacture parts/products which in some way, do not conform exactly to specification i.e. supplier cannot produce parts according to specification and requests YAZAKI for deviation approval.

6.3.2 Concession

A concession is the written request from a supplier to ask YAZAKI to accept and use parts already made / in transit, which do not conform to specification, and which the supplier has only become aware of after manufacture.

6.3.3 Handling of Deviations / Concessions

Deviations / concession shall be communicated by using the CDAR form (Component Deviation Approval Request). The CDAR form is available at the YAZAKI Europe Supplier Portal. YAZAKI's decision on a deviation / concession will always be given in writing. Representative samples should be submitted with the CDAR form to the responsible SQE who will further coordinate with related Engineering Department and SQA of the affected YAZAKI manufacturing plant. If YAZAKI accepts the deviations / concessions, each delivery must be identified with a label "Deviation / Concession 'X'".

6.4 Product Traceability

Products supplied to YAZAKI shall be traceable up to batch production or up to a maximum of 8 hours of production, whichever is smaller. Supplier shall ensure that the traceability plan maintains its integrity all the way back to each production step and inspection lot across the entire supply chain.

The traceability plan must be agreed with YAZAKI on the supplier's initiative and installed in enough time before PPA/PPAP submission. YAZAKI specific requirements for traceability must be taken into consideration.

6.5 First In First Out inventory control

Suppliers are responsible to have inventory control systems that positively identify and control obsolete material to prevent inadvertent shipment to the YAZAKI. Where feasible, suppliers shall maintain First In First Out (FIFO) inventory management practice. The system for FIFO control must ensure controls extend to rework/repair, test activity and off-site (sub-contract) processes.

6.6 Sub-supplier Management

YAZAKI suppliers are responsible for the development of their sub-suppliers. They shall have the necessary process, competence and resources to manage their sub-suppliers (including directed-buy suppliers and outsourced processes) and monitor their performance. They shall also ensure that the sub-suppliers comply with all the requirements contained in this Manual.

An intent to change a sub-supplier shall be communicated well in advance to YAZAKI. The change of a sub-supplier can only be implemented upon prior approval by YAZAKI. See section 6.1.2 – Change Notification across the Supply Chain. Subsequently, Production Part Approval Process (PPA/PPAP) shall be performed.

YAZAKI reserves the right to participate in audits and assessments of sub-suppliers regarding quality management systems, processes, products etc. jointly with the YAZAKI supplier, YAZAKI 's customers or a third party assigned by YAZAKI. Advance notice will be given. YAZAKI participation in a sub-supplier audit does not absolve the YAZAKI supplier from their responsibility to properly monitor and develop the sub-supplier

6.7 Records Retention Table

Document Type	Examples	Must be retained for
APQP and PPAP documentation	Production part approvals, APQP records, Technical specifications, drawings, process flow charts, FMEA, control plans, manufacturing instructions, …	at least **15 years** after product / part or herewith processed final product has been placed on the market or the length of the time that the part (or family of parts) is **active** for production and service requirements **plus, one calendar year** unless otherwise specified by YAZAKI or any OEM specific requirements
Quality Performance records	Control charts, inspection and test results, product audits, lay-out inspection, functional testing, …	
Product Safety related records	Safety relevance and conformity, Critical Characteristic	A minimum of **20 years** from the date of manufacture

7 Performance Measurements and Corrective Actions

YAZAKI recognizes that the performance of the supply base has a direct and immediate impact on organizational performance. In response to this, YAZAKI has developed a system for the measurement and evaluation of supplier performance. The indicators resulting from this process are compiled every month and are reviewed and evaluated at all levels of the YAZAKI organization. These measurements are shared by Category SQE, for HIS review.

7.1 Non-conforming material and Corrective action response

It is in the interest of both YAZAKI and the supplier, to identify and address non-conforming parts as quickly as possible. Suppliers shall take all necessary actions to respond to non-conforming product that reach a YAZAKI facility (production site, warehouse, etc.). Every effort is taken to investigate and document non-conformances and to notify the supplier immediately.

All costs (sorting, handling, shipping, rework and inspection report costs) associated with addressing a non-conformance will be the supplier's responsibility. These costs may include any secondary costs incurred by YAZAKI resulting from a non-conformance, such as the costs associated with tear down, reassembly, re-testing, and logistics support.

7.1.1 Treatment of Complaints / Rejections

The supplier is responsible for the quality of parts/products delivered at all times, starting from nomination of the supplier until end of project/product lifetime, EOP + 15 years (or other defined on SoW). Supplier is also responsible for delivery of the correct parts / products, to the correct YAZAKI Europe location. The supplier's responsibility is not only for his individual part, but also for any concerns / rejections / recalls etc. with YAZAKI products/ parts which have been produced using supplier's defect / suspect product/parts and are related to those defect / suspect product /parts. Whenever a quality concern has occurred, the next three deliveries, with conformance confirmed, must be identified with an **extra green label**.

7.1.2 Treatment of Quality & Logistic Complaints / Rejections

The supplier shall apply the eight disciplines (8D) root cause analysis problem solving methodology and have evidence of official training on problem solving techniques.

The supplier must provide to YAZAKI facilities an 8D report which must be in the English language, and which upon closure, clearly defines and verifies corrective actions implemented to eliminate the root cause.

This process must be carried by the supplier using the web-based YAZAKI Global Quality Reporting System for Components (GQRS-C) (https://gpdb.yazaki-europe.com/sm_apps/). User Manuals are posted in the portal, if necessary, further guidance / advice on the correct use of this system can be obtained from the SQA and/or SQE.

7.1.3 Responsiveness / Pro-Activeness

Suppliers are selected because of their competence, qualification and particular commodity experience in an automotive environment. This includes that suppliers must be responsive and proactive for the entire life of the product.

Design and Development phase:

Supplier is responsible to mention risks, advantages and disadvantages related to possible tools during RFQ negotations related to their investment proposals.

Suppliers must assist YAZAKI project teams to find the best technical solutions at competitive prices, without compromising the required level of quality.

Production phase:

Suppliers must be committed to provide the necessary resources to resolve any concerns as top priority.

Post-production phase:

Suppliers must be committed to support and take responsibility for any concerns occurring after production phase i.e. field claims, warranty concerns.

7.1.4 Immediate Corrective Action

The supplier shall name a ´Champion´, who is the responsible contact person, for each supplier manufacturing location. When YAZAKI and associated companies receive products from more than one supplier manufacturing location, the supplier shall name a European coordinator to assist communication.

Production flow interruption: In the event of non-conformities, the supplier must provide corrective actions necessary to ensure YAZAKI production without interruption. These actions may include sorting, rework, containment, immediate replacement of defectives, and identification of `OK` parts / materials, and the presence of the supplier's personnel in the YAZAKI facilities affected, at supplier´s cost. Suppliers must respond within 24 hours (maximum) when notified of a concern.

Agreed containment action may include visits of specific supplier personnel to YAZAKI facilities to review / analyze the concerns. This is in addition to supplier personnel who may be carrying out sort / rework activities, as referred to above.

Suppliers shall provide YAZAKI with an initial 8D root cause analysis report using the GQRS-C portal, identifying containment actions (3D) within 24 hours. The appropriate YAZAKI SQA personnel responsible for handling the concern must review and approve the proposed supplier actions.

7.1.5 Permanent Corrective Action

Suppliers must provide YAZAKI with 8D root cause analysis report within 10 working days with an 8D report detailing complete corrective action.

A corrective action-timing plan (in conjunction with 7.1.4 above), must be submitted to the appropriate SQA personnel, who must approve the proposed plan / actions.

7.1.6 Customer Line Returns and Warranty Returns to YAZAKI

If supplier responsibility is identified, customer line returns and warranty returns will be managed as quality incidents and reported in the GQRS-C portal. The same process applies as explained in section 7.1.1. For warranty/field claims, supplier is still responsible for their components even project is end of life, EOP +15 years (pr other period mention on SoW).

7.1.7 Repetitive Problems

A repetitive problem indicates that the corrective actions according to 8D report were not effective or not implemented. Moreover, the effectiveness of the corrective action was not verified, as required by the 8D process.

In the case of repetitive problems, YAZAKI may request supplier's senior management to visit the YAZAKI Europe plant to propose and commit to a complete business action plan.

Supplier shall provide 100% inspection and identification of purchased parts /products until the problem is eliminated (Controlled Shipping), and if requested by YAZAKI, must agree to a process audit at the relevant supplier facility.

7.1.8 Cost of Non-Quality

In the case of quality and supply concerns caused by suppliers and accepted as justified by the supplier, all direct and indirect costs incurred at YAZAKI in particular for exceeding delivery dates, labor, materials, additional freight, lack of output, plus any other associated costs will be fully charged back to the delinquent supplier. This will be based upon the data collected via the GQRS-C portal (Cost Agreement) related to the length / magnitude of the concern /rejection.

7.2 Quality Objectives - Quality Improvement Plan

Suppliers are expected to use the lessons learned from each incident to improve production process, product design, or underlying business systems. The goal is to eliminate the possibility of similar incidents, not only by making procedural and process adjustments on the manufacturing floor, but by removing the environment that allowed the issue to surface. Lasting improvement requires correcting the systems and strategies that support the production process.

In addition to responding to identified non-conformances, suppliers should use statistical data to continually evaluate and refine their processes. This evaluation should include analysis of quality out of control indications, high PPM, scrap, downtime, and warranty failures. The clear objective of this analysis must be reduction of variation with the finished product. The supplier shall have on-going, active improvement projects that target two or three of the largest problem areas and be able to demonstrate a positive trend in reducing incidents and repeat occurrences.

7.2.1 Zero Defects Philosophy

All suppliers are expected to drive **Zero Defects Philosophy** throughout their supply chain, aiming to deliver defect free material at the required time. The ultimate quality target can only be zero PPM.

For suppliers defined as high impact, individual PPM Targets per project will be defined and specified, considering the product and technology as well as given customer requirements, in project specific documentation.

The **quality objective** on parts/products used on new projects i.e. projects in ramp-up prior to volume production, will be negotiated between SQE / supplier at the relevant time, but the ultimate target / objective will still be defect free deliveries (zero PPM).

7.2.2 Supplier Performance Evaluation / Supplier Score Card

Supplier Quality & Logistic Performance is measured against following KPI´s:

1. PPM Performance
2. Rejection Performance - Rejections per million (RPM)
3. 3D Reactivity Performance
4. 8D Reactivity Performance
5. Documentation Performance
6. Delivery Performance
7. Number of Rejections
8. Line-stop Performance
9. 3D Reactivity Performance of Customer Concern

Downgrading criteria: Subcategory fail (D level). The overall status (A, B, C, D level) is the sum of all KPI scores and considering the downgrading:

SCORE	LEVEL	STATUS
85 ≤ Score ≤ 100	A	Preferred
67 ≤ Score < 85	B	Acceptable
50 ≤ Score < 67	C	Probationary
0 ≤ Score < 50	D	Unacceptable

For detailed information, refer to the YAZAKI Europe Limited Supplier Score Card Manual stored at the YAZAKI Supplier Portal.

7.2.3 Supplier Development / Quality Improvement Plan

The supplier quality performance is monitored and is the base for deploying development activities to improve Quality, Cost, Delivery and Environmental objectives.

For suppliers defined as high impact and / or with a decreasing quality performance trend are expected to deliver a comprehensive **Supplier Quality Improvement Plan (SQIP)** for continuous improvement of their system, organization, etc., showing how Quality, Cost, Delivery and Environmental objectives are to be achieved.

Individual **Quality Commitments** with quality objectives are set-up by the SQE and agreed with the Supplier on a yearly basis, at a minimum.

7.3 Supplier Audits

Audits at supplier premises may be performed for following reasons:

- New supplier
- New supplier location
- New / additional business
- New process
- During APQP, before and or after PPAP/Product approval
- Poor performance
- After a major incident
- Other…

The supplier will be notified in advance in due time in comparison to the audit reason by the YAZAKI Auditor / SQE about any planned audit activity. The supplier is responsible to be well prepared for the audit including submission of the self-assessment in advance in order to assure the audit can be conducted in a proper way. The Audit format applied is the VDA 6.3 standard but can also be any other Customer specific assessment questionnaire.

YAZAKI reserves the right to charge the supplier for the expenses incurred if an unacceptable audit score level or preparation is detected during the on-site audit.

The related costs will be clearly communicated through YAZAKI Purchasing.

7.4 Continuous Improvement

Suppliers to YAZAKI are expected to drive continuous improvement activities throughout the whole organization.

Besides the basic standards of high level housekeeping / 5S, Visual Management, Mistake Proofing tools (Poka-Yoke) and good problem solving methods, it is also recommended to implement and maintain a Lean Management philosophy and principles using tools such as Value Stream Mapping, Single Minute Exchange of Die (SMED), Overall Equipment Effectiveness (OEE), Kanban, Standardized Work, Total Productive Maintenance (TPM) etc. The respective SQE will verify the level of implementation during on-site visits / audits.

7.5 Supplier Performance Deviation Management - Escalation process

SPDM with level of escalation is communicated through a notification letter that initiates and invites appropriate YAZAKI and supplier representatives with a formal agenda and appropriate meeting place and time to develop an improvement plan that will then be followed until the corrective actions are implemented and followed until the action is satisfactory.

SPDM De-escalation letter is sent to supplier when deviating performance is corrected.

More detailed information can be found on https://www.yazaki-europe.com/supplier - Supplier Private area – Reference Document EA-PU-xx-P-632 Supplier Performance Deviation Management.

SPDM process is applicable to both Direct & Indirect Material suppliers.

8 YAZAKI Specific Requirement Reference to the IATF 16949

Reference to the IATF Chapter	In addition, YAZAKI SQM EA-PU-xx-P-740-M-01 applies
4.3.2 Customer specific requirements	4.2 Customer Specific Requirements
4.4.1.2 Product safety	3.5 Product Safety
7.1.5.2 Measurement traceability	6.4 Product Traceability
7.5.3.2.1 Record retention	6.7 Records Retention Table
8.2.1.1 Customer communication – supplemental	10 Business Language
8.2.3.1.2 Customer-designated special characteristics	4.4 Special characteristics
8.3.2.3 Development of products with embedded software	5. Electronic Components
8.3.3.2 Manufacturing process design input	4 New Parts / Products
8.3.3.3 Special characteristics	4.4 Special characteristics
8.3.4.4 Product approval process	4.3 Reasons for Initial Samples; 4.11 Communication of Approval
8.3.6.1 Design and development changes supplemental	6.1 Modified Parts
8.4 Control of externally provided processes, products and services	6.6 Sub Supplier Management
8.1.1.2 Statutory and regulatory requirements	3. Management Systems requirements
8.4.2.3 Supplier quality management system development	6.6 Sub Supplier Management
8.5.1 Control of production and service provision	4.12 Safe Launch
8.5.2.1 Identification and traceability supplemental	6.4 Product Traceability
8.5.6.1. Control of changes-supplemental	6.1 Modified Parts
8.5.3 Property belonging to customers or external providers	4.9 Marking of Customer's Property
8.6.2 Layout inspection and functional testing	6.2 Annual Product Verification
8.6.5 Statutory and regulatory conformity	3. Management Systems requirements
8.7 Control of nonconforming outputs	7.1 Non-conforming material and Corrective action response
8.7.1.1 Customer authorization for concession	6.3 Deviations / Concessions
8.7.1.6 Customer notification	6.3 Deviations / Concessions
9.1 Monitoring, measurement, analysis and evaluation	7.1 Non-conforming material and Corrective action response
10 Improvement	7.2 Quality Objectives - Quality Improvement Plan; 7.4 Continuous Improvement

9 References

All reference documents mentioned in this Manual are to be considered the most current editions. Only the latest edition of each referenced document shall be used, unless otherwise specified by YAZAKI.

10 Business Language

All communications will be conducted in English unless otherwise requested by the YAZAKI receiving plant.

Unless otherwise specified by YAZAKI, documents including PPA/PPAP and APQP documents shall be written in English.

11 YAZAKI Supplier Portal

A copy of this document and all future updates can be found on the YAZAKI homepage (https://www.yazaki-europe.com/supplier).

Revision History

Revision Level	Comments	Date
New	Replaces EA-PU-xx-P-100-M-01	17/MAR/2022