

KIRCHHOFF AUTOMOTIVE

QUALITY ASSURANCE GUIDELINE

FOR SUPPLIERS

Valid for all sites of Kirchhoff Automotive Group

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Issued: **KIRCHHOFF AUTOMOTIVE GROUP**

FOREWORD

This manual specifically applies to all externally provided products, processes and services that affect KIRCHHOFF Automotive requirements or KIRCHHOFF Automotive customer's requirements. The contents of this manual and any references to Original Equipment Manufacturer standards are to be considered as an addendum to the General Terms and Conditions of Business and Purchase Order issued by KIRCHHOFF Automotive. This agreement is valid between the whole organisation of the supplier and each KIRCHHOFF Automotive legal entity. Requirements out of this manual shall be cascaded to across supply change.

This guideline pursues the strategy of building long-term and a fair cooperative relationship with suppliers. A partnership with suppliers which reliably meet the requirements for price, supply reliability, quality and innovation.

Attaining these standards will enable us to work together as a team and re-enforce KIRCHHOFF Automotive's commitment to long-term partnerships with our customers, suppliers, and our employees. This will secure our future.

The quality of the KIRCHHOFF Automotive modules depends to a large extent on the quality of the supplied products, facilities and services. Quality of products has to be planned and manufactured.

This Quality Assurance Guideline for Suppliers specifies the requirements, to ensure that supplier methods, systems, products, and services meet or exceed KIRCHHOFF Automotive and its customer's expectations.

As a supplier to KIRCHHOFF Automotive, you are expected to comply with ISO 9001 requirements and identified OEM Customer Specific Requirements with the intent and criteria found within this manual.

CONTENT

PURPOSE

The purpose of this Quality Assurance Guideline is to outline the minimum supplier quality standards for all suppliers doing business with KIRCHHOFF Automotive.

Only suppliers who can demonstrate compliance to and effective implementation of this manual and reference documents shall be considered for new and/or replacement business. Any deviation from this standard must be approved by KIRCHHOFF Automotive Procurement and Quality Leadership.

REVISION CONTROL

This Quality Assurance Guideline for Suppliers will be reviewed and, if needed, revised as necessary under the direction of KIRCHHOFF Automotive Procurement.

This guideline is the property of KIRCHHOFF Automotive. It is solely owned by KIRCHHOFF Automotive; any use of this manual without the consent of KIRCHHOFF Automotive is not permitted.

Note: It is recommended that each supplier review this manual periodically.

ACCESS

This manual is accessible at our website:

<http://www.kirchhoff-automotive.com/deEN/company/purchasing/downloads/europe/>

1. GENERAL REQUIREMENTS

QUALITY MANAGEMENT SYSTEM

KIRCHHOFF Automotive has fully embraced the IATF-16949 Standard. As a potential or approved supplier to KIRCHHOFF Automotive, we expect that you develop, utilize, and document a comprehensive quality management system (QMS), which includes all A.I.A.G./IATF-16949 (latest version) requirements or at minimum ISO 9001 requirements with clear development plan to reach IATF16949 certification and compliance with Customer Specific Requirements of defined O.E.M.

ENVIRONMENTAL MANAGEMENT

The supplier shall ensure protection of all environmental resources during all steps of the projects. Therefore he should follow the guidelines of the current revision of ISO-14001. A certification after this guideline is requested. The supplier ensures to observe all additional environmental guidelines given from KIRCHHOFF Automotive or KIRCHHOFF Automotive customer's.

Suppliers/Contractors shall satisfy the current environmental and safety legislative requirements related to controlled, restricted or hazardous materials as well as environmental considerations applicable to the country of end use.

KIRCHHOFF Automotive SOCIAL RESPONSIBILITY:

KIRCHHOFF Automotive expects our supplier's actions must be compatible with the interests of society, and also expects the supplier to make voluntary contributions to the sustainable development of society going above and beyond the legal requirements. This includes supporting and promoting charitable projects and supporting your employees' volunteer work where possible.

Where applicable KIRCHHOFF Automotive expects necessary foundations to develop, educate and train your employees. A commitment to the principle of lifelong learning is also expected from each supplier.

ENVIRONMENTAL RESPONSIBILITY

KIRCHHOFF Automotive expects our suppliers to preserve nature and biodiversity for future generations and protect the environment by using resources consciously and by meeting strict environmental standards in all our production processes.

This includes training your employees regularly to help them act in an environmentally friendly manner and comply with safety regulations. This will encourage your employees to act with intent to avert harm towards people and the environment.

CULTURAL RESPONSIBILITY

KIRCHHOFF Automotive expects our suppliers to be committed to supporting and promoting cultural values and also acknowledge and promote the cultural distinctiveness and traditions of the countries in which you are operating.

TRUST & RESPECT

KIRCHHOFF Automotive expects our suppliers to trust one another, to be reliable, accountable and law-abiding. We trust in the honesty of our suppliers and in the validity and truthfulness of what you do or believe.

KIRCHHOFF Automotive expects our suppliers recognize, value, appreciate and respect each individual. This also includes sincere attention, appreciation, and deference for each and every one and respects him/her, regardless of their national or ethnic background, sex, religion, age, or handicaps and also independent from private lifestyles. NOTE: A list of protected Human Rights might be different for each country.

WORKING LANGUAGE

Formal business language for communication is English for all suppliers; national language can be used if agreed with KIRCHHOFF Automotive. Since KIRCHHOFF Automotive is an international group, this document is exclusively published in the English language. Any translation into other languages is for information only.

2. SUPPLIER SELECTION & QUALIFICATION

Suppliers shall be capable of meeting KIRCHHOFF Automotive quality, delivery, environmental, cost and continuous improvement requirements. KIRCHHOFF Automotive will assess these requirements as a part of its supplier approval process. Suppliers shall be active and compliant in the supplier assessment and qualification process. The process will include but is not limited to the following:

- Cost competitiveness.
- Quality and delivery performance.
- Certification to Automotive industry standard IATF16949 by 3rd party organization.
- Production and process risk assessment
- Current financial health.

Before start of formal business, the supplier is requested to register at KIRCHHOFF Automotive Strategic e-Sourcing Solution (SeSS); this includes completing a Supplier Profile and attaching copies of management system certificates. Supplier registration and commodity released status is maintained by KIRCHHOFF Automotive and is visible in the SeSS.

3. SUPPLIER PRODUCTION PART APPROVAL PROCESS (PPAP)

Suppliers shall not ship production parts to KIRCHHOFF Automotive without prior establishment of an interim, limited, or full product approval following a PPAP submission.

PPAP is carried out according to AIAG PPAP manual reference or alternatively VDA volume 2. Initial Samples must be clearly marked and PPAP documents have to be attached.

Suppliers are required to submit a complete PPAP package to the related KA plant as identified in Purchase Order for approval and are expected to maintain and update the documents upon revision of part, change of process, or material sources as outlined in the AIAG PPAP manual.

Supplier shall manufacture the initial batch by using:

- Production Personnel
- Production Location/ Site
- Production Sub-supplier(s)
- Production Materials
- Production process using production Tooling/ Equipment
- Production Gauging/ Inspection Equipment (Accredited laboratories if outside)
- Production Rates/ Speeds/ Feeds
- Production released Prints/ Specifications/ Design Aides

Additionally, the purpose of PPAP submission is to determine if all customer engineering design records and specification requirements are properly understood by the supplier and that the process has the potential to produce products consistently meeting these requirements.

Product for Part Approval shall be taken from a significant production run. This run shall be agreed upon with KIRCHHOFF Automotive receiving plant and consist of one hour to eight hours of production, and with the specific production quantity to total a minimum of 300 consecutive parts, unless otherwise specified. This run must be conducted at the production site using tooling, gauging, process, materials and operators from the production environment.

From this significant quantity, a minimum of five pieces per cavity or fixture (if applicable) must be inspected and delivered to KIRCHHOFF Automotive receiving plant. If destructive tests are required, samples of these must also be submitted in addition to the aforementioned quantity. These samples have dual purposes: dimensional verification and gauge correlation between KIRCHHOFF Automotive and supplier.

Unless otherwise specified by KIRCHHOFF Automotive default submission level 3.

1. Design Records (ballooned KIRCHHOFF Automotive print) - *required*
 - A copy of the associated customer Standards must be included and ballooned.
2. Engineering Change Document - *if applicable*
3. Customer Engineering Approval - *if applicable*
4. Design FMEA - *if applicable*
 - DFMEA format shall be compliant to last edition AIAG FMEA Manual
5. Process Flow Diagrams - *required*
6. Process FMEA - *required*
 - PFMEA format shall be compliant to last edition AIAG FMEA Manual
 - Documentation of all Significant Characteristics and Pass Through Characteristics (PTC) are required
7. Control Plan - *required*
 - Control Plan format shall be compliant to the AIAG APQP & Control Plan Manual
 - Documentation of all Significant Characteristics and Pass Through Characteristics (PTC) are required
 - Requalification shall be identified in production control plan
8. Measurement System Studies - *required*

For "designated" characteristics , qualification is as follows:

 - % of Tolerance $\leq 10\%$ - Acceptable
 - % of Tolerance $>10\% \leq 20\%$ - Acceptable based on importance or impact
 - % of Tolerance $>20\%$ - Unacceptable
 - %Precision to Tolerance (P/T) $\leq 30\%$
 - For gauges to be acceptable, they must satisfy both the % of Tolerance and % Precision to Tolerance requirements listed above.

Attribute gauge studies are required where appropriate. For Attribute gauges the minimum sample size is 50 pieces with at least 10% non-conforming parts, 3 Operators, 3 Trials.

 - The non-conforming parts should be as close to borderline as possible
 - Where there is both an Upper and Lower boundary, Non-conforming parts must represent both conditions.
 - Determination of gauge acceptability in accordance with applicable tools as described in AIAG MSA Reference Manual
9. Dimensional Results - *required*
 - Documentation to support each individually numbered sample as defined above for all measurable characteristics.
10. Materials, Performance Test Results - *required*
 - Part composition information for International Material Data System (IMDS) reporting must be supplied in advance of the PPAP submission, however, a copy of the data provided must be included.

- 11. Initial Process Study *- required*
 - The supplier is responsible for performing an initial process capability utilizing the appropriate Statistical process tools and apply the appropriate assessment criteria as needed (i.e. Normal distribution, Non-Normal distribution, Unilateral tolerance, MMC / LMC modifiers).
 - Initial process capability shall be submitted on a minimum of 25 subgroups containing at least 100 readings from consecutive parts of the significant production run and include analysis of appropriate SPC tools. Unless otherwise stated, short-term capability requirements are 1.67 (Cpk) and long term as 1.33 (Ppk).
 - Initial process capability (short term) may be requested on additional characteristics on a part-by-part basis and will only be required at PPAP. Unless otherwise stated, the short term capability requirement is 1.33 (Cpk).
 - Once calculated and accepted the machine/ equipment must not be changed without KIRCHHOFF Automotive notification and approval. KIRCHHOFF Automotive requires that suppliers maintain process capability established at submission and through the life of the product.
- Analysis of Attribute Data
 - Where requested or required, process capability may be assessed using attribute data. The minimum sample size is 100 pieces with zero defective. Attribute data is not acceptable for features with a Critical, Significant, Special, CTQ, or Fit/Function designation.
 - Where capability is assessed utilizing attribute gauging, the MSA results and evidence of boundary samples must also be submitted.
- 12. Qualified Laboratory Documentation *- required*
 - Commercial/ independent test laboratories used must be accredited to ISO 17025 (or international equivalent)
- 13. Appearance Approval Report (AAR) *- if applicable*
- 14. Sample Product *- required*
- 15. Master Sample *- required*
- 16. Checking Aides *- if applicable*
- 17. Run at Rate Documentation
- 18. Packaging Approval Form *- required*
- 19. AIAG 4th edition Part Submission Warrant (PSW) *- required*
- 20. Supplier Early Production Containment *- required*
 - The purpose of early production containment identifies the supplier's efforts to gain control of its processes during project ramp up phase.
 - The supplier is required to develop and submit for approval a pre-launch control plan which is a significant enhancement to the supplier's production control plan consisting of additional controls, inspection audits, and testing.
 - The pre-launch control plan is not a substitute for the production control plan but is over and above the production control plan and is used to validate the control plan.
 - The pre-launch control plan must be used for all pre-production requirements and for the production ship quantity or duration specified by KIRCHHOFF Automotive. Quantity or duration and exit retrieval shall be agreed upon with KIRCHHOFF Automotive.

4. REQUALIFICATION

All direct material suppliers shall complete product and process requalification as a minimum on an annual basis. Requalification records on agreed production and process approval formats shall be stored at the supplier and on request be delivered to KIRCHHOFF Automotive receiving plants.

5. SUPPLIER EVALUATION RATING

Performance evaluation of direct material vendors has been introduced in order to quantify risk coming from supplier base and to support the sourcing team.

Supplier evaluation process is performed individually by each KIRCHHOFF Automotive manufacturing site on a monthly basis and it is available to supplier via SeSS.

Suppliers shall monitor performance and take action when results do not meet KIRCHHOFF Automotive expectations.

Supplier target is to reach and maintain "A" classification to all supplied KIRCHHOFF Automotive manufacturing site and continuously improve the product, processes and service performance.

General assessment of supplier evaluation.

Supplier allocation	Points
Group A	≥ 91 to 100
Group B	≥ 80 to < 91
Group C	0 to < 80

Suppliers are scored in four main evaluation criteria.

List of criteria for supplier's evaluation.

#	Criteria	Max. Points
1	Quality Performance	40
2	Delivery Performance	30
3	Service	20
4	Certification Status	10
Total		100

SUPPLIER QUALITY PERFORMANCE RATING

List of demerit points in quality performance.

#	Demerit points description	impact
1	Recurring quality problem	4
2	KIRCHHOFF Automotive customer complaint/recall/dealer return/warranty/ field actions	5
3	Internal complaint	2
4	Production interruption	3
5	Production stoppage	8
6	Stock replacement required	2
7	Some NOK parts in delivery	1
8	No complaint support	3
9	Delay in delivery 8D-Report/Action Plan	1
10	Non acceptance of sorting action (additional complaint costs)	3
11	Number of complaints	5
12	All NOK parts in delivery	3
Total		40

SUPPLIER DELIVERY PERFORMANCE RATING

This parameter considers both timely fulfilment of deliveries and completeness of quantities delivered. It has an equal weight between both sub-parameters, valued into 50% each.

The two scores for these criteria are as follows:

Completeness of Quantities delivered, compared to ordered quantity:

- Deviation between – 10% and + 10% = 100%,
- Deviation from -11% until – 25% = 50%,
- Deviation of more than -25% = 0%,
- Deviation from + 11% until + 50% = 70%,
- Deviation of more than 50% = 0%.

Fulfilment of Delivery Time, compared to the ordered week:

- Deviation of 0 weeks from the collection / delivery week = 100%,
- Deviation of more than 0 weeks from the collection / delivery week = 0%,
- Express shipments / deliveries used = 0%.

Whenever deliveries are ordered to a fixed date, fulfilment of Delivery Time has got the same above criteria, but where the comparison is made against the delivered date.

For subcontractors, a manual calculation for both criteria is required.

SERVICE CRITERIA RATING

Service parameter is important to get a better awareness on the level of support our suppliers provide to KIRCHHOFF Automotive.

List demerit points service criteria.

#	Demerit points description	Impact
1	Lack or incorrectness of material certificates,	2
2	Incorrectness of paperwork and or labelling (including wrong delivery destination),	2
3	Incorrectness of PPAP/IMDS procedure and timing,	2
4	Difficulties with supplier contact availability,	2
5	Problems during claim management (8D),	2
6	RFQs not responded properly or on time,	2
7	Repeated lack of order acknowledgement,	2
8	Lack of flexibility towards schedule changes,	2
9	Insufficient reaction to price reduction requests or unjustified request for price increases by the supplier,	2
10	Packaging problems	2
Total		20

CERTIFICATION STATUS RATING

List of defined criteria scores according to the following rating

#	Demerit points description	Impact
1	Lack of/expired IATF 16949 or ISO TS16949 certificate	8
1.1	Lack of/expired ISO 9001 certificate	3
2	Lack of/expired ISO 14001 certificate	2
Total		10

6. SUPPLIER DEVELOPMENT

KIRCHHOFF Automotive can select Suppliers for development who represent opportunity for improvement and the highest potential positive impact. Supplier development engineers may work with the selected suppliers to ensure the improvement goals are met.

If KIRCHHOFF Automotive sees a trend in not achieving performance objectives it can mandate one or more of the following actions:

- Supplier General Improvement Plan
- Supplier Improvement Program
- On-Site Process Audits
- Supplier Site Review

Suppliers selected for development projects shall demonstrate their willingness to change, improve and show evidence of internal continuous improvement efforts.

7. SUPPLIER OF THE YEAR

The award "Supplier Of the Year" is granted in accordance with the principles of partnership and cooperation between KIRCHHOFF Automotive and its suppliers.

All suppliers are requested to have an excellent performance and introduce continuous improvement programs as valuable attitude to deserve KIRCHHOFF's Supplier Of the Year award.

The choice of Supplier Of the Year is made based on yearly supplier evaluation, risk classification and customer focus.

8. QUALITY COMPLAINTS AND ISSUES

The supplier shall take all necessary steps in order to address identified non conformity or risk of delivering non conform products to KIRCHHOFF Automotive.

KIRCHHOFF Automotive and its customer representative(s) can support supplier during the problem solving process at the supplier's facility.

Containment action	Immediately after detection		
Containment action notification	Within 24h from incident identification		
	Corrective action plan	Within 5 calendar days from incident identification	
		Corrective action verification	Within 14 calendar days from incident identification

Each product Non-Conformance to specification will be claimed by KIRCHHOFF Automotive manufacturing site quality department. Each problem solving activity reported to KIRCHHOFF Automotive shall be recorded in 8D format and resolved using 8D methodology.

CONTAINMENT ACTIONS:

Supplier shall indent and implement the activities in order to assure uninterrupted manufacturing KIRCHHOFF Automotive and his customers , containment actions shall include activities to:

- Stock at KIRCHHOFF Automotive
- Material in transit
- Material at the Supplier

For sorting activity requiring sub-contractor, the Supplier will have to select a sorting company approved by KIRCHHOFF Automotive. Supplier shall ensure that the selected sorting company has the correct type of sorting equipment, instructions to enable successful sorting and immediate communication of any relevant information (including sorting results) obtained by the supplier and/or the sub-contractor during the sorting. All costs linked to the sorting, including cost to be paid to the subcontractor , will be borne by the supplier. Containment actions shall be in place until or corrective and preventive actions will be validate with positive results.

CORRECTIVE ACTIONS SHALL:

- Be submitted to KIRCHHOFF Automotive for review and approval
- Focus on system level improvements to prevent reoccurrence within the organization
- Include all element of 8D report
- Include defect and root cause validation test
- Acknowledge that training/retraining is insufficient and further actions shall be taken to error proof

9. INCOMING INSPECTION

KIRCHHOFF Automotive does not intend to perform any quality incoming inspection activity. Suppliers shall notify KIRCHHOFF Automotive immediately upon suspicion of the delivery of a non-conforming product. KIRCHHOFF Automotive manufacturing site quality and procurement departments shall be notified. The notification should include a detailed description of the non-conformance (fit, function, quality, reliability, safety, delivery, service or compliance with regulatory and statutory requirements), affected quantity, product number's and the initial containment actions taken.

10. SUPPLIER AUDITS & ASSESSMENT

KIRCHHOFF Automotive may conduct audits or other assessments on a periodic basis to evaluate the Supplier in areas such as quality, delivery, competitiveness processes and expectations. Audits and assessments may be scheduled due to:

- Qualification Process
- Performance issues (quality, logistics,.....)
- Process validation
- Potential or identified risk
- Development & Improvement program
- Corrective action validation
- Complaining with CSR and CR

Where it is appropriate, CQI standards are mandatory for suppliers which are delivering products manufactured in special processes. Suppliers shall deliver their self-assessment to the standards on an annual basis via supplier portal.

Suppliers shall provide right of access to KIRCHHOFF Automotive and its customers to allow for the evaluation of quality system documentation and records, conducting audits, and verifying product conformance. The supplier is accountable for defining and implementing corrective and preventive actions and also supervise effectiveness of these actions acc. to required schedule.

The optimization of any detected weak points is the responsibility of the supplier. Confidential or sensitive production processes and establishments may only be excluded from auditing if explicitly agreed by both parties in writing in the contract or initiating Purchase Order or Scheduling Agreement.

S/R audits (Safety Relevance) can be performed by KIRCHHOFF or S/R audit self-assessment can be asked to be made by supplier acc. to OEM's Customer Specific Requirements.

11. SERIAL DELIVERIES MANAGEMENT

DELIVERY PERFORMANCE

All suppliers are fully responsible for high Delivery Performance - 100% of deliveries on time. If suppliers do not meet logistics requirements they could be charged all costs for the delay and the complaint.

MARKING & IDENTIFICATION

When supplying components the supplier shall always refer to and indicate the KIRCHHOFF SAP article number in any communication. It concerns particularly labels, delivery notes and invoices, as well as correspondence. In addition these SAP part numbers shall be prominent (e.g. highlighted, underlined, bigger fonts).

PACKAGING AND LABELLING

The packaging method, box type, storage conditions, quantity of pieces, delivery dates, should be established between KIRCHHOFF and each of the suppliers. The parts and raw materials have to be packed according to general safety requirements.

All parts have to be packed in such a way as to avoid damage during transport or storage. The type of packaging, prescribed by KIRCHHOFF Automotive and approved jointly with the supplier has to be used.

Traceability shall be ensured through clear markings. The supplier has to ensure the traceability of his and his sub-suppliers products up to the raw material stage. If there is no particular packaging prescribed, all parts have to be packed in such a way as to avoid damage during transit or storage.

QUALITY ASSURANCE IN SERIES PRODUCTION

Supplier shall perform required tests and measurements and provide required reports with each delivery according to the schedule.

Steel and aluminium suppliers should provide required material certificates of conformance with each delivery acc. to DIN EN 10204.

Suppliers of bought-in parts are obliged to enclose the material certificate with each delivery if required. KIRCHHOFF Automotive does not have 100 % inspection of incoming finished parts, fasteners, parts, services or raw materials.

PROCUREMENT

The supplier shall ensure that the products he is obtaining from his sub-supplier meets the required quality. Therefore, the guidelines and measures indicated in this document also apply to his suppliers. In the case where KIRCHHOFF Automotive is the customer and responsible for the product, the supplier shall inform KIRCHHOFF Automotive about all sub-suppliers who have influence on the parts quality before sourcing them. KIRCHHOFF Automotive has the right to raise an objection if necessary.

Changing of sub-supplier during the whole project-lifetime shall be agreed with KIRCHHOFF Automotive.

Suppliers are obliged to meet the FIFO requirements.

IN-PROCESS TESTS

The prescribed quality-relevant characteristics must be checked and documented by means of in-process tests, performed in accordance with a process-related control and inspection plan, and corresponding inspection instructions, which will need to be created.

STATUTORY AND REGULATORY REQUIREMENTS

The supplier shall document their process to ensure that products, processes, and services conform to the current applicable statutory and regulatory requirements in the country of receipt, the country of shipment, and the customer-identified country of destination.

With safety parts (with influence on car passengers safety), the supplier is obliged to completely document the quality management measures and results (e.g., VDA part 1). Every single safety part has to be identified, clearly traceable, and comprehensible.

All documents which are used for safety parts must be marked corresponding to the specifications

For safety parts the certificate of conformity and measurement report can required for each delivery. Internal documents which confirm required quality and traceability should be archived for 15 years (or longer in case of legal requirements demands) at supplier.

Special Characteristics shall also include, but are not limited to, all relevant statutory and regulatory requirements.

Not fulfilling the special characteristics definition could cause extreme and serious failures that affect the safe and proper use of KIRCHHOFF Automotive product or could violate statutory and regulatory requirements.

HANDLING OF DEFECTIVE UNITS

If defective parts are detected during the inspections, they have to be separated from the normal production flow, identified immediately and stored in a way which avoids return into the normal production flow. The defect cause has to be established and corresponding corrective measures have to be implemented.

12. SUPPLIERS CONTINUOUS IMPROVEMENT

The supplier is obliged to maintain and improve its quality system according to current revision of IATF 16949 standard (min. ISO 9001) and its environmental system according to ISO 14001 standard.

The supplier has to improve the quality of the products and services to meet the still increasing Automotive industry requirements.

KIRCHHOFF Automotive declares the readiness to help its suppliers to improve the quality system (for example: trainings, quality assurance issues support).

ADVANCE QUALITY PLANNING

KIRCHHOFF Automotive expects its suppliers to carry out systematic quality planning. The quality of a product is largely determined in the development stage. Therefore it is essential that quality assurance measures are built into the planning at this stage.

Effective elements in the forward planning of quality are:

- Manufacturing feasibility studies,
- Project flows with quality aims and scheduling/deadlines (incl. reviews and milestone systems),
- FMEA (Design / Process / Logistics),
- Control Plans,
- Capability studies of process, tooling and equipment,
- Test equipment and resource planning,
- SPC.

KIRCHHOFF Automotive is entitled to request evidence for performing this tool at any time of the project and within serial delivery.

Supplier shall develop the process and/product following a "0 defect" philosophy.

TECHNICAL DOCUMENTS

The supplier is responsible for meeting the technical requirements set by KIRCHHOFF Automotive. Any uncertainties regarding interpretation, missing documents and instructions/specifications, etc. must be clarified immediately in order to ensure problem-free collaboration. This clarification is the responsibility of the supplier.

ENGINEERING CHANGE CONTROL

During the life of a program, engineering changes may be required. The suppliers are requested to implement the changes correctly and in a timely manner in order to meet or exceed the customer timing plan. All suppliers must also comply with the Production Part Approval Process (PPAP) whenever a change is required

FEASIBILITY STUDIES

Within a feasibility study of the components it shall be assessed whether a requested product can be produced under series production conditions corresponding to the technical specifications and contract agreements. KIRCHHOFF Automotive is entitled to request evidence for the performance of such a feasibility study at any time of the project.

DEFINITION OF INSPECTION CHARACTERISTICS

This definition shall be derived from e.g. FMEA, APQP, Risk Analysis or other development tools. Within the quality planning procedure, important and critical characteristics and Pass Through Characteristics must be summarized in a detailed control plan. This shall form the basis for preparation of a detailed quality plan with the aim of "Zero Defects".

DOCUMENTATION

For quality records, a retention period as defined by the current revision of IATF 16949 shall apply. Initial sample inspection reports have to be stored according to the demands of IATF 16949 and customer requirements. For Safety Parts documents have to be stored for 15 years. (or longer in case of legal requirements demands) at supplier.

14. RECOMMENDED MANUALS

Recommended manuals- current revisions.

IATF 16949	Quality management in the Automotive industry International Automotive Task Force (IATF)
ISO 9001	Quality management systems – Requirements
VDA Volumes 1 - 7	Quality management in the Automotive industry, VDA e. V. Frankfurt
AIAG Core Tools	Ford, Chrysler, GM
SPC	Statistical Process Control
MSA	Measurement Systems Analysis
APQP	Advanced Product Quality Planning
PPAP	Production Part Approval Process
Formel Q	VW requirements
CSR	OEM Customer Specific Requirements

15. SEVERABILITY CLAUSE

In the event that certain individual provisions of this guideline prove to be or become invalid, this fact shall not impair the validity of this guideline. In such event, the invalid provisions shall be replaced by valid provisions that come nearest the original intent.

Modifications and supplements to this guideline are only effective if agreed by both parties in writing.

16. DEFINITIONS

8D	Problem solving methodology
AIAG	Automotive Industry Action Group
APQP	Advanced Product Quality Planning
CQI-11	Special Process: Plating System Assessment
CQI-12	Special Process: Coating System Assessment
CQI-15	Special Process: Welding System Assessment
CQI-9	Special Process: Heat Treat System Assessment
CSR	Customer Specific Requirements
FIFO	First In First Out
FMEA	Failure Mode and Effects Analysis
IMDS	International Material Data System
OEM	Original Equipment Manufacturer
PPAP	Production Part Approval Process
PSW	Part Submission Warrant
RFQ	Request for quotation
S/R	Safety Relevance
SAP	The MRP system in KIRCHHOFF Automotive
SeSS	Strategic e-Sourcing Solution – KIRCHHOFF Automotive supplier platform available at: www.pool4tool.com/portal/kirchhoff
SPC	Statistical Process Control
Suppliers	suppliers of raw materials, finished parts and assemblies, services and standardized parts (fasteners, bought-in parts).
Suppliers of semi-finished parts	suppliers of stamped parts, weld parts, assemblies.
Suppliers of services	suppliers of KTL painting, powder painting, zinc coating, washing-degreasing, conservation, stamping, arc welding, sorting and reworking etc.
Suppliers of standardised parts (fasteners) "bought-in parts"	suppliers of screws, weld nuts, bolts, collars, tubes etc.
VDA	Association of German Automobile Industry