Quality Assurance Agreement (QAA)

between	HKR Automotive GmbH - hereinafter: - HKR –
And	address supplier - hereinafter: - Supplier -

preamble

HKR Automotive strives for a qualitative and lasting business partnership with its suppliers. The aim of this agreement is the contractual definition of the technical and organizational requirements between the parties, which are necessary to ensure the quality of product development and the products and to achieve constant quality improvement of the products, taking into account the relevant environmental requirements. The validity of this agreement applies to all companies of the suppliers.

I. scope

The following agreements apply to deliveries and services from the supplier to HKR. If additional product-related agreements are required, these will be documented. These agreements are also part of the contract between HKR and the supplier and apply in addition to the respective supply contracts. The supplier obliges its sub-suppliers to comply with the rights and obligations assumed from this agreement. This agreement can be monitored by HKR upon request. The parties agree that violations to the obligations of this agreement entitle HKR, after an unsuccessful warning, to terminate the contracts on which the deliveries are based extraordinarily and without notice.

II. quality goal

Customer satisfaction is the ultimate goal of all quality assurance activities. All deliveries and services to HKR and/or its customers must meet the agreed and legal requirements. The supplier and its sub-suppliers are committed to the zero-defect goal. The supplier continuously optimizes its services accordingly. This goal is pursued through consistent quality planning and continuous monitoring with a focus on error prevention and constant improvement, as well as resource conservation and the principle of sustainability.

With selected suppliers can be concluded separate QAAs in which specific quality targets/ppms are agreed. The responsibility for this is on the supplier quality management department.

III. quality management

The supplier commits to permanently use a suitable QM system that meets the requirements of the automotive industry and is verified by a certificate in accordance with IATF 16949 in the currently valid version. If the supplier does not maintain a certified management system according to IATF 16949, he will commit to further develop his system accordingly. If the supplier cannot be certified according to IATF 16949 due to the nature of his business activity, he at least must maintain a certified management system according to DIN EN ISO 9001. As proof of the corresponding management systems of the supplier and its sub-suppliers, the supplier will send copies of the currently valid certificates available without being asked. The supplier shall inform HKR immediately about the revocation of its certificates or the revocation of the certificates of the sub-suppliers.

IV. representative / contact person

The supplier appoints an officer (PSCO product safety and conformity officer) who coordinates the implementation of this agreement and thus has to make or bring about decisions. He is always the contact person for HKR.

PSCO is hereby named:
His deputy:
The HKR must be informed in writing of a change in the representative without being asked.

V. subcontractor management

The supplier is responsible for ensuring the quality of the raw materials used for HKR and the production parts purchased for HKR. This also includes contract processing such as heat treatment, surface treatment (e.g. electroplating), painting, drilling, milling, turning, etc. The supplier ensures that its sub-suppliers take suitable quality-control measures so that the quality of the products to be delivered to HKR meets the contractual and legal requirements. The supplier ensures that his subcontractors introduce and maintain at least one quality management system in accordance with DIN EN ISO 9001.

VI. environmental management

The legal requirements and limits must be met as minimum requirements for all processes and for all services to be provided. Test results, if required by law, are made available to HKR. For all processes and for all services to be provided by the supplier's subcontractors, the test results must be made available to HKR upon request. The mid-term goal for the supplier should be the establishment of an environmental management system, verified by a certificate according to DIN EN ISO 14001. With regard to the end-of-life vehicle regulation 2000/53/EG and, if applicable, the electronic waste regulation 2002/96/EG, the supplier must provide all the necessary data. The material data regarding the end-of-life vehicle ordinance are made available to HKR via the international material database (IMDS). The REACH regulation on the Registration, Evaluation, Authorization (and Restriction) of Chemicals came into effect on 06/01/07 in EU member states. The REACH regulation in its current form is intended to ensure that around 30,000 of the most commonly used substances, as well as all

new substances, are registered and that appropriate safety data are available. In the case of substances that are of very high concern (belonging to the SVHC category), it may also be necessary to apply for an authorization for their use. The supplier must comply with these standards. The RoHS Directive on the Restriction of the Use of Certain Hazardous Substances came into force in the EU member states on 07/01/06. The RoHS Directive, in its most current form, restricts the use of six hazardous substances, supporting efficient recycling of discarded products. It must also be ensured that specifications for the use of responsible minerals are complied with by EICC (Dodd-Frank Act). The supplier must introduce a concept for resource conservation and sustainability in its processes.

VII. audits

In case of occurring quality problems or as part of the optimization of processes, HKR is permitted, after coordination in advance, to have its employees carry out a system, product or process audit in accordance with VDA Volume 6.3. If quality problems occur that are caused by sub-suppliers, the supplier enables HKR to audit the sub-supplier in the form of a system , product, or process audit if necessary. The supplier carries out annual self-audits in the form of a VDA 6.3 process audit on the products delivered to HKR. The results of the self-audits are to be sent to HKR on request.

VIII. advanced quality planning

The principle of "error avoidance instead of error detection" is taken into account by the supplier. A systematic advance quality planning is carried out using APQP (Advanced Quality Product planning) or VDA maturity level assurance. However, at least the following five requirements must be met: 1. feasibility, 2. quality discussions, 3. project plan/milestones, 4. test planning and test equipment planning, 5. risk analysis/FMEA to be implemented.

1. Feasibility

The supplier receives technical documents from HKR with the order. The supplier is obliged to refer to all documents (such as drawings, test specifications, standards) that appear unclear, incorrect or incomplete. HKR will then issue appropriate written instructions or provide amended documents. The supplier uses an internal distribution system to ensure that all affected contributors always have access to the latest version of the documents sent by HKR. Documents that no longer correspond to the latest version must be destroyed or returned. The supplier checks the deliveries and services specified in the order with regard to their feasibility. Feasibility in this context means that the requested product can be manufactured under serial production conditions, in particular with regard to the requirements such as:

- capacities/quantities
- milestones
- specifications
- drawings
- process capabilities for special characteristics CCs with Cpk > 1.67 and SCs with Cpk > 1.33, short term capability > 1.67

In addition to this information, the customer-specific specifications contained in the appendices must also be considered. Approval takes place via an EMPB in accordance with the VDA PPF procedure. The scope of the sampling can be agreed in advance between the supplier and HKR.

2. Component review

In the course of the component review, a common understanding between the supplier and HKR on the product/process is established before the order is placed, but at the latest at the start of the project and documented using the component review list.

3. Project Plan / Milestone Plan

The supplier creates a project or milestone plan for the purpose of project planning and project implementation. The following milestones are included in the project plan:

- Creation of a design FMEA (if the supplier is responsible for the design)
- Creation of a process FMEA starting from the process planning phase
- Creation of a control or production control plan (including special characteristics, critical characteristics CCs and significant characteristics SCs)
- Planning and provision of test equipment including proof of test equipment capability
- Production of non-tool sample parts (if necessary)
- Production of the first off-the-tool sample parts
- Determination of the machine or process capability (for special characteristics CCs and SCs)
- Implementation of the initial sampling according to PPAP or VDA 2/PPF
- Carrying out a capacity analysis (Run@Rate)
- Start of production and system filling
- Start and finish dates, resources

The supplier communicates the project status / project progress and the list of open points / action plan at specified intervals to the responsible quality planner at HKR. Project risks are evaluated by the supplier and ideally eliminated with suitable measures, but at least reduced to an acceptable risk. In special cases, e.g. in complex projects or based on an end customer requirement, the product development process can be tracked using the maturity level methodology. In this case, the VDA volume "Maturity level assurance for new parts" applies. Alternatively, APQP can be used.

4. Test planning and test equipment planning

The supplier ensures through systematic test planning and test equipment planning that
for new and/or modified products, manufacturing processes, etc.

- all characteristics essential for the quality are recorded,
- the test methods and frequencies to be used are suitable,
- the test equipment is designed correctly and is available in time before the start of the pilot series and
- the test method is agreed upon.

The characteristics that are essential for quality are stated on the drawings and in the specifications. The determination of critical and significant product features, which are to be given special attention to in the test planning and in the planning of test equipment, is carried out by taking into account the FMEA findings in coordination with HKR.

A test plan contains the following information:

- Master data (such as manufacturer, designation, drawing number, technical revision status)
- documentation obligation and creator / user / date
- test characteristic(s), (at least all special characteristics CCs and SCs)
- test equipment
- test frequency
- test method
- type of test (quantitative or qualitative)
- sample size or 100% inspection
- remedial measures in the event of errors and those responsible for implementation

The definition of the special characteristics is based on the VDA volume "Product development - process description of special features (BM)".

5. Risk analysis / FMEA

The supplier must create a risk analysis using FMEA for all parts/components to be manufactured according to a specified design drawing. The results of the supplier's risk analysis can be monitored by HKR at any time. The construction and planning departments at HKR support the supplier with questions about system interfaces. System FMEAs are initiated by HKR if required and carried out jointly on a project-specific basis. Risk analyzes must be created by the dates specified in the project plan / milestone plan and updated accordingly.

6. Technical cleanliness

In the case of the manufacture of cleanliness-sensitive components (HKR marks this as a special characteristic in the specification), VDA Volume 19 Part 2 “Technical Cleanliness in Assembly” must be taken into account.

7. ESD compliance

The supplier must ensure that its products and processes are ESD compliant. This also includes the internal and external packaging.

IX. quality assessment of construction results

In terms of error-preventing production and constant quality improvement, the supplier commits to carry out a quality assessment of the design results achieved (development concept, development pattern) within the framework of design reviews. The assessment is based on the specifications. If the results deviate from the quality requirements in the specifications, corrective measures must be planned and implemented by the supplier. Any resulting additional costs are borne by the cause.

X. proof of process capability

Regardless of the specification of further test characteristics for series monitoring, the supplier must carry out process capability studies for special characteristics. According to the project plan, the selection and specification of the characteristics for which evidence of the process capability is to be provided must take place at the latest for the pilot series. However, these are at least all critical and significant characteristics:

- Preliminary process capability Pp; Ppk > 1.67
- Process capability (long-term) Cp ; Cpk > 1.33 for SCs > 1.67 for CCs

Special characteristics are marked accordingly in the drawings and/or specifications and documented in the control plan. The supplier must provide evidence of the process capability for the specified test characteristics. The process capability study must be carried out on the basis of VDA volume 4 "Quality assurance before series production". HKR is entitled to view the relevant documentation (control charts, SPC) on request and to document it in the component review. If the required process capabilities are not achieved, the supplier or the subcontractor must immediately initiate measures to optimize the process and apply suitable test methods so that the quality target can be met. Evidence of process capability is a mandatory part of initial sampling.

XI. sampling

The sampling of the products should provide evidence before the start of series production that the quality requirements set out in the drawings and specifications have been met. Sampling is carried out in accordance with PPAP or VDA 2 /PPF. The procedure to be used and the submission level are agreed with the supplier. At least one retained sample of the last sampled and released version must be retained by the supplier. The storage period can be found in the current norm. A new sampling must always be carried out; re-sampling and change sampling is to be carried out for:

- in the case of rejected sampling or sampling with conditional approval
- changes in the production process
- change of subcontractor
- in the case of relocation of production (also within the existing production facility)
- change to the test process or test equipment
- changes in construction or design
- material changes
- use of new tools

- production discontinuation > 12 months

A delivery of products to HKR (even after changes) is only possible after approval for sampling or submission of a deviation permit /special approval by HKR. The correspondingly delivered goods must be marked with special release labels.

XII. requalification exams

Annual requalification must be coordinated with HKR and must take place 12 months after the last release by HKR. Otherwise, the specifications of IATF16949:2015 apply. The results are to be made available by the supplier free of charge. This is an obligation of the supplier.

XIII. process verification (Run@Rate)

When performing a Run@Rate, all standard production tools and systems must be in use. Deviations from this must be agreed in advance. The achievement of the planned performance must be proven using the personnel planned for series production and the necessary equipment. The date and scope of the inspection will be priorly coordinated between the supplier and HKR. The preparation and implementation responsibility lies with the supplier with the participation and subsequent evaluation by HKR. Deviations are recorded in an action plan and must be processed by the supplier. If necessary, the procedure must be repeated in the event of significant deficiencies. HKR is entitled to invoice the supplier for the personnel costs incurred for the further necessary verifications (travel, expenses, accommodation, daily flat rate).

XIV. marking, storage and packaging

Regarding the marking of tools, products, parts and packaging the specifications agreed with HKR must be met.

1. The supplier marks the goods in such a way that the product condition and the test condition are clearly recognizable at all times, from goods receipt to delivery.
2. The individual load carriers with goods ready for dispatch are provided with a fully completed goods label (VDA label).
3. Each container must be marked in such a way that batch tracing is guaranteed. The plain text and the content of the data matrix code must be coordinated with HKR.
4. The labeling of the goods must be recognizable during transport and storage.

XV. traceability and documentation

The supplier is obliged to ensure traceability that is complete in the event of a detected error. For the creation and storage of documents, the recommendations of the VDA (Volume 1 "Documentation and Archiving" and "Verification") in the currently valid version must be taken into account. Documents with special archiving, which relate in particular to special characterics of the classification CCs, must be archived for 30 years, other documents for at least 10 years. In the event of claims being made by third

parties, the supplier will grant HKR access to the relevant quality documentation to defend against claims and make these temporarily available to the extent necessary to provide evidence of exculpation.

XVI production/series monitoring

The supplier is obliged to carry out all of the tests listed in the control plan to ensure product and process quality. The control plan is made available to HKR with the sampling documents and approved. Changes to the control plan must be reported to HKR and must be approved by HKR.

In the event of process disruptions and quality deviations, the suppliers must analyze the causes, initiate improvement measures and determine their effectiveness. In the event of recurring production problems that affect the quality and delivery reliability of the products to be delivered, the supplier grants HKR insight into all relevant process parameters and characteristics. Insights into manufacturing processes that require confidentiality and other trade secrets can be denied.

XVIII. serial delivery

The supplier ensures the supply of parts in accordance with the agreed quality and delivery conditions in agreed quantities and on time. To avoid malfunctions and machine and tool failures, the supplier maintains preventive maintenance/servicing.
To avoid disruption in the supply chain, safety stocks must be created for purchased parts and finished products.

XVIII. defective parts

If defective or suspect parts are found, they must be restricted, marked and separated. The cause bears the costs of further measures. Mixing with good parts must be prevented in order to ensure that only defect-free contractual items are delivered. The supplier is only entitled to deliver parts that deviate from the specification or from the drawing requirements if there is a deviation permit approved by HKR , which must be attached to the outside of the shipping packaging.

XIX. receipt inspection and notification of defects

Upon receipt, HKR checks the products purchased from the supplier for their identity, quantity and for externally visible damage. Otherwise, HKR is released from the obligation to examine and give notice of defects (§377 HGB).

XX.nonconformities

The supplier reacts to complaints due to faulty deliveries/services immediately. The supplier sends a report (according to VDA volume "8D - problem solving in 8 disciplines"). The following reaction times must be observed:

- Problem description including error localization and risk assessment, initiation of immediate measures to avoid further defective products at HKR (feedback within 24 hours)

- Cause of error for the occurrence and non-discovery of the problem, definition of remedial measures (within 5 working days)
- Confirmation of the introduction of the corrective measures and preliminary proof of the effectiveness of the measures taken (within 10 working days)
- Confirmation of the effectiveness of the remedial measures (within 20 working days), if not by design.

HKR reserves the right to review the measures introduced at the supplier by means of an audit. The notice period for this audit is 2 working days.

Each justified complaint will be charged to the supplier with a lump sum of 300 euros. In addition, all costs incurred will be claimed in addition to the lump sum per complaint. In the event of a new complaint for the same error pattern or a follow-up audit is necessary, all associated costs for HKR Automotive GmbH, such as hotel and flight costs (> 4 hours business class) are to be borne by the supplier. These include all internal/external costs, as well as consequential damages.

Warranty claims are derived from customer complaints and field complaints that can be traced back to a defect in the product delivered by the supplier.

XXI. rejection of defective deliveries/services

Before faulty deliveries/services are sorted out, rejected or reworked, the further course of action is coordinated between the supplier and HKR in order to keep potential damage to a minimum. Appropriate measures must be taken to ensure production and delivery readiness:

- Return and short-term replacement
- Sorting out by sorting company or supplier
- Rework by sorting company or supplier
- Exchange by supplier

The next three deliveries after corrections must be marked according to customer requirements.

XXII. escalation process

Depending on the problem and the frequency of problems, a distinction is made between discussions at the following supplier levels (escalation process):

Level 0:	Clerk level
Level I:	Head of department
Level II:	Purchasing, SQA and, if necessary, management

If sufficient success is not achieved with the measures specified in each case,

the conversation will be escalated to the next higher level.

XXIII. change notifications

The supplier informs HKR (e.g. via PCN) about any changes (e.g. process, material, location, see also VDA 2 /PPF trigger criteria for sampling) at least 6 months before their implementation, so that HKR can check them for their scope and relevance to the end customer. The releases for changes are to be handled in accordance with the sampling regulations (PPAP, VDA 2 /PPF) and thus also include a validation of the change before release. Part histories must be kept from the beginning of the sample creation to the end of series production. Part histories contain all internally and externally triggered product and process changes as well as information on part designation, part number, change status of the drawing or construction stage, description of change, delivery date of sample, delivery date of series, sampling. The part history must be made available to HKR on request.

XXIV. secrecy

The parties assure each other that they will keep secret any information and knowledge they have obtained from the other party and will not make it accessible to third parties or use it for any other purpose for which it was transmitted without the written consent of this party became. This obligation will continue for a period of 3 years from the date of termination of this Agreement.

XXV. written form requirement

Changes or additions to this agreement must be made in writing to be effective. This also applies to the waiver of the written form requirement.

XXVI. scope and term

The present agreement comes into force on the date of signature by the supplier and HKR. It is valid for an indefinite period and can be terminated in writing by a registered letter by both the supplier and HKR with a notice period of 6 months. The right to extraordinary termination is not affected. The termination of this agreement does not affect the effectiveness of current supply contracts until they have been fully processed.

XXVII. contingency strategies

The supplier commits to develop emergency strategies and emergency plans and to implement them if necessary in order to guarantee the delivery of the guaranteed parts and their quality. These must be available to HKR for inspection upon request.

XXVIII. final provisions, law, place of jurisdiction

Should individual provisions of this contract be ineffective or unenforceable or become ineffective or unenforceable after the conclusion of the contract, the validity of the rest of the contract remains unaffected. The invalid or unenforceable provision shall be replaced by a valid and enforceable provision whose effects come closest to the economic objective pursued by the contracting parties with the invalid or unenforceable provision. The above provisions apply accordingly in the event that the contract proves to be incomplete. The agreement is subject to the law of the Federal Republic of Germany, but to the exclusion of the UN Sales Convention. For all contractual and non-contractual disputes, the exclusive local and international jurisdiction at the place of business of the customer is agreed. In particular, this jurisdiction also excludes any other jurisdiction that is provided for by law due to a personal or factual connection.

XXIX. applicable documents

The applicable documents are part of the contract and are listed in the appendix to the QAA.
The supplier will be informed by HKR about innovations and has to implement them. These innovations thus become part of the contract.
In general, the currently valid VDA volumes must be taken into account.

HKR Automotive GmbH **supplier**

Kupferzell,

Attachment

Special Shipment Label.pdf

Label for marking non-series-compliant parts.