Supplier Manual

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1 Preamble

This Supplier Manual shall apply to both GRAMMER AG and GRAMMER AG affiliated companies (hereinafter referred to as "GRAMMER") pursuant to Sections 15 et seq. of the German Stock Corporation Act (AktG) and supplements the GRAMMER Terms and Conditions of Purchase as amended from time to time, available at

http://www.grammer.com/supplier-support/purchasing.html

The Supplier Manual is used exclusively in the German and English versions.

In the event of contradictions or discrepancies, the German version is authoritative.

Global competition, increasing demands from our customers and cost pressure are challenges that GRAMMER must face together with its suppliers. The prerequisites for this are mature products for the start of series production and stable processes during series production. To achieve this, we need capable suppliers / partners who are committed to meeting the challenges of the future beyond the basic requirements, together with us.

This manual serves as a guideline for partnership-based cooperation between suppliers and GRAMMER. It is a binding document and is part of the contractual agreement between GRAMMER and the supplier and must be considered at the pre-contractual enquiry stage.

2 Terms and abbreviations

AIAG	Automotive Industry Action Group
AktG	Aktiengesetz, German Stock Corporation Act
APQP	Advanced Product Quality Planning
BOH	Business On Hold – blocking the supplier for new orders
CC	Critical Characteristic
CSL	Controlled Shipment Level
CQI	Continuous Quality Improvement
D / TLD	Characteristic Requiring Documentation
EMPB	Initial Sample Test Report
EOP	End of Production
FMEA	Failure Mode and Effect Analysis
QDA	Quality Development Agreement
GPQ	GRAMMER Produces Quality
IMDS	International Material Data System, see www.mdsystem.com
CIP	Continuous Improvement Process
MSA	Measurement System Analysis
NOL	Nomination Letter
NPM	Non Production Material
PMS	Product-Market Segment
PPAP	Production Part Approval Process
QAF	Quotation Analysis Form
QEV/QDA	General Quality Development Agreement and ppm targets
QM System	Quality Management System
QSA	Project / Product-Specific Quality Assurance Requirements
R&R	Run and Rate (process acceptance for a new project)
REACh	Registration, Evaluation, Authorisation of Chemicals
RoHS	Restriction of Hazardous Substances
SC	Significant Characteristic
SCE	Supplier Cost Engineer

SLRR	Supplier Launch Readiness Report
SOP	Start of Production
SQA	Supplier Quality Assurance
SDE	Supplier Development Engineer
TRL	Technical Revision Suppliers
UM System	Environmental Management System
VDA	Verband der Automobilindustrie, German Automotive Industry Association

3 Procurement and quality policy

We strive for partnership and long-term cooperation with our suppliers. Continuous improvement of cooperation in supplier processes and systems contributes to profitability, delivery reliability and quality improvement.

Quick-changing and increasing customer demands on GRAMMER also require our suppliers to be extremely flexible and willing to contribute creatively and quickly to solving problems. The supplier's deliveries and services must therefore fully comply with all agreed and statutory requirements. To pursue this zero-defect goal, consistent advance quality planning and effective series monitoring are indispensable.

The focus here must be on fault prevention. The supplier thus undertakes to consistently pursue a 0-failure strategy.

Together with the supplier, we want to achieve the following goals:

- Establishing a long-term customer / supplier relationship
- Ensuring joint competitiveness
- Optimum communication
- Minimising storage and transport costs for the benefit of both sides
- Creating the prerequisites for the supplier to be able to optimally assume responsibility for quality
- Quality assurance before series delivery (project phase)
- Assurance and continuous improvement of quality in series production

Scope of the Supplier Manual

- without exception for all production material suppliers
- Service providers and NPM suppliers who, based on the current supplier risk matrix, have a direct influence on the fulfilment of customer requirements according to IATF requirements.

4 Requirements to the supplier management systems

The supplier undertakes bindingly to introduce a quality management system that at least meets the requirements of DIN EN ISO 9001 and to prove this with a corresponding certificate.

The goal of the suppliers **must** be to align their QM system with IATF 16949 and to also document the implementation of this standard with a certificate. Failure to meet this requirement can have a negative impact on the individual supplier rating and supplier classification and can therefore be decisive for awarding new contracts.

If GRAMMER customers have requests for other management systems, these must be specified in the Quality Development Agreement (A_016_001). The latest versions of the applicable customer-specific requirements

(Link to customer-specific requirements) are to be procured independently by the supplier and the contents implemented from them.

GRAMMER reserves the right to check the effectiveness of the QM system (after notice) at any time in the form of a Second Party Audit (system audit).

Environmentally compatible production and environmentally compatible products are requirements that we all must meet. Therefore, we ask our suppliers to introduce an environmental management system according to DIN EN ISO 14001 or to prove the planned introduction with a time schedule.

GRAMMER is currently introducing an occupational safety management system in accordance with ISO 45001 and a data security management system in accordance with ISO 27001 or Tisax (Trusted Information Security Assessment Exchange) and invites its suppliers to also integrate this content into their existing management systems. The aim should be to prove this with the respective certificates.

Compliance with applicable laws and regulations is a prerequisite.

5 Supplier selection

5.1 Supplier self-disclosure / GRAMMER supplier portal

Via the GRAMMER Supplier Portal => https://eprocurement.grammer.com/ngastras/astras.R6/WFE/public/master/de/DE/-/showLogin, the supplier must store his data independently and maintain it at regular intervals (including upload certificates, new contacts, etc.).

5.2 Potential analysis

For new, potential suppliers, a paid (daily rate SDE 1.500€) potential analysis according to VDA 6.3 is planned by an appropriately qualified auditor or GRAMMER approved partners (e.G. Formel D) in coordination with Purchasing and Central Supplier Development and carried out at the supplier's premises. This potential analysis serves to evaluate new, yet unknown suppliers, locations, and technologies.

It serves to prepare the award decision based on comparable manufacturing processes and products. A positively evaluated potential analysis does not necessarily lead to an award to the supplier, but a negative evaluation (red) precludes an award.

GRAMMER may require the supplier to perform a self-audit in accordance with VDA 6.3 to obtain information and prepare for a potential analysis.

The evaluation is carried out in the report analogously to the traffic light system and the evaluation rules according to VDA 6.3. The report on the potential analysis, as well as any necessary improvement program, will be sent to the evaluated company promptly after execution.

The supplier is obligated to present a binding program with implementation dates and follow-up activities of GRAMMER's central supplier development on the planned award date.

If awarded, the improvement programme must be implemented by the nominated supplier on the specified dates and the effectiveness of the measures must be proven by a self-audit on the agreed date before SOP.

5.3 Order placement / list of approved suppliers / Sourcing Table / Business-on-hold

At GRAMMER, the decision to place an order is made by a cross-departmental committee (Executive Board, PMS, Purchasing, Quality, Operations, Controlling) in the "International Sourcing Table".

The order will be placed via a separate commission / nomination. By signing the order, the supplier is integrated into the list of approved suppliers.

Negative assessments during audits, non-compliance with GRAMMER requirements, significant deterioration in quality or non-signing of contracts can lead to the supplier being completely or partially blocked (business-on-hold). The business-on-hold status is indicated to the supplier in writing.

5.4 Warranty / product liability / insurance

The details regarding warranty and product liability are regulated in the GRAMMER Purchasing Terms and Conditions in their currently agreed version.

These are available at: http://www.grammer.com/supplier-support/purchasing.html.

Warranty claims must be handled in accordance with the provisions of the respective terms and conditions of purchase. In addition to this, the provisions of this Supplier Manual and the VDA Volume "Field Failure Analysis & Audit Standard" in their respectively valid version must apply. No Trouble Found (NTF) process is part of this volume.

The supplier undertakes to maintain verifiable product liability and recall cost insurance with an appropriate coverage amount per personal injury / property damage for the delivery item to be delivered that is customary in the market and to communicate this to GRAMMER prior to placing an order by submitting a corresponding insurance confirmation.

The absence of proof of the insurance policies must entitle GRAMMER to terminate the delivery relationship at any time without GRAMMER incurring any additional costs or to terminate negotiations with the supplier.

6 Cooperation in the product development process

6.1 General

Development projects must be scheduled in conjunction with GRAMMER's project managers according to the requirements of the end customer. The supplier must provide enough qualified employees for this purpose.

6.2 Supplier Launch Readiness Process (APQP)

GRAMMER change the APQP process to the GRAMMER Supplier Launch Readiness Review with the most important key points and elements for the planning and execution of projects.

After the Risk assessment (F_014_125 will be requested by GRAMMER) done by the supplier as self-assessment and GRAMMER internal assessment the Risk Level will set the requirements for joint project work. The set Risk Level start the SLRR Report that will be created in the ASTRAS System by the responsible SQA as Activity to track the Process. Feedback to the SLRR Activity and regular Review must be done in the ASTRAS System and in coordination with the SQA.

6.3 Quality Assurance Requirements (QSA)

In the QSA, GRAMMER Quality Planning defines the product and customer-specific requirements (e.g., initial sampling scope, process capabilities, test equipment capabilities, etc.) for the components of the respective project. The manufacturability of the components is again evaluated and documented by the supplier. The identification and definition of the special characteristics of GRAMMER and the OEMs can be derived from this.

6.4 Specifications / Drawings

The supplier undertakes to:

- procure and comply with statutory regulations, all specifications, requirement specifications and standards in their current version (in accordance with the information in the drawing),
- return the signed QSA sent with the request to GRAMMER and enclose it with the initial sample documents,
- request requirement specifications and evaluate, coordinate, and comply with the requirements.
- define important characteristics and necessary parameters for process capabilities, coordinate them with GRAMMER and adhere to them,
- point out missing information (e.g., specifications, standards),
- report inconsistencies in the documentation to the responsible purchasing department,
- coordinate with GRAMMER in advance any product and process changes that influence the requirements,
- if required, consider the customer-specific requirements demanded by GRAMMER customers,
- use GRAMMER's data exchange portal exclusively for the exchange of CAD data and, if required, to independently acquire and use suitable software for reading CAD data in the original format (usually CATIA or Unigraphics).

6.5 FMEA

A design FMEA can only be created with development responsibility. The necessity must be coordinated with the corresponding GRAMMER product developer.

A process FMEA must be created or updated to ensure product start-up, changes, and complaints.

The preparation is carried out in accordance with the requirement of AIAG & VDA FMEA-Handbook.

The FMEAs must be submitted to GRAMMER for inspection upon request. If necessary, the suppliers must interface FMEAs with the customer or supplier.

6.6 Production Control Plan / Control Plan

The control plan (production control plan, form F_014_019) is an overview of all quality requirements, their verification and test criteria for the components and must be prepared for the prototype, pre-series, and series phase in accordance with the requirements of IATF 16949 in the currently valid version.

Project progress must be adjusted in coordination with the respective GRAMMER quality planners.

The control plan includes the incoming goods inspection, intermediate and final inspection, product audit and re-qualification testing. The evidence of the performance of re-qualification tests (e.g., fire tests) must be kept at regular intervals, documented accordingly and submitted without delay if required or upon request by GRAMMER. Customer-specific specifications must be observed.

Characteristics that were recognised and evaluated as quality-relevant in the drawing and in the FMEA must be reflected in the Control Plan.

6.7 Capability Proofs

Process capability studies serve to prove the quality capability of the processes.

Suppliers must independently provide proof of their ability to perform all test and functional characteristics. Additional proofs of capability (e.g. SC, CC) must be coordinated with the responsible GRAMMER quality planners.

The calculation and execution of the process capabilities must be carried out in accordance with VDA Volume 04 Section 3 or the specifications of AIAG (Process Capability Studies), unless there is another higher-value requirement from the customer.

Unless otherwise specified in a QSA, the following limits apply to SC characteristics to demonstrate process capability:

- Short-term capability $C_{mk} \geq 1.67$
- Preliminary process capability $C_{pk} \geq 1.67$
- Long-term capability $C_{pk} \geq 1.33$

For CC characteristics:

- Short-term capability $C_{mk} \geq 2.0$
- Preliminary process capability $C_{pk} \geq 2.0$
- Long-term capability $C_{pk} \geq 1.67$
-

Proofs of process capability must be determined free of charge for GRAMMER, handed over upon request and proven for the current series. If the above process capability values are not achieved, the affected characteristics must be 100% checked and the results documented. The traceability of the data must be ensured.

6.8 Process Acceptance / Run@Rate

The release for delivery is issued by a process acceptance, which is carried out by GRAMMER on the supplier's premises if required. The decision to carry out a process acceptance is made in the Supplier Launch Readiness Process by an internal committee specific to the component or supplier and with regard to critical characteristics or processes.
The supplier must be informed of this at an early stage.

A prerequisite for process acceptance is a product release (at least special release by GRAMMER or conditional release according to VDA Volume 2 or PPAP) and the completion of development and process work.

Triggers for the execution of a process acceptance (R@R) can be in particular:

- New parts
- Critical manufacturing processes
- Technical changes (changed parts, modified specifications)
- Relocation of the supplier's production site
- Changes in the supply chain
- Significant increase in quantities

In general, GRAMMER requires a self R@R (own process series by the supplier) for each project.
The relevant documents must be enclosed with the respective initial sampling. If these documents are not submitted, no production process and product release can be granted. The documents must be made available to the central supplier development department (SDE) or plant SQA on request. In the event of process acceptance by GRAMMER employees, these documents are also queried and evaluated.

The GRAMMER R@R form must be used as the form here or, in the case of corresponding customer specifications, the customer form.

Unless otherwise agreed in writing, the required capacities from the nomination must in principle be ensured for each part number throughout with a flexibility of +/- 15% on 240 working days with 15 shifts per week and 48 weeks per year.

In special cases, the process approval may be preceded by an on-site check. In the case of critical projects / suppliers, the quality and quantity of the production process is checked for series suitability in advance according to a jointly agreed project plan.

6.9 Samples

6.9.1 Prototype and pre-series parts / other samples, test parts

The contact person for the scope and time of sampling of prototype and pre-series parts / other samples / test parts is the respective GRAMMER project buyer or product developer as well as the Q planners in the respective GRAMMER plants. Here, coordination between the parties takes place at an early stage with the help of a project / product related QSA (quality assurance requirement).

The supplier undertakes to prepare and document a measurement report of prototype and pre-series parts and other samples in accordance with the drawing specifications and data set. The sample parts must be delivered free of charge to the requesting GRAMMER office together with the measurement protocol and marked accordingly.

Features that deviate from the specifications must be agreed upon in writing with the product developer and approved by the product developer.

Prototype, pre-series, and series parts must be clearly marked on the packaging units with an additional DIN A5 sticker. The stickers must be provided with part numbers, part designation, GRAMMER drawing index, supplier change index, production date, batch number, reference to release report. Deliveries after modification or with special release must be clearly marked on the package as such for the first three deliveries. In the case of components whose dimensions, function and/or geometry do not permit such marking, identification must be carried out in coordination with the responsible GRAMMER quality planner via the package marking.

Each delivery must be product-specific and include test certificates in accordance with the specifications in the Control Plan. In addition, the part history (F_015_002) must be enclosed with every delivery. The parts used for the non-destructive tests must be separately marked and enclosed with the delivery.

Parts intended for **testing** must be clearly described by a sticker or tag at least with the information listed below and indicating the tool status (prototype, pre-series, series):

- Name
- Article no.
- Index

- Part history
- Manufacturer
- Material
- Purchaser
- Production date
- Test report of the measured parts
- Contact partner at GRAMMER
- Tool status (prototype, pre-series, series)

If defects should arise during and after the tests in the scope of delivery, or if the parts should become apparent as not being installable, the supplier must remedy the defects on site. The costs for expenses incurred (e.g., repeated environmental testing) due to defective parts must be passed on to the supplier by means of a test report.

A detailed test planning, which includes all phases (prototype, pre-production and series), is prepared for the delivered parts or components by the supplier at the beginning of the development and in consultation with GRAMMER. These plans are continuously updated by the supplier according to the development progress.

Proof that the tests have been carried out successfully according to plan is the basis for successful initial sample approval.

6.9.2 Initial sample with initial sample test report (EMPB/PPAP)

The basis for the initial sampling of suppliers to GRAMMER is VDA Volume 2 or AIAG PPAP. The production of initial sample parts must be carried out under series conditions.

The initial sampling also includes proof of the test specifications and specifications drawn up on the drawing. The materials used must be documented in the materials test report.

The QSA, which has already been jointly agreed in the project phase and signed by the supplier, must be enclosed with the initial sample documents.

The production of the initial sample parts and the creation and maintenance of all necessary documents and proofs (e.g. FMEAs, measurement protocols, MSA, process capabilities, control plan etc.) are to be created free of charge for GRAMMER. The initial sample parts and the corresponding documentation must be labelled and sent to the contact named in the QSA or to the requesting GRAMMER contact person.

Post-sampling scopes must be treated in the same way as initial sampling scopes.

The proof of process capability is part of the initial sampling. Material data must be provided in the IMDS prior to initial sampling.

Examples of rejection of initial sampling:

- Documents and evidence are incomplete.
- Planned / actual variance exists but is not approved (missing special release)
- The presented parts do not correspond to the valid design status.
- Missing IMDS data
- Missing QSA

6.9.3 Reference and limit samples

Reference and limit samples must be coordinated with the quality planners / SQA of the GRAMMER plants in the project phase, labelled as such and stored protected from environmental influences during the entire product life cycle - at least up to EOP. They must be made available to GRAMMER upon request.

The master samples for colour, graining, varnishing, etc. specified in the technical documents are to be procured by the suppliers for start-up and series production and are binding as a reference.

Reference samples

- represent the allowed values of characteristic parameters.

Limit sample

- Sample that represents the limit value of a quality characteristic.

6.9.4 Parts history

Suppliers maintain a parts history for all products. All product and process changes are documented here. Contents of the parts history:

- Article no.
- Article designation
- GRAMMER drawing index and the associated supplier change index.
- Reason for change
- Date of receipt of the change
- Date of dispatch of the samples
- Marking, whether hand sample, VWZ (pre-series tool) or SWZ (series tool).
- Machine setting data.

If necessary, machine setting data sheets can be requested. For all development stages according to GRAMMER's drawing index and the respective optimisation measures carried out by the supplier for this purpose, the machine setting parameters must be documented in the supplier's part history.

The updated supplier part history must be sent immediately to the product developer and the SQA employees at the respective plant.

6.9.5 IMDS data

All requirements are contained in the IMDS Supplier Manual (M_014_004). The IMDS Manual is available at www.grammer.com/supplier-support/

6.9.6 Special release

Prior to initial sampling, characteristics deviating from the target specifications must be agreed in written form with the responsible GRAMMER product developer.

Deviations must be analysed **BEFOREHAND** by the supplier and provided with remedial actions / proposals for optimisation. These documents must be attached to the application for a temporary (quantity or timeline) special release. After evaluation of the application for a special release by GRAMMER Development and Quality, the supplier is notified of a response in the form of a rejection or issuance of a special release. Applications without prior analysis and an action plan will be rejected on principle.

In the event of rejection, the supplier must immediately take measures at his own expense to remedy the deviations found.

In the event of a special release, this must be enclosed with the initial sample documents as well as ALL components that are delivered to the plants and sent to the affected GRAMMER plants IN ADVANCE.

The containers, packages etc. of the components which are delivered with special release must be clearly marked with reference to the SPECIAL RELEASE.

Without prior notice to GRAMMER plants, the supplier is prohibited from delivering parts to GRAMMER plants.

The limitation of the special releases (quantity or date) is to be pursued by the supplier. If these limits are reached and no appropriate remedial measures have been implemented by the supplier, the supplier is obligated to approach GRAMMER Development AND the affected plant at least 5 days before the end of the time limit and request an extension. An up-to-date action plan must be enclosed with the application. Without this action plan, the request for extension will be rejected in principle.

6.10 Tool management

In addition to the GRAMMER Tool Purchasing Terms and Conditions, available at http://www.grammer.com/supplier-support/purchasing.html, the following additional provisions must apply to tool procurement.

The supplier undertakes to store, insure, and maintain the tools in an orderly and proper manner.
The owner of the tool must also be traceable by means of suitable type plates.

The supplier must use appropriate technical means for the design, manufacture and dimensional inspection of tools and gauges. When awarding contracts to sub-suppliers, these requirements must also be met under the responsibility of the supplier. Tools that are the property of the customer or GRAMMER's own tools must be clearly identified by type plates.

The intervals at which the tool status report is to be submitted must be agreed with the responsible GRAMMER tool manager.

The tool release is affected by a successfully completed initial sampling. If required, GRAMMER employees can inspect the tools directly at the supplier's premises.

The supplier must plan and implement a tool management procedure. This procedure must include the following criteria:

- Tool history
- Maximum production quantity (number of rounds)

- Suitable storage system
- Evidence for preventive tool maintenance

The last part of a batch must be kept on the tool until the next production start.

The access of GRAMMER tool managers to the tool inspection at the respective toolmaker's must be ensured by the supplier and must all form part of the contract when the order is placed. If required, access rights including tool inspection will be extended to GRAMMER customers. For tool inspection, the tools must be prepared accordingly (e.g., both mould halves separated).

6.11 Test gauges / test equipment

Testing gauges and testing equipment must be included in the supplier's testing equipment monitoring system. These must be marked accordingly and assigned to the product. The capabilities of the test equipment must be demonstrated during initial sampling. The setup of test gauges and measuring devices must be coordinated with the respective quality planner or product developer.

The supplier must design the measuring equipment in such a way that it can cover the entire product development and production period.

Costs for test gauges, test equipment and measuring devices must be borne by the supplier. For all special characteristics (CC/SC) and inspection characteristics, the supplier must independently provide proof of test and measuring equipment capability (MSA, IATF Core Tools) at an early stage in the project phase.
If GRAMMER provides the supplier with testing or measuring equipment, this must also be included in the supplier's own monitoring of testing equipment. Changes to these tests or measuring equipment may only be made after GRAMMER's consent or approval. In the case of product changes that have an influence on the test equipment, the procedure for changing the test equipment must be coordinated with GRAMMER.
GRAMMER must be notified immediately of any damage to the customer's property provided and any special measures (e.g., 100% testing, alternative coordinated measuring equipment, etc.) must be taken. Costs for this are borne by the perpetrator.

7 Sub-supplier management

The sub-supplier management serves to identify and safeguard possible risks in the supply chain.
The supplier must be fully responsible for his scope of performance, as well as that of his suppliers and service providers, which must also include full responsibility for quality.

The supplier is also obliged to carry out the evaluation of his suppliers on his own responsibility.

The supplier is responsible for his supply chain including purchased parts and outsourced process steps. The supplier must therefore ensure that he identifies and evaluates all risks in his supply / process chain on his own responsibility and systematically reduces them by means of suitable remedial measures.

The supplier is responsible for fulfilling all requirements in the supply and process chain. For this purpose, he must inform his suppliers and ensure that the requirements (including customer-specific requirements) are known, understood, and implemented.

The supplier must present his supply chain in a self-audit or on request. This includes project-specific assessments, risk analysis (critical paths analogous to VDA maturity assurance) and assessment of the quality capability of the entire supply chain. GRAMMER can view these evaluations and has the right to verify the supplier's evaluations with the sub-supplier together with the supplier. The evaluation is carried out according to the questionnaire as per VDA 6.3 or Grammer's internal TRL question list.

Changes in the supply chain (including material and process changes) must be notified to GRAMMER in advance. The supplier must obtain GRAMMER's consent prior to implementing the changes. If GRAMMER rejects the change, the supplier is not allowed to carry it out. Changes in the supply chain can lead to a reassessment of the supplier and re-sampling of the volumes. GRAMMER reserves the right to verify the changed sub-supplier structure. Costs for this are borne by the supplier.

8 Quality Framework Agreement Series Suppliers (QEV / QDA)

The supplier is required to permanently optimise his core processes in line with the 0-failure philosophy.

A quality development agreement (QEV/QDA) regulates the concrete quality objectives for a defined period. If no QEV/QDA has been concluded, the supplier is obliged to reduce failures annually.

The supplier undertakes to introduce and maintain a systematic product monitoring system for his products, i.e., the supplier prepares an analysis of the actual and potential failures in the use phase and their influence on quality, safety, or the environment.

The supplier independently analyses his current PPM figures and immediately agrees necessary corrective measures with the respective GRAMMER customer plant. The coordination with the plants must take place before the respective conclusion of a supplier evaluation. Subsequent changes to the supplier evaluation are not carried out.

In the event of deviating results (B or C result in the evaluation), the supplier must independently take measures with the aim of regaining the contractually stipulated quality requirement for his product.
If it is found that the release tests do not sufficiently consider the series application in the field,
the supplier must independently, in coordination with GRAMMER, propose modifications of the release tests and take sufficient account of the series application conditions under "laboratory application".

The requirements from IATF 16949 and VDA (documentation and archiving) as well as the customer-specific standards and requirements apply to all characteristics marked "CC" or "SC" in the product description (e.g., drawing, control plan) or other customer-specific requirements.

This means among other things:

- Identification and marking of internal company documents (e.g., test and work instructions, test reports, training certificates, individual drawings)
- Archiving according to VDA volume 1: i.e. 15 years after discontinuation of production
- Layout and availability of documentation for use in court.

The supplier undertakes to comply with the requirements of the EU End-of-Life Vehicle Directive (2000/53/EC and 2002/525/EC) and the implemented national laws (in Germany: End-of-life vehicle law of 21/06/2002, BGBl. I S. 2199 et seq.), the requirements of the EU Directive 2002/95/EC, as well as REACh in the respectively valid version.

Supplier Cost Engineering

GRAMMER aims to make its products and the respective manufacturing processes as efficient and effective as possible. This is also expected from our suppliers and service providers in the direct and indirect supply chain. A transparency in the manufacturing costs (e.g., QAF, Cost Break Down, etc.) is a basic requirement for us in our partnership. During cost optimisation measures, GRAMMER reserves the right to conduct lean audits in the value chain together with the supplier and to identify improvement potential.

The supplier undertakes to support GRAMMER in this activity and to grant access to the manufacturing processes.

9 Quality assurance in series production

9.1 Incoming goods inspections

GRAMMER carries out the following random checks of incoming goods, independently of the outgoing inspections to be carried out by the suppliers:

- identity check
- visual inspection for directly detectable transport damage
- Quantity check

GRAMMER must notify the supplier in writing of any obvious defects.

Defects which were not apparent during the incoming goods inspection, or which were not detected, are reported to the supplier as soon as they become known, or in the event of collective rejection inspections.

Sorting actions of faulty parts:

If defective parts are detected during the pre-series and series prior to the start of production (processing or installation), the supplier must have the opportunity, upon request, to immediately sort the scope of the suspect parts at GRAMMER's expense.

If the supplier is unable to carry out the sorting operation within a reasonable period of time specified by GRAMMER, or in the event of urgency or unreasonableness, GRAMMER reserves the right to have the sorting operation carried out by employees of GRAMMER or by external third parties, whereby the supplier must bear the resulting costs and also assume coordination with the sorting / reworking service provider.

9.2 Product safety, product liability

The primary manufacturing responsibility for the purchased parts incorporated into GRAMMER's end product lies with the supplier. The supplier must ensure compliance with all product liability and product safety laws and regulations as well as comparable foreign regulations in the customer-related area of application of the parts supplied by the supplier to minimise any risks of product liability or product recall.

The supplier must ensure and oblige his sub-suppliers accordingly that, in particular:

- there is a pronounced quality awareness throughout the company,
- the necessary product safety is ensured during the development of components,
- product safety is given special consideration in quality planning,
- the quality capability of the manufacturing processes is ensured and proven,
- the probability of the occurrence of defective products is minimised by appropriate quality assurance measures accompanying the series production process,

- the timely detection of faulty products in the production process is ensured as early as possible by appropriate measures,
- Quality data and legally or contractually required verification tests are documented in detail to be able to prove that the products were manufactured in compliance with laws and safety standards,
- a material traceability system is used to be able to limit the effects of faults that have occurred, if necessary,
- detailed information and training of the responsible employees about product safety and product liability is provided,
- Components with limited durability meet the specific labelling requirements,
- a on-site Product Safety & Conformity Representative (PSCR) is appointed for each stage in the supply chain. Grammer must be notified immediately of any changes in the composition of the (PSCR).

9.3 Supplier self-audit

To assess and improve quality capabilities, the supplier must carry out regular internal audits (system, process, product) in accordance with the requirements of IATF 16949 and VDA Volume 6.3,
at least once a year.

The Supplier Self-Audit based on VDA 6.3 serves to provide evidence to the supplier that all legal, official, customer- and product-specific and own requirements for the respective production site for the respective product group have been met. The self-qualification of the supplier is part of the CIP and has the classification "A" as its goal. Following a self-assessment with an "A" rating, GRAMMER reserves the right to carry out a process audit at the supplier's premises to check the status of the A-supplier. GRAMMER's evaluation is decisive for the final classification of the supplier.

The aim is for the supplier location to achieve an A rating at the latest after two self-audits. If the self-audit does not achieve an A rating within a reasonable period, GRAMMER reserves the right to conduct an audit at the supplier's premises. The resulting costs will be invoiced to the supplier.

The internal process audit must be performed by appropriately qualified auditors (see IATF / VDA 6.3 Specifications - status) for all process steps of the product groups commissioned by GRAMMER. The self-audit must be sent to GRAMMER upon request. GRAMMER may also request that a self-audit including an improvement program be carried out and sent at any time.

9.4 Product audit

Process fluctuations and missing process capabilities often have a direct effect on product quality.
A product audit can identify deviations from customer requirements and draw conclusions about the influencing processes. Considering detected deviations, the causal processes can be identified, analysed and corrective measures implemented.

A product audit according to VDA 6.5 must be carried out at least once a year for each product manufactured in series. The product audit must be regulated in the production control plan. The results of the product audit are randomly checked by GRAMMER as part of process audits. Upon request, these audits must be transferred to GRAMMER.

In the event of deviations detected in the product audit, the supplier is obliged to immediately initiate suitable measures and monitor their implementation. The sustainability and effectiveness of the measures must be examined within a reasonable period.

In the event of A and B as well as systematic C faults, the supplier must immediately inform GRAMMER's Central Supplier Development Department (SQE) to coordinate the necessary measures.

9.5 Process audit VDA 6.3 by GRAMMER

Process audits serve to assess quality capability. They should lead to capable and controlled processes that are robust against disturbing variables. The VDA process audit monitors the product development process, supplier management, series production and customer satisfaction / customer care and/or service. Process audits according to VDA 6.3 can be applied internally as well as externally. Suppliers use process audits to design and improve their processes.

Reasons for carrying out process audits include:

- Maturity assessment regarding product or process release
- Securing product and process start-ups
- Assessment of the quality capability of suppliers and sub-suppliers
- Analysis due to product or process problems
- Initiation and monitoring of improvement processes
- Disruptions in the supply chain
- Ensuring the availability
- Weak point and risk analysis / prevention
- Multiple C ratings in succession in GRAMMER supplier evaluation (Negative Trend)

VDA 6.3 Process audits at suppliers are planned worldwide in GRAMMER's annual audit planning and announced and carried out regionally by the SDEs.

If an audit leads to a C classification (not quality-capable), GRAMMER will carry out a post-audit within 9 months at the supplier's expense.

Supplementary gradation regulation according to VW Formula Q compared to VDA Volume 6.3

If the supplier (who delivers to the VW process chain) does not have a system certification according to IATF 16949 or VDA Volume 6.1, the VDA 6.3 process audit will downgrade from A to B despite the degree of fulfilment EPN ≥ 90%:

The relevant customer specifications are generally part of every VDA 6.3 process audit. The content, implementation and compliance with these requirements are randomly checked by the auditors during the audits.

Specific audit requirements related to special processes and products (CQI, Customer Specific Requirements, SPICE assessment, etc.) shall also be considered.

9.6 Quality audit verification management D/TLD parts (D/TLD)

Laws impose requirements on automotive manufacturers which must be fulfilled as minimum requirements for all series vehicles. This also results in evidence for suppliers, which, despite strict liability (product liability), is intended to protect the supplier and the automotive manufacturer against consequential damage such as sales bans and contractual penalties.

In addition to the general requirements for the QM system, the supplier must maintain part-specific quality certificates for D/TLD parts and archive them for at least 15 years. This includes technical documents marked with SC, CC or "TLD" such as drawings, tables, production releases, technical delivery conditions, test

specifications, sample reports and other quality records, which are required in the event of proof and may relieve the burden.
The quality certificates also include certificates of planning activities, selection and qualification of personnel, suitability of test facilities as well as process capability investigations and correspondence.

In the event of damage and/or at the request of GRAMMER, the supplier must be able to prove that he has fulfilled his corporate due diligence in order to exclude defects in the product.

GRAMMER Group expects its suppliers to apply the system to each D/TLD part to be supplied.

Further information can be found in the "VW Formula Q Capability", or other customer specifications in the actual valid versions.

The VW form 04_SL_D_TLD_audit_v_5_4_2016.xlms is to be used for the execution, it can be downloaded from www.grammer.com/supplier-support.

9.7 Technical Supplier Review

The Technical Revision Suppliers (TRL) is another quality instrument for ensuring the quality of purchased parts throughout the entire supply chain.
GRAMMER must be entitled to carry out a technical revision at its suppliers or throughout the entire supply chain at any time, which must be announced no later than the day prior to the execution.

GRAMMER is pursuing the following goals with its technical revision:

- Ensuring the conformity of parts and components to the specified requirements.
- Verification of product manufacturing on site and all other hedging activities.
- Effectiveness check of corrective measures and verification of agreed quality management standards.

Reasons for performing TRL

- Fault analysis and definition of measures in relation to process or product defects.
- Defined information obligations on the part of suppliers regarding production relocations, changes, etc. were not complied with.

The technical revision supplier is not a substitute for process audits.
The evaluation of the TRL is based on VDA 6.3. A negative result (RED) triggers an escalation and can ultimately lead to a downgrading of the location to C (Business on hold) in the quality performance.

9.8 Complaint procedure / defect claims

In the event of complaints, GRAMMER will inform the supplier by means of a complaint report. The supplier must analyse the defect, define suitable remedial measures, implement them, and verify / validate their sustainable effectiveness.

GRAMMER expects a reasonable response time in the event of faults, due to existing JIS/JIT delivery obligations. The parties agree on a maximum time of 24 hours (working days) from receipt of the complaint to the first qualified reaction of the supplier. Within one calendar week (5 working days) of the occurrence of the fault, GRAMMER must be sent an 8-D report with an analysis of the causes of the fault or the remedial measures initiated (in advance by fax / email).

Immediate response

If the analysis of the facts requires a longer period, or if the urgency of the situation requires a statement from the supplier at short notice, the complainant must be informed immediately and informally.

Faults that could lead to a customer complaint must be processed by the supplier using emergency measures, that is,

- immediate sorting / reworking of stocks on site at the receiving GRAMMER plant.
- use of a 100% firewall to avoid further faults.

If this cannot be implemented by the supplier's own personnel, the supplier must instruct third parties to carry out the execution on the supplier's account.

GRAMMER must be entitled to assert the agreed warranty rights for the delivery of defective parts.
Details can be found in the GRAMMER Charge Back Policy under Chapter 10 of the Supplier Manual.

The following minimum quality tools must be used for fault analysis and sustainable fault elimination:

- 5 Why Analyses for Occurrence AND Non-Detection
- Ishikawa
- PDCA

These tools are part of the GRAMMER GPQ philosophy (**G**RAMMER **P**roduces **Q**uality) and must be included with the 8D Report based on plant requirements. GRAMMER supports the supplier in qualifying and applying the Q-Tools as well as in understanding and implementing the GPQ philosophy in your company. The aim is to implement a sustainable and effective fault elimination process at the supplier.

In the event of increased occurrence of deficiencies in communication or delivery quality, the supplier might be invited to appropriate Supplier Days / Supplier Meetings at the respective plant in cooperation between the central Supplier Development department (SQE) and the quality departments of the plants. The supplier must comply with this invitation. The aim of the meeting is to present the delivery performance of Central Supplier Development (SQE) and the GRAMMER delivery plant. During this meeting, measures are jointly defined which must be implemented by the supplier in order to optimise performance again.

9.9 Continuous improvement process CIP

Continuous improvement must be part of the quality strategy of every supplier. The supplier must implement and maintain a continuous improvement process to reduce his internal rejection and rework rates.
The results of CIP are to be proven as cost savings or quality improvement.

9.10 Change management

The supplier is obliged to notify the receiving GRAMMER plant of all changes in its process chain (location, product, process) in accordance with VDA Volume 2 **BEFORE** implementation and to obtain the approval of the relevant specialist departments. The necessity of a new sampling must be coordinated with the responsible quality assurance department. The additional expenses arising from the renewed release process must be borne by the supplier.

9.11 Re-qualification tests

All characteristics (function, material and geometry) must be verified within the scope of a repeated inspection of all parts and components delivered to GRAMMER at least once a year. The scope of the characteristics to be inspected can only be limited in coordination with the GRAMMER quality planners. The evidence must be made

available to GRAMMER upon request, free of charge. Depending on the end customer of GRAMMER, special specifications apply which must be observed and implemented (e.g. VW Formula Q, BMW GS90018, and others).

10 Recourse and Charge Back Policy

GRAMMER's expectations of suppliers and their sub-suppliers is a 0% failure rate for 100% of all deliveries as well as on-schedule processing of open topics and measures in projects and series production. If this general requirement is not met, a corresponding recourse and claim will be raised towards the supplier including a chargeback notification.

In case of GRAMMER employees must support the suppliers to secure the production and customer deliveries we address following costs:

- In General processing fee for handling supplier complaints 220 EUR/complaint process
- Hourly rate in case if we need to start by GRAMMER staff rework / sorting / logistic actions,
  - Europe EUR 70/h, Asia & America EUR 55/h
- Travel Expenses and Support actions / scopes according to the respective effort

In case of further topics & costs (CSL´s. customer escalations, delays, …) the Supplier need to go in alignment with the effected plants.

11 Supplier evaluation

The supplier evaluation is carried out automatically on the basis of facts and includes the following criteria:

- Q-PPM
- Quality costs in relation to purchasing volume.
- Number of Q notifications (without collective rejections)
- Delivery quality / adherence to delivery dates
- Quality development agreement signed.
- Certification status QM System
- Certification status UM System
- Result of process audit
- Supplier security level
- Risk Score

The results are communicated to the suppliers by GRAMMER Supplier Portal. In the event of multiple C classifications in succession, GRAMMER can schedule and carry out a process audit. Costs for this must be borne by the supplier. If the audit result is also a C, the supplier can be set to Business-On-Hold.

In the event of a B or C classification, the supplier must be requested to draw up appropriate targeted action plans and send them to GRAMMER upon request.

Details on supplier evaluation can be found under the following path:
https://www.grammer.com/supplier-support/purchasing.html

12 General requirements for suppliers

12.1 Packaging

The packaging for the prototype, pre-series and series parts or the product-specific packaging and its labelling, including the materials used, must be defined, tested, and monitored together with GRAMMER. The packaging must be marked in accordance with VDA 4902 or the respective customer requirements.

The packaging data sheets must be approved by the GRAMMER plants that accept them. Alternative / fall-back packaging must also be included in the packaging data sheets.

13 GRAMMER escalation process

13.1 Goals and approach

The escalation procedure is used to ensure a smooth production and project flow and to identify problems at an early stage.

GRAMMER distinguishes between two phases.

- Project phase (development, pre-series)
- Series phase

Goals of the process are.

- finding effective solutions to major problems during the supply relationship with the supplier.
- ensuring a strategic balance between GRAMMER's interests and the responsibility of the supplier.
- all participants know their responsibility for a quick and efficient problem solution.

In principle, each stage of the escalation process runs as follows:

- Cause analysis / problem description
- Coordination of an action plan to eliminate the causes and define responsibilities accordingly.
- Implementation of action plans
- Depending on the result of the actions carried out, an escalation to the next stage of the respective procedure takes place or the escalation procedure can be discontinued.

Other rights to which GRAMMER is entitled under the contractual agreements or the agreed law must apply in addition to this escalation procedure and must remain unaffected.

13.2 Escalation Level 1 / Controlled Shipment Level 1 (CSL1)

Escalation criteria series inputs / possible triggers

- Negative supplier evaluation (multiple C rating)
- Significant exceeding of the agreed ppm intervention limit for delivery quality and logistics problems
- Sort action required for safety-relevant or function-relevant characteristics.
- Explicit Q-Gate requirement from GRAMMER customers on a written basis
- serious repetitive faults despite completed 8D report.
- Measures are delayed with regard to content and deadlines or agreements are not kept (e.g., no 8-D report) and the supplier was already present at GPQ Plant
- Impending supply bottleneck due to Q-problems
- Supplier-related supply bottlenecks

Additional escalation criteria for field failures / inputs from the field

- Multiple field complaints with identical defect patterns in a production period of less than 3 months
- Damage part analysis is not carried out according to VDA standard.
- If traceability of damaged parts is required, a limitation of less than 2 weeks is not possible (Suspected Parts)

Measures

- Elaboration and implementation of an action plan
  Creation of a separate Q-Gate area at the supplier site
  → Controlled Shipment Level 1 (CSL1)
- Possible installation of a Q-gate in the GRAMMER plant and/or at the GRAMMER customer's premises
- Marking of parts, material, and containers for tracking production
- Execution of a 100% final / additional inspection for all suspect parts
- Updating all relevant documentation
- regular reporting to GRAMMER on the status of the action plan, results of the additional 100% control and progress in the fault correction process

GRAMMER informs the supplier of the CSL1 status. GRAMMER must also agree with the supplier at what frequency the supplier must inform the affected GRAMMER plant about the sorting operation. The running costs for CSL1 must be borne by the supplier.
The Q contact person at the GRAMMER plant coordinates the reconciliation of the test methods directly with the supplier.

Downgrading from escalation level CSL1

- Fault-free deliveries over 20 working days with regular delivery or 5 fault-free deliveries with irregular delivery.
- The supplier will be informed in writing by the responsible SQM about the downgrading from CSL1.
- All costs incurred will be invoiced to the supplier.

13.3 Escalation Level 2 / Controlled Shipment Level 2 (CSL2)

Series and field escalation criteria

- Classification in escalation level 1

Additional inputs / triggers

Despite special marking of the parts (from CSL1), nOK parts are delivered
→ Sequence CSL2
CSL1 lasts more than 4 weeks with daily delivery
→ Sequence CSL2
Insufficient content preparation for the escalation meeting CSL1 on the part of the supplier Non-compliance with the measures and deadlines agreed in CSL1
(from escalation discussion or 8D report)

- there are structural process or system deficiencies which do not guarantee a permanent and fault-free supply.

Measures

CSL2 → 100% goods issue inspection at the suppliers by an external service provider
(proposed or approved by GRAMMER)

- Daily reporting of test results to GRAMMER (results from sorting actions, etc.)
- Process audit in accordance with VDA 6.3 by GRAMMER or by an external service provider designated by GRAMMER. The costs incurred will be invoiced to the supplier.

GRAMMER informs the supplier of the CSL2 status. The Q contact person at the GRAMMER plant coordinates the reconciliation of the test methods directly with the supplier.

Downgrading from escalation level CSL2

- Fault-free deliveries over 20 working days with regular delivery or 5 fault-free deliveries with irregular delivery.
- The supplier will be informed in writing by the responsible SQM about the downgrading from CSL2.
- All costs incurred will be invoiced to the supplier.

13.4 Escalation Level 3 / Controlled Shipment Level 3 (CSL3)

Series and field escalation criteria

- Classification in escalation level 2

Inputs / triggers

Non-compliance with the measures and deadlines agreed in CSL2
(from escalation meeting, audits, 8D report)

- Supplier management does not support fault rectification and escalation discussion and rejects costs from CSL1 / CSL2
- Recall or field action required.

Measures

- Non-consideration in further awards by GRAMMER (New Business on Hold)
- Short-term visits to the supplier without prior notice
- Intensive on-site supplier development (project / resident engineer) by GRAMMER employees or an external service provider determined by GRAMMER. Costs must be borne by the supplier.

Downgrading from escalation level CSL3

- Fault-free deliveries over 20 working days with regular delivery or 5 fault-free deliveries with irregular delivery.
- Action plan coordinated with GRAMMER for structural / systematic improvement at the supplier and clear concession of the supplier's management for a sustainable improvement of the structures / QM system.
- Action plan has been completed on schedule and proof of effectiveness for the measures is available.

- A final audit by GRAMMER or an external service provider designated by GRAMMER, if applicable, proves successful completion and shows a correspondingly positive audit result.

14 Declaration of inclusion of the parties

This Supplier Manual is an integral part of the contractual relationship between GRAMMER and the suppliers. It must be agreed in the contracts.

As our potential supplier, by submitting your offer you confirm that you are aware of the requirements described, that you recognise them, that you fully comply with them and that you ensure that they are implemented in your supply chain.

Changes / adjustments at the request of the supplier are not possible.

15 Other applicable documents

ISO TS 16949 / IATF 16949 Quality management systems - special requirements for the application of ISO 9001 for series and spare parts production in the automotive industry	current version
DIN ISO 9001 Quality management systems	current version
DIN EN ISO 14001 Environnemental management system	current version
VDA 6.3 Process audit	current version
VDA 6.5 Product audit	current version
VDA Volume 2 Quality Assurance of Deliveries	current version
VDA Volume 4 Bundle of sections	current version
VDA Volume 03 Part 1 Reliability Assurance	current version
VDA Volume 03 Part 2 Reliability methods and tools	current version
AIAG (Automotive Industry Action Group) guidelines in the automotive industry (PPAP, MSA, SPC, APQP, Sustainability, CQI 8, 9, 11, 12, 23…)	current versions
Forms **http://www.grammer.com/supplier-support/**	
Project plan Q supplier / APQP Status Report	F_016_012
SLRR Risk Assessment	F_014_125
Supplier Launch Readiness Report	F_014_123
Control Plan	F_014_019
Sonderfreigabe / Special release	F_014_013
Quality development agreement	A_016_001

Teilelebenslauf / Parts History	F_015_002
GRAMMER escalation process	P_016_011
8D Report nach / based on VDA	F_014_017
IMDS Manual for suppliers	M_014_004