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Quality manual for suppliers

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1 Preface

1.1 Preface

The "Quality Manual for Suppliers" follows the definitions from the "General Purchasing Conditions" and the definitions given below.

1.2 Meaning

The main quality purpose of the Buyer is to meet requirements set by the Buyer's Customer. All major requirements and expectations set by the Buyer's Customers make the Buyer fulfill higher quality requests related to Products and Services. As the Buyer's Product and Service quality to a large extend depends on the quality of Bought-out Parts, we wish to establish and implement long-term partnership with Suppliers and in this way make sure the Suppliers themselves provide for continuous quality improvement.
In order to provide high quality, reliable and competitive Products and Services, we have implemented management of quality system and continuous improvement, which can only be achieved with mutual beneficial relationship between the Customer and the Supplier.

1.3 Reference documents and meaning of terms

Reference documents:
- ISO 9001,
- IATF 16949,
- VDA 6.1,
- VDA 6.3,
- VDA 6.5,
- VDA 2,
- Customer demands.

The meaning of terms:
- APQP - Advanced product quality planning
- FMEA - Failure mode and effects analysis
- PSW - Part Supply Warranty
- PPAP - Production Parts Approval Process
- SPC - Statistical Process Control
- R&R - Repeatability and Reliability
- 8D - Eight Disciplines
- EOP - End of Production
- MSA - Measurement System Analysis

2 Objective of quality management

As our Supplier, you are responsible for quality of Products and Services delivered to the Buyer. The purpose of this Manual is to define the basic Buyer's requirements to the Supplier in terms of quality and therefore to provide long-term:

- high quality of Products and Services,
- transparent communication,
- creation of conditions allowing for continuous improvement of efficiency and sustainability in the entire supply chain.

In terms of planning and providing the quality, the Buyer gives priority to the preventive approach and principles of continuous improvements. The concept of continuous improvements shall be also implemented by the Suppliers, focusing above all on:

- »0 defect« in terms of quality,
- providing conforming deliveries,
- permanent improvement of Products and Services as well as processes.

Nothing in this Manual shall impair the requirements of legal regulations and customer specific requests, which are binding on both the Buyer and its supply chain.

3 Quality Management system

Implementation of effective quality management system in accordance with ISO 9001 (current version) and developing a quality management system in accordance with IATF 16949 (current version), is prerequisite to establishing a long-term business relationship between the Buyer and Supplier.

Effectiveness of quality management system is demonstrated through:

- continuous and reliable improvements of Products and Services as well as processes,
- quality of Products and Services delivered (PPM, number of claims, cost of claims),
- on-time deliveries,
- successful implementation of corrective action plan,
- efficient communication on all levels,
- meeting the objectives of individual projects (schedule, quality and cost).

4 Quality planning

4.1 APQP

When winning new Products and Services, the Supplier shall meet the APQP requirements or other requirements when so agreed and determined by the Buyer. The Supplier is required to appoint an expert qualified in preparing documents and implementing actions in compliance with the requirements established in the automotive industry (APQP, PPAP, MSA, SPC, FMEA or equivalent methods according to VDA). All related costs shall be included in Products and Services price.

4.2 PPAP

Prior to series production, the supplier shall submit to the Buyer the PPAP file with the contents as described below, depending on the type of Products and Services.
In special case of laser cutting, there are additional demands in document NZD-82, unless otherwise agreed.

The Buyer shall classify the Products and Services in following groups:

Products and Services	**Level**	**Definition**
Material (raw material)	0	Sheet metal (coils, sheets…)
Additional elements (additional elements for welding, impressing…)	1	Standard elements
	2	Non-standard elements
Complex elements	2	Elements, made according to drawing/ specification
Services	2	Surface protection, surface treatment, heat treatment, plastic coating…

Levels of sampling are defined in document OB-185, where the needed sampling documents and demands are given and reference with VDA 2 and AIAG PPAP standards.
In special cases of project, the suppler can get different demand for sampling (modification of OB-185) and in case some complex part VAR can demand sampling according level 3. Supplier gets special information in inquiry by VAR.

Supplier must the label the initial part as “initial samples” on all documents are packaging unit. All documentation must be sent to the e-mail address: merilnica@var.si, unless otherwise agreed.

Buyer commits himself that the confirmation of sampling is made in 14 days after receiving all documentation. Buyer can send following states of sampling:

- Approved
- Rejected

  - In this case the supplier must in 5 working days send an action and schedule plan for re-sampling.
- Conditionally approved
  - In this case the Buyer defines the validity of conditional approved state. Supplier must send an action and schedule plan for re-sampling to get the state approved.

Supplier covers all cost related to additional sampling. Supplier covers also all costs related to project delays from Buyer and Costumer from Buyer.

4.3 SPC

For the purpose of process control, we use different statistical methods (Statistical Process Control), e.g. sampling, control cards, process capability Ppk, Cpk, capability of measurement testing equipment, etc. Before using any method, the size of the sample shall be defined in accordance with VDA standard or PPAP (latest version).
If not otherwise required, the process capability shall be deemed to be validated to provide appropriate quality in the following cases:

Characteristic	Sampling	Serial production
Safety-relevant, regulatory	Ppk ≥2.00	Cpk ≥ 1.67
Important characteristics	Ppk ≥1.67	Cpk ≥ 1.33

4.4 FMEA

FMEA - Failure Mode and Effect Analysis is an analytical preventive technique, which identifies potential failures before they occur. It allows to anticipate a failure, reduce costs of failure identification and minimize the risk of failures. The Supplier shall use this technique or an equivalent one for risk assessment in the event of developing a new process, changing a process, deviation from required quality, and regular quality improvement activities.
Demand for different types of Products and Surfaces are described in point 4.2.

4.5 MSA

MSA (Measurement Systems Analysis) evaluates the quality of the current measurement system and affects the control of process parameters and characteristics of Products and Services. The Supplier shall make the analysis for the following systems:

- Measurement system variations (variable characteristics are those whose values can be expressed numerically), e.g. sliding gauge, micrometer, dial indicators, altimeter, …
- Attributive measurement system (attributive or descriptive characteristics), e.g. gauges control devices GO-NO GO, …
- Complex measurement systems (measurement systems where the same part can’t be measured twice – repeatability and reproducibility measurement systems).

4.6 Special characteristics

In order to meet high legal and regulatory requirements (such as those related to the responsibility for Products and Services) as well as increasing Buyer's Customer demands,the Buyer shall pay a special attention to the specification, implementation and inspection of special characteristics. Non-compliance with determined and agreed requirements may result in significant consequences such as recalls or Product and Services replacements. This may lead to ban of sales or loss of image or orders.

For all functions marked with a special characteristic, it is necessary to record all data, measurement values and documents for a full examination of all controlled production processes, tests, etc. as required by the latest version of VDA standards.

Special characteristics may be:

- safety-relevant characteristics – are all those product or process characteristics where noncompliance with requirements has effect to vehicle end user safety or effect to the environment safety. Products with safety characteristics are basically components of the vehicle that have active or passive influence on the safety of the vehicle (e.g. brakes, steering…).
- regulatory characteristics – are all product or process characteristics which must be fulfilled to assure compliance with legal regulations.
- important characteristics –are those characteristics of product or process which compliance must be assured to assure functionality, suitability of operation or further processing of the product.
- other characteristics – are those characteristics of product or process, which we want to informatively label for the easier and more efficient planning of the equipment, product, production process and measurement process.

These characteristics are defined in the List of requirements and/or technical documents attached here to and are specially labelled. The Supplier is bound to control and monitor special characteristics in accordance with the validated control plan and keep records on safety characteristics at least 15 years after completion of production (EOP).

All sub suppliers shall be approved and they are bound to perform the same procedures of documentation as the direct Suppliers to Buyer.

5 Change management

No modification in process or/and on Products and Services of the Supplier and their sub suppliers shall be implemented without a Buyer's approval. The Supplier shall provide a sufficient and timely amount of information in order to enable all necessary activities (assembly of samples, samples for Buyer's customers, validation, long-lasting testing and Buyer's customer approval). In the event of a modification of the Supplier's Products and

Services, the general requirement shall be to mark the first deliveries with a special marking in accordance with Buyer's requirements.

The Supplier is obliged to keep and, if needed make a presentation of the history of changes of the relevant Products and Services or process. For each change, the Supplier is obliged to update the sampling documentation in respect of agreement made with Buyer about the required sampling level (see item 4.2), and present documentation to Buyer.
Product and Service or/ and process change can be released to series production only upon Buyer's validation of the documentation. Additional costs related to the repeated approval process will be charged to the Supplier, if origin of request is from Supplier's side.

The Supplier is responsible for development of their suppliers at least to the extent required in this document. Should the Supplier intend to change their supplier, they shall obtain Buyer's authorization as Buyer reserves the right to audit and release a sub supplier. Each change of Supplier, location or Equipment shall mean a new validation of Products and Services and process.

Should the Supplier identify a discrepancy of characteristics or reliability of Products and Services as to the agreed requirements, he shall immediately inform Buyer and start to eliminate non-conformities in compliance with requirements laid down in this document. Until the corrective actions are implemented and validated, Buyer may require implementation of special actions (e.g. higher level of inspection, 100% inspection, additional operational / process steps) for a certain period. In such a case, the Supplier
is held responsible for any costs thus incurred.

6 Non-conformity management

As soon as Buyer receives the Products and Services, he carries out the incoming inspection sampling including the following inspection:

- identification of Products and Services,
- delivered quantities,
- deliveries with regard to possible obvious packaging, Products and Services deformation,
- A-test for Materials,
- Products and Services special characteristics.

Should a defect on the delivered Products and Services be identified at the incoming inspection, Buyer shall notify immediately the Supplier by issuing a formal claim. In case of possible unidentified defects, due to the sampling inspection, which may be detected subsequently within the usual operating procedures, the Supplier shall be informed upon such detection. If the defect is identified after the incoming inspection within the Buyer process and the Buyer's Customer, this shall in no way reduce the Supplier's responsibility to deliver proper Products and Services in terms of logistics and quality.

A claim shall mean every identified deviation from requirements determined in terms of logistics and/or quality. After receiving a claim, the Supplier is obliged to implement corrective actions to prevent recurrence, reduce consequences and provide an undisturbed supply. Immediate actions shall be presented within 24 hours after receiving the claim. Subsequent measures (8D) shall be presented within 10 working days unless otherwise agreed.

Products and Services	**Definition**	**Demands**
Material (raw material)	Sheet metal (coils, sheets…)	- Immediate actions - Credit note
Additional elements (additional elements for welding, impressing…)	Standard elements	- Immediate actions - Credit note
	Non-standard elements	- 8D report - methods for finding cause used (5 Why, Fishbone diagram…)
Complex elements	Elements, made according to drawing/ specification	- 8D report - methods for finding cause used (5 Why, Fishbone diagram…)
Services	Surface protection, surface treatment, heat treatment, plastic coating…	- 8D report - methods for finding cause used (5 Why, Fishbone diagram…)

The claim shall be closed in 30 business days. The Supplier shall use a team method to sort out the problems.

In particular cases, the Supplier may make a written request to release Products and Services under specified conditions which is agreed with the relevant Buyer's services who can issue a derogation approval in writing.

Supplier is obliged to cover complete costs which are consequence by failing to comply demands by the Buyer or Buyer's customer.

Valid costs for claims:

1. Claim management: **150 EUR/claim***
2. Sorting costs: **25 EUR/h**
3. Measurements on 3D machine: **50 EUR/h**
4. Delivery of goods: **according to actual costs**
5. Meeting by supplier/ costumer: **40 EUR/h**
6. Per diem Slovenija: **according to valid Slovenian regulation**
7. Per diem abroad: **according to valid Slovenian regulation**
8. Costs of stay: **according to actual costs**

9.	Costs on additional work on work places:	**calculated as overtime costs according to actual costs**
12.	Other costs:	

** All costumers costs will be directly forwarded and charged to supplier.*

In case of work out of the regular working time, to prevent the production stop by coustuer, the buyer can increase the costs on the basis of increased costs (afternoon, night, Saturday or Sunday work…)

7 Supplier monitoring

The Buyer regularly monitors Supplier's performance on yearly basis:

- PPM,
- customer disruptions at the receiving plant, including yard holds and stop ships,
- delivery schedule performance,
- number of occurrences of premium freight
- special status costumer notifications related to quality or delivery issues,
- dealer returns, warranty field actions and recalls,
- number of repeating claims,
- reactions on claims,
- competitiveness.

Our goal is deliveries with 0 PPM. But the minimum requirements are:

- for materials (raw) materials: 500ppm and
- for all other products and services: 25ppm.

Buyer checks yearly if the supplier has valid standards ISO 9001, IATF 16949 in ISO14000.

Suppliers are categorized in the A, B, C and D levels.

- In case of A and B evaluation no additional actions required from supplier.
- In case of C evaluation, the supplier must send in 14 days the action plan to purchase manager. In case the supplier doesn't send the action plan in time, the escalation process begins (8).
- In case of D evaluation, the escalation process begins (8).

8 Escalation process

With the purpose of effective problem solving and providing appropriate quality and Buyer's Customer security, we have determined the following escalation process.

8.1 Level escalation E0 – standard procedure

By level E0 the Buyer checks deliveries in regular dynamics, in case of deviation from demands.
VAR Quality department can from supplier expect special inspection, for example the delivery with measurement report or 100% control.

8.2 Level escalation E1 – stricter procedure
If the quality or logistic failures and issues are raising (repeating claims, claim from safety/ important characteristic, function problem, number of claims, constant delivery delays, unresponsiveness…) the buyer can increase the demands for control of products.
If the supplier effectively implements the actions and there is no complains within defined period (4 weeks or 20 working days), the buyer must reduce the escalation from E1 to E0.

8.3 Level escalation E2 - notification
If the supplier on the escalation level E1 causes further problems, the escalation rises on E2. The buyer raises the escalation and notifies the management of supplier.
The buyer has the right to use extern help on suppliers' costs. Supplier supports the buyer, when doing inspections of implemented actions.
If the supplier effectively implements the actions and there is no complains within defined period (4 weeks or 20 working days), the buyer must reduce the escalation from E2 to E0.

8.4 Level escalation E3 - New Business on Hold (NBH)
In case the activities don't lead to improvements in quality or logistics or responsiveness and the level of escalation E2 is too long, the buyer blocks the supplier from new projects.
State "New Business on Hold" is reported to suppliers' certification company.
Other reasons for the state "New Business on Hold":

- Quality system certification is not valid more than 6 months,
- Lack of cooperation between supplier and needed corrective actions,
- Quantities delivered not sufficient,
- Supplier rating (D).

Buyer reserves the right to use external support on the suppliers' costs. Supplier supports the buyer, when the process audits are held.

8.5 Level escalation E4 - exclusion
If with support of buyer there is no evident improvement of quality, logistics or purchasing, the supplier is excluded from new projects (New Business on Hold) and the customer steps in the process of change of supplier. The supplier is excluded from the list of supplier.

8.6 Delivery under supervision (level 1)

Supervision level 1 means that supplier must after regular control conduct the 100% control on the agreed characteristics before every delivery.
The products and packaging unit must be labeled according to agreement with buyer.

8.7 Delivery under supervision (level 2)

Supervision level 2 means that external company must conduct the 100% control on the agreed characteristics before every delivery. The order has to be made by supplier.
The supplier is also responsible for the control instruction for external company. The products and packaging unit must be labeled according to agreement with buyer.

9 Audits

The Supplier shall perform regular audits (at least once a year) and in case of problems additional exceptional Products and Services and process audits (generally according to VDA 6.3 and VDA 6.5 upon an advanced agreement with the Buyer) with the aim to ensure continuous improvement of production process.

Buyer, Buyer's Customer or a third party determined by Buyer shall have the right to make an audit of the Supplier or their subcontractor in order to assess the efficiency of the quality management system and continuous improvements (system, process and Products and Services audit). Buyer respects the Supplier's restrictions in terms of protection of industrial property.
The audit shall be carried out upon an advanced agreement with the Supplier, and the information shall be treated as confidential. In the event of unexpected major defects or damages, Buyer shall reserve the right to make an immediate visit to the Supplier and inspect the process management.

The results of audits shall be exclusively used for making decisions on Supplier selection and determining necessary actions for improvement.
In the event of reproducible exceptional audits which are an integral part of escalation, Buyer shall be entitled to the reimbursement of costs by the audited supplier.

After reception of the audit report, the supplier is bound to implement the appropriate actions related to the identified non-conformities within the agreed deadline.

10 Requalification tests

The supplier is obliged to perform requalification tests for all characteristics of the Products and Services as required at the PPAP validation.

Products and Services	**Definition**	**Requalification requirements**
Material (raw material)	Sheet metal (coils, sheets…)	- Certificates (analysis results) in accordance with EN10204 - 3.1 for every delivery
Additional elements (additional elements for welding, impressing…)	Standard elements	- Certificates (analysis results) in accordance with EN10204 - 3.1 – upon buyers' demand
	Non-standard elements	- Requalification: 1x year

Complex elements	Elements, made according to drawing/ specification	- Requalification: 1x year
Services	Surface protection, surface treatment, heat treatment	- Requalification: upon buyers' demand - Sending certificate of suitability with every delivery
Services	plastic coating	- Requalification: 1x year

The evidence of performed requalification shall be sent to the Buyer within 48 hours of the request and it shall be free of charge.

11 Documentation management

The supplier shall make detailed records on implementation of quality management actions including the documentation related to the initial samples, trainings, requalifications, physical initial samples and complete documentation related to special characteristics. In addition, the supplier shall store such documentation at least 15 years after the end of production (EOP). In terms of the documentation management, the Supplier shall meet the VDA standard and specific requirements defined by the Buyer.

If the need arises, the Supplier shall allow Buyer to access and support the documentation and sample analysis, and submit the requested samples and documentation.
The Supplier shall present the required documentation and samples within no more than 24 hours from such request. This shall in particular apply to the characteristics of Products and Services for which a proof for statistical capability of process is requested.
The Supplier shall attend to the functional project management in the stage of Products and Services and process design and other extensive tasks. This all shall be documented in accordance with the VDA standard or in accordance with appropriate equivalent.

12 Concept of order completion

In the event of failure and/or disruption of Equipment, the Supplier shall ensure, through implementation of appropriate measures, that Products and Services shall be available to the Buyer (e.g. quick intervention by toolmakers and maintainers provided by a contract made with relevant equipment manufacturers, safety stock of material). In order to avoid delivery disruptions, the supplier is obliged to implement a system of preventive maintenance.

On the demand of buyer, the supplier is obligated to send the evidences of production compliance of product or service (measurements, certificates…).

13 Packaging and labeling of deliveries

The supplier shall provide the storage of products in a way to protect them from damage or change of material characteristics due to environmental impact.
Supplier must be capable in each moment to determinate which Products are subject of possible failure at the Buyer od Buyer's Customer. In accordance with this request Supplier must establish proper system of Products and Services marking.

14 Outsourced materials/suppliers

When the Supplier is determined by the Buyer's Customer, the conditions can be stipulated directly by the Buyer's customer.
It is considered that the Buyer's customer has transferred all requirements to the Supplier and the Supplier acknowledges and accepts such requirements. In such a case, the Buyer shall be informed by the Supplier about implementation and observance of all conditions.

In case the Buyer was not informed by the Supplier about the possible agreements between the Supplier and Buyer's Customer point 6 of this document must be respected.
The Supplier is obliged to deliver to the Buyer, as a legal entity controlling the supply chain towards the Buyer's Customer, the complete quality documentation which has been agreed and validated between the outsourced Supplier and the Buyer's Customer.