Customer Specific Requirements

Transfer the Customer Specific Requirements to suppliers – VDA, BMW Group

CSR Rev. 001

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1. Scope

This Customer Specific Requirements Document (CSR) is an integral part of Corporate Supplier Manual (CSM) and aims - defines to transfer the specific and special requirements of the final customer (OEM) and Huf.

This document contains the most restrictive requirements that have to be fulfilled by the Huf suppliers and does not replace any of the OEM's requirements. The latest and most valid versions of CSR's are available on IATF website and/or on the OEM's website:
https://www.iatfglobaloversight.org/oem-requirements/customer-specific-requirements/

The supplier is obliged to sign this document.

2. Targets

Targets for suppliers (PPM, Logistic Performance, 8D evaluation) are set for all components (material groups) in the Huf Supplier Portal, available on www.huf-group.com website and update annually.

3. Requalification / Resampling

Requalification of materials, components must be performed once per 12 months. To ensure quality, Supplier must carry out a regular requalification of its scope of supply in accordance VDA publication "Robust Production Processes" (section 5.3.4).

4. Certificates of conformity

Supplier shall send the CoC (also named as CQC, CoA) for materials, components as a part of the PPAP submission and each time on demand of the Huf company.

5. Knowledge of basic VDA

The supplier confirms that he is familiar with the requirements of the following VDA documents and meets these requirements.

- VDA 2 Securing the Quality of Supplies
- VDA 5 Capacity of Measurement Processes
- VDA 6.3 Process Audit
- VDA 6.5 Product Audit
- VDA Volume Maturity Level Assurance
- VDA Volume Product Integrity
- VDA Volume Robust Production Process
- VDA Volume AIAG VDA FMEA Handbook
- VDA Volume Automotive SPICE Guidelines
- VDA Field Failure Analysis

6. Documentation and archiving

All Quality Records are retained by the Supplier over the life of the product (including spare parts) + 15 years so that they are readily available at Huf request – acc. to VDA 1.

7. Self assessment

The contractor must perform a self-audit on the basis of VDA 6.3 & VDA 6.5 and send the result to Huf Group at least once every 12 months in the form of a complete audit report.

8. PSB / PSCR

According to BMW Group CSR's the supplier must appoint and train the Product Safety and Conformity Representative (PSCR) for each phase in the supply chain. This information (nomination letter, training certificate) must be submitted to Huf. The product safety representative must have appointed and trained representative.

9. Second-part audits

The supplier agrees that Huf Group (or appointed representative) may carry out a process audit in the supplier's plant on the basis of VDA 6.3 .

10. Part history (Teilelebenslauf)

Supplier is obliged to inform Huf about any changes in the process chain (place of production, product change, process change or supplier change) as required by VDA 2 using „Part History" form. All parts (or label on the boxes) have to be marked with latest part status labels and shipped with valid measurement reports according to last revision of the drawing.

11. MSA

The capability of the measurement process, steady measured values, shall be proved on the basis of a variance analysis (ANOVA) in accordance with VDA Volume 5 with measurement uncertainty budgets. Calibrated measuring equipment and reference standards shall be used for the studies so that the proof is comparable and traceable.
A smaller number than 25 repeat measurements is permitted in justified exceptions, e.g. if a measurement takes an extremely long time, or because of economic reasons. However, the lowest possible number is 5.
In case the sample size is less than 25, sg shall be corrected with the correction factor kF to sgk, see formula:

$$kF = (4 \times n - 3)/(4 \times n - 4) \times 1{,}01$$

and Table:

n	k_F
5	1,0520
10	1,0176
15	1,0078
20	1,0031

12. SPC

Machine Capability Study (MCS)

$$c_m \geq 1.67;\ c_{mk} \geq 1.67$$

Sample size shall be 50. Parts manufactured in direct sequence shall be removed from the mach ne. The prerequisite is that production of these parts shall be under series conditions.

In justified exceptions, for example short run production, a smaller sample size is possible but shall be documented (evaluation is impractical with fewer than 20 parts). If the sample size is less than 50, the requirement applies with reference to the lower confidence limit (confidence interval 95 %, table by analogy with VDI/VDE 2645 BL2, has to be applied only for Cmk):

n	$C_{mk} \geq$
20	1,93
25	1,85
30	1,79
35	1,75
40	1,72
45	1,69
50	1,67

Provisional process capability study (Pp)

$$P_p \geq 1{,}67; \qquad P_{pk} \geq 1{,}67$$

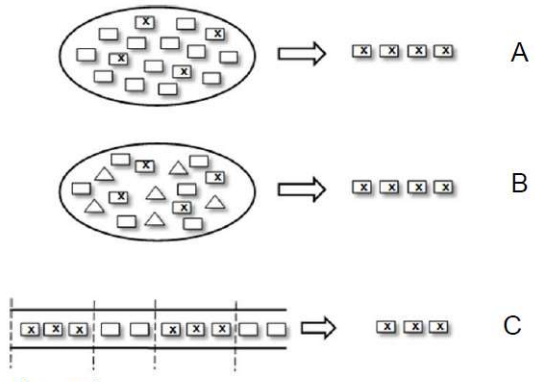
Sample size shall be 50 in this case too. The parts shall be removed at regular intervals from the produced batch. In justified exceptions, for example short run production, a smaller sample size is possible but shall be documented. Statistical evaluation is impractical with fewer than 20 parts.

Process capability studies (PCS)

Process capability studies, also known as **long term capability studies**, establish the long term quality capability of the entire process. Compared to machine capability studies, long term influences and disruptions are taken into account. A process capability study is the prerequisite for process monitoring/steering, particularly with control charts or statistical process control (SPC).
A process capability study is conducted for the first time when a new process is introduced.
The process capability study has to be repeated at least when, for example, a relocation or a serious change in the production process has taken place. Information indicating which changes necessitate this is set out in the production-process and product-release process, see VDA Volume 2.

$C_p \geq 1{,}33;$ $C_{pk} \geq 1{,}33$

Process capability shall be verified no later than three months after the start of standard production.
The measured data of the machine capability study cannot also be incorporated into the process capability study, because long term influences are not taken into account in the machine capability study.
The total size of the sample is defined as 125, individual samples to be taken uniformly from production over a period of 10 to 20 weeks, or over 4 weeks at least. Ensure that the process proceeds under series conditions when sampling is in progress and is not disrupted or changed. An intervention is permissible only between samples and shall be documented.
If parts are removed only in samples, the possibilities include the following:



Legend:

A	random sample
B	random sample from subgroups
C	cyclic removal from process in progress

The single samples shall be from one batch, or one lot, and shall be taken one after the other. The total number of random samples is 25 x 5 = 125.
In justified exceptions, for example short run production, a smaller sample size is possible but shall be documented (at least n ≥ 20).

n	C_{pk} ≥
20	1,67
25	1,59
30	1,54
40	1,48
50	1,44
60	1,41
70	1,39
80	1,37
100	1,35
125	1,33

Special case 100 % sorting check

If process capability is not possible because tolerances are too tight, a 100 % sorting check is can be carried out (e.g. bearing shell to crank pin). In this case the calculated process capability is not decisive. It is only the process description.

13. Warranty Parts Review, Containments and Problem Solving

Upon receipt of a warranty claim, Suppliers shall respond within the specified limits, utilizing only the array of available responses as set forth below:

- Category 1: Responsibility of Supplier (Sample provided by Huf Supplier)
- Category 2: Trouble Not Found NTF (Sample provided by Huf Supplier)
- Category 3: Responsibility of Dealer and/or Customer

Reporting Tool – 8D and Required Response Time Frame

- Supplier will undertake to receive and respond to an 8-D Problem Action report which is the official communication tool for reporting and resolving problems.
- The required Response time frame is as follows:
    - an initial response to a critical problem (essentially the containment action/8D report: Steps 1 to 3 – 3D) is required within 48 hours of receipt from Huf
    - a 5-Why analysis for ascertaining root causes and verification is required to be completed as part of the 8D process
    - 8D final response is required within 10 working days of receipt from Huf

- If Suppliers fails to respond within Huf required time frame (48 hours for critical issues for section 1 of the 8D report and/or 10 working days for full root cause and final corrective action for section 2 and 3 of the 8D), Supplier will be deemed to have accepted the warranty claim and all warranty costs received from OEM and all other costs and expenses of Huf will be the sole responsibility of the Supplier. In case when more time will be needed to determine the cause of the problem, the supplier may ask for a deviation and we will individually set the time needed to close the complaint.

Category 1: Responsibility of Supplier
Warranty part analysis results and actions shall be documented using the 8-D format. This format is also utilized to monitor the effectiveness of corrective actions over time by each component. Implementation of a testing process to verify actual root cause and determine corrective action for dealer claims is required of Huf by our OEM customers and must therefore be pass-thru to our Suppliers as well. The Supplier shall keep all provided parts received as warranty for a period of 6 weeks from issue notification date.

Category 2: NTF - No Trouble Found
If NTF status is declared in the 8-D process, Suppliers must clearly describe and document with data, how they arrived at this conclusion. In other words, NTF status in the warranty analysis process must follow systematic elimination of potential root cause factors. NTF typically describes a scenario whereby testing indicates the returned part meets Huf and/or our customer part and performance requirements as defined in purchase orders, PPF and warranty terms and agreements.
Examples include: additional levels of testing, development of new test procedures, simulation of customer usage, verification to all applicable specifications, etc. In some cases when the defect is proven at the customer, a compromise may have to be reached between Supplier, Huf, and Customer (shared % responsibility).

Category 3: Responsibility of Dealer and/or Customer
N/A

14. Others

If Huf request the supplier to use certain advanced quality planning instruments (e.g., forms, programs or systems) / advanced standards not mentioned in this document, the supplier has to use them if requested to do so by Huf.

Supplier Quality Development

Supplier signature and date

Quality Manager

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	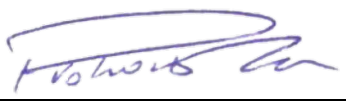	
Signature	Signature	Signature

HISTORY			
REVISION	REASON	BY	DATE
001	Released	Michał Zyzak	25.01.2021
Document review once per 12 months or in case of any changes/updates in Customer Specific Requirements			