

# Guideline for initial sample deliveries including initial sample test report to Pankl Racing Systems AG – Drivetrain Systems





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#### Revision 1.

Version	Date	Change	Creator	Release
02	15.03.2021	Company name	Glatz	15.03.2021
		changed		



#### 2. Purpose

This guideline is intended to regulate the cooperation between Pankl Racing Systems AG - Drivetrain Systems (PDSYS) and the suppliers of purchase parts with regard to initial samples and their documentation in series production projects. Racing projects will be dealt with separately.

Sampling is the basis for the production process and product release. It proofs that the requirements agreed with the customer in drawings and specification are met. In coordination with PDSYS, samples and their scope have to be carried out according to VDA or AIAG or the corresponding documents have to be transmitted in conformity with VDA or AIAG.

Sampling is used in the following cases:

- New parts (if required by PDSYS)
- Changes to production (construction-, specification- material changes)
- Changes to production processes
- Relocations of production
- Prolonged interruption of production (12 months, spare parts are excluded)
- Re-qualification

#### 3. Used items and abbreviations

DDOVO

Devil I Devil and Construer AC Debut to the Construer

#### 4. Submission stages

The submission stage describes which documentation has to be transmitted to the PDSYS. All the documents listed in the table must be available for internal release.

#### **Initial sampling**

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The scope of the sampling and the documents to be submitted are to be agreed with PDSYS or are specified on the order. Unless otherwise agreed, the PDSYS sample with associated documentation shall be submitted in accordance with PPF Submission Level 2 or PPAP Level 3.

#### 4.1. Document checklist

<u>In general, the document scope must be coordinated</u> with the PDSYS. The following table gives an overview of the different submission levels according to VDA and AIAG.

- V... Presentation to the customer/communicate before component delivery
- D... Documentation remains with supplier, immediate presentation to customer on request
- x... inapplicable



7	CA CA Cappa on amplicable to										S	
PPF (VDA)	PA AIA(	Scope as applicable to the product	Evidences		PI	PF			Ρ	PΑ	Ρ	
	д /)	the product		0	1	2	3	1	2	3	4	5
-	18	Covering page / Part Submission Warrant	Basic data, signature in accordance with the authority matrix	٧	٧	٧	٧	٧	٧	٧	٧	
1.1	9	Geometry, dimensional inspection	Measurement results for all characteristics on the customer drawing (Bubble Drawing)	D	D	٧	٧	D	٧	٧		
1.2	1	Functional check	If applicable f.e. check for freedom of movement, installation tests	D	D	٧	٧	х	Х	Х		
1.3	10	Material testing	Chemical, physical, metallurgical tests in accordance with the underlying material specifications including heat treatment and possibly tests out of the control plan	D	D	٧	٧	D	٧	٧		
2	14	Samples	Number or delivery quantity according to agreement	D	٧	٧	٧	$\Box$	٧	٧		
3	1, 2	Technical specifications, Development documents	Customer drawing (Bubble Drawing), approved changes that are not recorded in the documents (specifications)	D	D	٧	٧	D	٧	٧		
4	4	Product-FMEA	Only in case of constructions/design responsibility	D	D	D	D	D	D	٧		
5	3	Design release	Only in case of constructions/design responsibility, Design release from the customer	D	D	٧	٧	D	D	٧		
6	(17)	Comply with legal requirements	If agreed, evidence of compliance with legal requirements (f.e. environment, safety, recycling)	х	٧	٧	٧	D	D	٧		
7	(18)	Material data sheet per IMDS	Registration of ingredients in IMDS (whole supply chain)	٧	٧	٧	٧	٧	٧	٧		٦t
8	-	Software test report	Confirmation of software tests	D	٧	٧	٧	Χ	Χ			plai
9	6	Process-FMEA	Only available for inspection	D	D		D	D	D	٧	ē	o
10	5	Process flow diagram	Production- and inspections steps with their sequence	D	D	D	٧	ם	D	٧	tom	ucti
11	7	Control Plan	Including all product- and process characteristics and control measures	D	D	D	D	D	D	٧	from the customer	e prod
12	11	Confirmation of process capability	Short-term ability of processes	D	D	٧	٧	D	D	٧		Assessment on the production plant
13	(17)	Achievement of special characteristics	Evidence for protection	х	х		٧	D	D	D	Determined	ssmen
14	16	Test/inspection equipment list	If agreed, for product specific test equipment	D	D	D	٧	D	D	D	efer	sse
15	8	Capability study testing equipment	For the whole measuring and test equipment in the control plan	D	D	D	D	D	D	٧	ď	Ā
16	1	Tooling list	Number of tools (origin/forming tools) or number of nests (injection molding), information about the tool concept	D	D	٧	٧	Х	Х	Χ		
17	-	Confirmation of agreed capacity	Process validation (Run @ Rate)	D	D	٧	٧	Χ	Χ	Χ		
18	ı	Written self-assessment	Internal approval, operations which have no serial status	D	D	٧	٧	Х	Х	Х		
19	2	Part history	Document including all changes concerning product and production process	D	٧	٧	٧	D	٧	٧		
20	-	Confirmation of suitability of transport equipment	Evidence that storage and carriers don't impair parts	D	D	٧	٧	Х	Х	Х		
21	ı	PPF status of supply chain	Covering pages of sampling of purchased parts	D	D	٧	٧	Χ	Χ	Χ		
22			If applicable approval of coating systems (e.g. paint adhesion )	D	D	٧	٧	х	х	х		
-	15	Master sample	A reference sample must be kept as long as the parts approval	х	х	х	х	D	D	D		
-	12	Documentation accredited laboratory	Accreditation oft he laboratory in case of external tests	х	х	х	х	D	٧	٧		
-	13	Appearance release report	Releases due to optical appearance of the parts	х	Х	Х	х	٧	٧	٧		

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#### **Explanation of the documents** 5.

In the following the systems and the points to be filled in are described exemplarily. In the case of existing templates from the supplier, it must be ensured that the required information is included. PDSYS-specific can be requested from PDSYS Purchasing.

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#### Cover page 5.1.

#### parkl

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- 2. Full address **PDSYS**
- 3. Sample reason
- 4. Presentation stage (unless otherwise agreed PPF Level 2/ PPAP Level 3)
- 5. Appendix (by arrangement with PDSYS)
- 6. Product and supplier Data
- 7. Confirmation of the supplier, possible remarks, IMDS entry



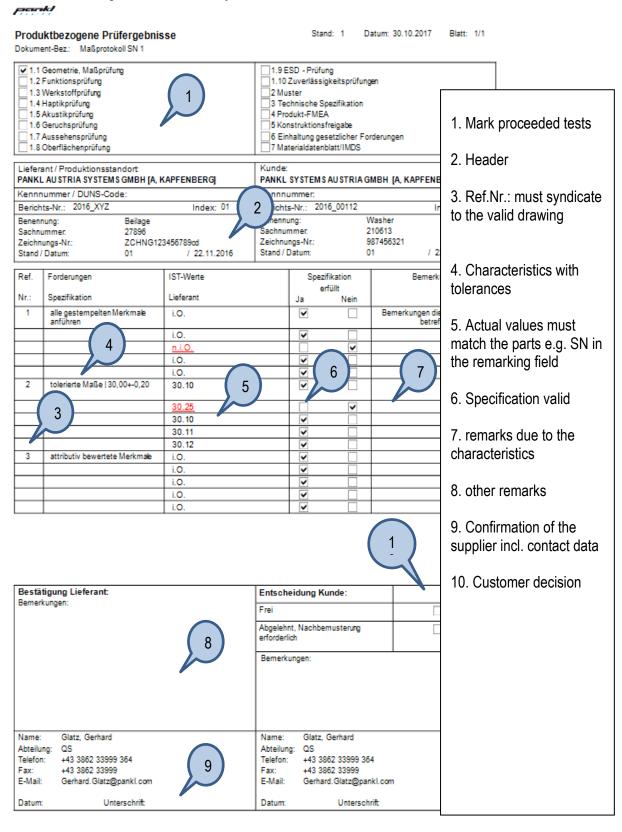
#### Index 5.2.

#### Inhalt des PPF-Berichtes

Lieferant / Produktionsstandort: PANN, AUSTRASYSTEMS   Kunde:   PANN, SYSTEMS AUSTRIA GMBH   (A.   Frankformer   CNRS-Cope   1   Index: 0.11   Index: 0.11	Inhalt des PPF-Berichtes					
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Anlage	Sachnummer: 27896	5	Stand	/ Datum: 01 /	30.10.2017	
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3 Prozess-FMEA	▼ 7 Materialdatenblatt/IMDS	1 / 06.02.	2017	Materialzertifikate/IMDS	─ docume	ents etc.
10 Prozessablaufdlagramm	▼ 8 Software prüfbericht	1 / 06.02.	2017	Softwareprüfbericht		
11 Produktionslenkungsplan	9 Prozess-FMEA				٠	9-1
1 / 22.11.2016   1 / 22.11.2016   Absicherung besondere Merkmale   1 / 22.11.2016   Absicherung besonderer Merkmale   1 / 22.11.2016   Absicherung besonderer Merkmale   15 Prüfmittelfishigkeitsnachweis   1 / 22.11.2016   Werkzeugübersicht   1 / 22.11.2016   Werkzeugübersicht   1 / 22.11.2016   Prozessvalidierung   18 Schriftliche Selbstbewertung   1 / 22.11.2016   Selbstbewertung   1 / 22.11.2016   Verpackungsprachweis Ladungsträger   1 / 22.11.2016   Verpackungsvorschriften   Ve	10 Prozessablaufdiagramm				5. poss	ibie remarks
Variable   Variable	11 Produktionslenkungsplan					
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21 PPF Status Lieferkette						
22 Freigabe von Beschichtungssystemen						
23 Sonstiges						
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## 5.3. Geometry, Dimensional inspection



#### Initial sampling

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#### 5.4. Material testing

If the material is provided by the PDSYS, no separate protocols are required. For materials provided by the supplier, the minimum requirement is a 3.1 works certificate from the material manufacturer. Material tests where the base material is tempered must be coordinated with the R&D department of PDSYS as well as verified within protocols.

### 5.5. Samples

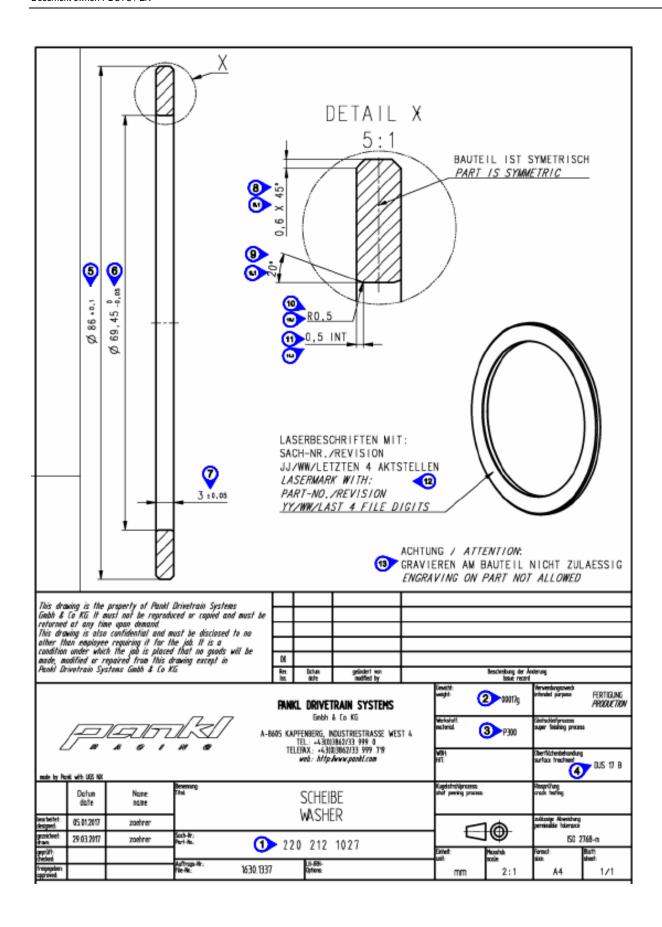
The number of samples has to be coordinated with the PDSYS. The minimum requirement is a 100% measurement and documentation of at least **one** component. For mirror-like components (LH/RH) separate samples are required. The numbered initial samples have to be marked as well as clearly assigned to the measurements.

#### 5.6. Technical specifications, Development documents

For suppliers with design responsibility, a valid drawing must be provided. In the case of deviations from the specifications permitted by PDSYS, the suppliers' approval has to be claimed at the responsible purchaser of PDSYS and has to be attached to the delivery, including the cause of the defect and the planned avoidance of the defect.

A signed drawing is required to assign the product characteristics. The characteristics in the inspection reports must correspond to the drawing. It must be ensured that not only dimensional characteristics but also any notes or important instructions are stamped and checked (e.g. weight, lettering, references to standards,...). As long as the numbering is legible, it can also be handwritten.







#### 5.7. Product FMEA

If the product is developed by the supplier, the implementation of a product FMEA must be verified by a cover sheet sampling. Upon request, D-FMEA shall be presented at the supplier's premises for inspection.

#### 5.8. Design Release

As an order is usually only placed after design approval has been given, the submission of the design approval is not required.

#### 5.9. Comply with legal requirements

If agreed and applicable, evidence of compliance with legal requirements must be enclosed.

#### 5.10. Material data sheer per IMDS

In coordination with PDSYS. The released entry must be documented on the cover sheet (PSW). If this is not possible, early confirmation is required (Purchasing PDSYS).

#### 5.11. Software test report

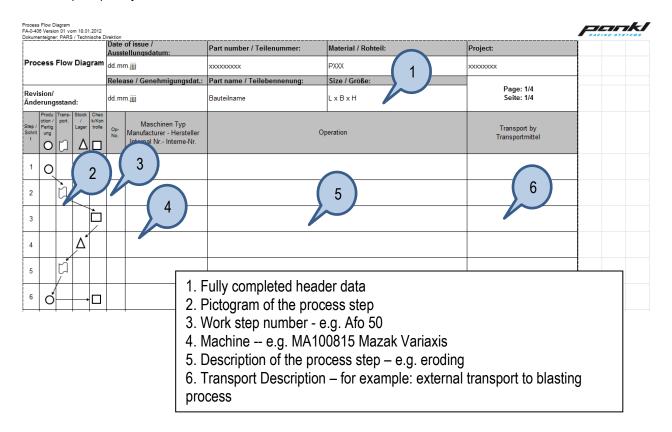
Not applicable for PDSYS products.

#### 5.12. Process FMEA

The execution of a process - FMEA has to be proven by means of a cover sheet. Upon request P-FMEA shall be presented to the supplier for inspection on site.

#### 5.13. Process Flow Chart

The description of the process flow and the associated test steps can be done by describing the work steps (see Pankl template) or by means of a flow chart.



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#### 5.14. Production Control Plan (PLP) / Control Plan

Product/process characteristics relating to the final product must be described with the associated tests, measurement equipment, frequency of tests and reaction plan. The process steps must correspond to the process flow diagram. Special features and 100% controls must be specially marked (column "K", special designation,...)

Control-Plan
FA-1-045 Version 01 vom 28.08.2014
Dokumenteigner: PDSYS / OS



Prot	otyp: Vor	rserie:	Serie			Kontaktperson	/Telefo	on:		Datum:		Verändert:		
Control-Plan Nummer:				Kernteam:				Datum/Freigabe durch Kundenentwicklung (falls erford.):						
Teilenummer/Änderungsstand:				Lieferant/Stand	dort Fr	eigabe/Datum:		Datum/Freigabe durch Kunden-Qualitätsbereich (falls erford.):						
Teilename/Beschreibung:				Datum/Weiter	e Freig	abe (falls erford	.):	Datum/Weiter	e Freigabe (falls	erford.):				
Lieferant/Standort: Lieferantenschlüssel:														
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#### 5.15. Confirmation of process capability

In coordination with PDSYS. See section 4.17 securing special features

#### 5.16. Achievement of special characteristics

To ensure special characteristics, a 100% measurement incl. documentation or SPC (cpk≥1,66) has to be performed.

#### 5.17. Test/Inspection equipment list

A list of the test equipment used has to be send to the PDSYS in accordance with the submission stage. The gauge types must correspond to the records in the PLP.

#### 5.18. Capability study testing equipment

In general, the test equipment must be adapted to the tolerance of the characteristic. Measuring equipment which is used for special characteristics has to show an MSA/GRR according to the submission stage.

#### 5.19. Tooling list

If several tools or nests are used, a separate initial sample must be created for each tool/nest. Traceability to the respective tools/nests must be ensured.

In the case of purely metal-cutting machining, the overview of the machines used in the process flow diagram is sufficient. Traceability to the respective machine used must be ensured.

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#### 5.20. Confirmation of agreed capacity

Proof of process validation must only be provided in consultation with PDSYS.

#### 5.21. Written self assessment

Internal release for operations that do not yet have a serial status with regard to process and product characteristics. (e.g.: For the first sample delivery, the components are deburred manually, but a vibratory finishing process will be implemented in the serial production).

#### 5.22. Part history

It is necessary to keep a record of all process and product changes on the basis of a part life cycle. In case of changes, it must be agreed with PDSYS whether a new sampling is necessary or whether a cover sheet sampling (cover sheet, part history, documents concerning changes, e.g.: measurement of a drawing detail) is sufficient.

penk

## Teilelebenslauf part history

Kunde / customer: Pankl Austria Systems GmbH

Industriestraße West 4 A-8605 Kapfenberg

Projekt / project: Bauteilbezeichnung / part:

Zeichnungsnummer / drawing no.:

Pankl:

Kunde / customer:

Lieferont	/ cumplior:
LIEIGIAIIL	supplier:

lfd. Nummer/ no.	Zeichnung- Rev./ drawing issue	Laufkarten-AE Stand/ process card issue	Datum/ date	Beschreibung/ description	geändert von/ changed from	Bemerkung/ note
1						
2						

#### 5.23. Confirmation of suitability of transport equipment

Evidence of the suitability of the transport containers for both internal and external transport shall be provided. This proof can be provided by means of a description including a picture or sketch of the packaging.

#### 5.24. PPF status of supply chain

Any evidence of approved sampling by subcontractors must be submitted.

#### 5.25. Approval of coating systems

For coatings, specifications are defined by the R&D department of PDSYS. In the case of sampling, proof of compliance with the respective specification must be provided.

In the case of standard coatings, suitable proof must be provided or coordinated with PDSYS.

#### 5.26. Master sample

In case of systematic deviations from the specifications released by the PDSYS, it is recommended to define a reference sample with the PDSYS. This definition must be actively initiated by the supplier.



#### 5.27. Qualified laboratory documentation

Drawing parts may only be handed over to third parties in consultation with PDSYS. In the case of permission, proof of accreditation of the third party must be submitted to PDSYS. A consultation with PDSYS regarding the non-disclosure agreement is mandatory in such cases.

#### 6. Attachments

The annexes listed are examples. Templates can be obtained directly from the VDA or AIAG websites.

f\_Vorlage.xlsx

- Pre sampling meeting
- Submission\_Covering Page
- Submission \_Index
- Submission Dimensional Data Sheet

agramm\_Vorlage.xlsx kungsplan\_Vorlage.rt

- Submission \_Process flow diagram
- Submission \_Control plan
- Submission Parts history

