

1.	Purpose	2
2.	Scope	2
3.	Terms	2
4.	Requirements concerning organisation and management system	3
4.1.	Supplier approval	3
4.2.	Supplier development	3
4.3.	Conduction of audits	3
4.4.	Confidentiality	4
4.5.	Person of contact / Changes in the organisation	4
4.6.	Quality responsibility	4
4.7.	Personnel qualification.....	4
4.8.	Risk management / Emergency planning	4
4.9.	Continuous improvement	5
4.10.	Legal provisions.....	5
4.11.	Special transportation costs.....	5
5.	Order processing	5
5.1.	Feasibility check	5
5.2.	Sub-suppliers & Sub-contracting	5
6.	Provided products	6
7.	Production and service provision	6
7.1.	Procurement of raw material.....	6
7.2.	Inspection plan and Process flow chart	6
7.3.	Quality documentation	7
8.	Preservation, Storage and Packing	7
8.1.	Storage of material	7
9.	Configuration management	8
9.1.	Traceability	8
9.2.	Process changes	8
10.	Quality deviations	8
10.1.	Request for deviation	8
10.2.	Detected deviations after delivery	8
10.3.	Incoming goods reports / OPR.....	9
10.4.	Failure costs	9
11.	Initial samplings / FAI	9
11.1.	Initial sampling according to VDA Part 2.....	10
11.2.	Initial sampling according to EN/AS 9102.....	10
12.	Additional requirements for critical characteristics	10
12.1.	Process capability	10
12.2.	Measurement system analysis.....	10
12.3.	Process-FMEA.....	11
13.	Miscellaneous	11

1. Purpose

This document regulates the cooperation between organisations working for Pankl Racing Systems AG Group (abbr. to Pankl) and their suppliers.

The demands imposed by the aviation industry, automotive industry, racing, and the medical engineering are on the highest possible level and include the suppliers as a significant part of the system. The more important it is to provide for a clear arrangement of the interfaces and cooperation.

The quality assurance agreement at hand is therefore a binding agreement used by Pankl to define the demands to their suppliers (hereinafter also referred to as contractor) in a consistent framework. Even though there aren't set out any additional quality demands in the order form, the following requirements shall apply with any confirmed order.

2. Scope

The document at hand applies in the moment of confirmation and execution of a Pankl purchase order for an indefinite period to suppliers providing the following products or services:

- Special processes (e.g. heat treatment, destructive- and non-destructive tests, coatings, welding)
- Raw material & wrought material
- Reshaping, primary shaping, and mating
- Mechanical processing
- Standard- and drawing components (e.g. bolts, bushings, piston rings, rubber boots, cylinder liner, etc.)
- Operating fluids (e.g. glue, varnish, primer, lubricant)
- Calibration and maintenance of machines and equipment as well as for inspection means and devices

Supplemental or alternative agreements based on this document may be concluded with the purchasing department and shall always be subject to written form. Existing supplemental or alternative agreements remain valid for requirements not altered or not new in this revision of the QAA (highlighted yellow).

3. Terms

Whenever a requirement set out in this text is accompanied by the term "shall", its implementation is mandatory. The use of the term "should" is to be understood as a recommendation.

Counterfeit part An unauthorized copy, imitation, substitute, or modified part (e. g., material, part, component), which is knowingly misrepresented as a specified genuine part of an original or authorized manufacturer.

EASA European Aviation Safety Agency

EMS Environmental Management System

FAIR / EMPB First Article Inspection Report / Initial Sample Report

FOD Foreign Object Damage

NAA National Aviation Agencies

OPR Outside Process Rejection (Incoming Inspection Report) = Complaint to a supplier

QMS Quality Management System

RVCA / 8D Request for Corrective Action = Form for root cause analysis and corrective actions

4. Requirements concerning organisation and management system

4.1. Supplier approval

The supplier approval process contains the clarification of the questions, whether:

- the supplier maintains a QM-System, which meets the requirements set by Pankl and if he is capable of further development and improvement (see section 4.2).
- the supplier is capable to meet Pankl's requirements with respect to technology, delivery performance, flexibility, and quality.

The basic requirements to obtain a supplier approval by Pankl are:

- Information submitted by the Supplier Survey
- Currently applicable quality management standards and corresponding certificates
- Signed confidentiality agreement
- Customer references, special approvals and qualifications
- Audits conducted by Pankl, if deemed necessary
- Positive initial sampling of a product or service

4.2. Supplier development

The minimum requirement to the supplier's QMS is its certification issued by an accredited certification body according to the ISO 9001. If this requirement is not met, an approval of the supplier is only possible on the basis of an exceptional case and will be issued as a special approval by Pankl.

Suppliers conducting Special Processes as a part of their service or for the manufacturing of their products should have those processes certified according to the NADCAP standard and to maintain the standards of this certification. This is a mandatory requirement in the field of aviation. Exceptions are only possible by means of a special approval by Pankl.

Apart from that, the implementation of the requirements as set out in this QAA, as well as the fulfilment of the targets concerning quality, logistics, and price as agreed upon with Pankl shall be assured by QMS of the supplier.

The supplier should furthermore aim to implement an environmental management system (EMS) according ISO 14001 in order to contribute to environmental sustainability.

The development and certification of the QMS according to IATF 16949 (for manufacturers of automotive products) or AS/EN 9100 (for manufacturers of aviation components) or AS / EN 9120 (for distributors of aviation components) constitute the fulfilment of Pankl's demands to the QMS.

4.3. Conduction of audits

The supplier confirms his agreement to the conduction of announced audits through representatives of Pankl and their customers, as well as through regulatory authorities and organisations (e.g. NAAs, EASA), and will, besides that, oblige his own suppliers or sub-contractors accordingly.

Process accompanying auditing of the product or service including quality assurance measures on site and access to the documentation shall be ensured by the supplier. The scope and protection of the know-how are to be agreed upon in the interest of both contractual parties.

Reasons for the conduction of audits may be:

- Supplier approval or approval of a process
- Changes in the product/process
- Repetitive complaints / quality issues
- Regularly conducted (surveillance) audits

The supplier shall define appropriate actions to be taken for any complaints, agree upon them with Pankl and implement said measures within the agreed period.

4.4. Confidentiality

Prior to the acceptance of the order, suppliers shall sign a confidentiality agreement and follow them throughout the entire performance. The effective implementation of the confidentiality agreement may be checked by Pankl in the course of audits (see section 4.3).

4.5. Person of contact / Changes in the organisation

The supplier shall inform Pankl about the main persons of contact (e.g. Managing directors, Quality manager, Sales). The supplier shall inform Pankl immediately and in writing about essential changes concerning the management system or organisation, company take-overs or splitting resp. relocation of the site.

4.6. Quality responsibility

The responsibility for the quality of the products manufactured or delivered by the supplier including the services and deliveries rendered by sub-contractors or sub-suppliers (see also section 5.2) shall rest solely and under consideration of the legal and administrative provisions towards Pankl, with the supplier.

The effectiveness of any liability exclusion and/or liability restriction on the part of the supplier is expressly excluded. Therefore, the supplier shall be held liable to the full extent for both, services rendered by him and services rendered by his suppliers. In the event of any damaging, destruction, or loss of products or material, the contractual partner shall particularly not only be held liable for the value (or multiple value) of the services to be rendered by him. Besides, he shall also be held liable for damages and costs incurring due to the non-fulfilment of legal or administrative provisions (see section 4.10.).

The supplier undertakes to take out and maintain an insurance policy, which is adequate with respect to his delivery- and service subject (incl. its final use). In particular, the supplier shall take out product liability insurance on personal-, material- and financial losses.

4.7. Personnel qualification

All staff members shall be qualified in accordance with their field of activity. Corresponding training documents and certifications shall be recorded.

All staff members employed by the supplier and working with the (provided) components of Pankl shall be adequately trained in the sensitive handling of the components (see also section 6).

4.8. Risk management / Emergency planning

The supplier shall define a concept to be applied in emergency cases (e.g. machine breakdown, interruptions of power supply, staff shortage, fire protection), in order to keep the risks of an interruption or failure to meet delivery schedules as low as possible. The emergency planning describes the risk potential and the safety precautions taken with respect to all operational and production areas of the supplier.

4.9. Continuous improvement

The supplier undertakes to strive for continuous improvement in order to achieve a high degree of customer satisfaction. Considering the economic viability, he shall design and implement an adequate program on the improvement of processes (zero-failure strategy).

4.10. Legal provisions

The supplier undertakes to comply with all relevant legal and administrative provisions (e.g. REACH, RoHS-guidelines, Part21, etc.). Furthermore, the supplier shall commit to observe all applicable provisions with respect to the export, import, and transition of goods – this applies in particular with respect to the further use of the component and its country of destination (e.g. ITAR). If necessary, the supplier shall apply for all required permits and licenses in a timely manner.

4.11. Special transportation costs

Pankl expect their suppliers to prepare a breakdown of all unplanned transportation costs incurred throughout each quarter of the calendar year, including the reasons.

5. Order processing

5.1. Feasibility check

Prior to the acceptance of the order, the supplier shall carry out a commercial and technical feasibility check and in doing so, ensure that the manufacturing of the product in line with specifications and order details can take place given the available resources. The check of the specifications in the version to be applied, as well as all requirements set out in the order form, plus the active coordination of unclear or missing matters with Pankl constitutes an integral part of this analysis. The supplier undertakes to also check the feasibility with respect to the schedule and capacity prior to the acceptance of the order.

Short-term orders are especially common in the racing industry. Regardless of the urgency, the observance of specifications and order details, as well as the conduction of the tests and checks required should always be given utmost priority. In case that the quality demands and requested delivery dates are unfeasible or if there are recognized certain risks, the supplier is asked to settle these with the purchase in writing (fax, e-mail).

5.2. Sub-suppliers & Sub-contracting

The sub-contracting of the order (partly or in full) is not permitted without the prior notification to and written approval by Pankl.

The provisions set out in this QAA are to be applied in full and observed in every detail by the sub-suppliers. The responsibility concerning the quality delivered by the sub-suppliers and all consequences resulting thereof shall be borne by the supplier (see also section 4.6). The supplier shall ensure that all jointly approved sub-suppliers are filed in his management system and subjected to regular observation.

The non-fulfilment of the requirements set out above entitles Pankl – under exclusion of any and all liability – to cancel the performance of services partly or in full and to refuse the acceptance of products and/or services.

6. Provided products

Products can be provided by Pankl in kind of wrought material, semi-finished products, measuring equipment, and tools.

Provided products shall be handled with at least the same deal of sensitivity and care as it is applied to their own products. If the supplier is provided with materials or components for further processing, the incoming and outgoing inspections shall be carried out on-site of the supplier. The kind and method of these controls should be coordinated with Pankl. In case that the supplier detects any defects or deviations at the time of the incoming inspection, he shall inform the purchasing department immediately and make arrangements concerning the further proceeding.

Provided components shall be handled with utmost carefulness. Even the slightest surface damages (e.g. scratches) may result in the non- or restricted usability of parts. This is particularly important in terms of handling, logistics (see section 8) and training of staff (see section 4.7).

Provided tools and measuring equipment are to be labelled as property of Pankl and shall only be used for the implementation of orders placed by Pankl. The maintenance intervals or lifetime shall be defined in an expedient manner and observed. Any damage or loss has to be reported to the purchasing department of Pankl immediately.

Provided material is subject to special documentation. By no means the supplier is allowed to arbitrarily use substitute material.

7. Production and service provision

7.1. Procurement of raw material

In the event that the order includes the procurement of raw material, the supplier shall request a material certificate „3.1“ according to EN 10204 by the supplier of the raw material, which is supposed to be checked and sent along with the delivery (see also section 7.3). As a general rule, material must only be purchased from sources approved by Pankl or the end-customer. In case that the material does not meet the requirements, the supplier shall immediately inform Pankl's purchasing department and the supplier of the raw material.

7.2. Inspection plan and Process flow chart

The supplier undertakes to plan, organize, and realize the production process and quality assurance on his own responsibility and in such a way, that an extensive monitoring and quality control is ensured at any time and all quality and safety demands to the product or service are continuously met.

Furthermore in the aerospace business the supplier shall appropriately prevent the use and delivery of counterfeit or suspect counterfeit parts and shall undertake provisions for the prevention, detection and removal of foreign objects (FOD). This applies to all products and services, regardless whether these are manufactured or rendered by the supplier himself or if he procures them from sub-contractors.

Production documents for the purpose of specifying the inspections and processes have to be compiled for all production processes and kept up-to-date. These documents shall include all work sequences, events, and inspections starting with the incoming goods receipt through to the delivery. The supplier shall keep record of all activities and inspections performed.

Setup processes shall be appropriately verified (first piece inspection e.g. after tool change, material change, new order). If inspections or tests are conducted by sub-contractors (see section 5.2), these shall be accredited in line with ISO/IEC 17025 or approved by Pankl.

If stated in the order form (in case of critical products or processes), the production documents shall be approved by Pankl prior to the start of the production or after changes (see section 9.2).

If the supplier is provided with inspection plans, the correspondent characteristics have to be checked and documented by the supplier. The documentation has to be submitted as a part of the delivery to Pankl.

7.3. Quality documentation

If the required quality documentation is not included in the delivery, this will be rated as a deviation at the time of the incoming goods inspection (see section 10.3) and considered in the supplier assessment. In addition, Pankl's purchasing department may suspend the payment until the required quality documentation is being provided.

Unless otherwise specified, the standard documentation includes:

- Delivery note
- Acceptance test certificate "3.1" according to EN 10204 (for raw material & wrought material)
- Completed inspection documentation resp. Certificate of Compliance (for external processing)
- Concession form (in case of deviations – see section 10.1)
- Initial sample test report / First Article Inspection Report (in case of an initial sampling delivery – see section 11)
- Safety data sheet (for chemicals, oil, lubricants, gases)

8. Preservation, Storage and Packing

The supplier shall be responsible for the protection and preservation of the products by usage of appropriate means and packings. The storage areas have to be kept protected, marked, neat and clean, in order to avoid environmental influences and confusion.

If the packing material has been provided (e.g. circular packing), the use of it is mandatory. Besides, it has to be made sure, that the packing material remains undamaged throughout the intermediate storage.

The supplier shall ensure that the packing of semi-finished or finished goods as well as their internal transport takes place without any contact between components.

8.1. Storage of material

In the event that the supplier provides for the storage of materials for Pankl (raw material) it has to be made sure that the following requirements are met:

- The prevention of a reduction in quality due to environmental influences shall be provided.
- The assignment of the material certificate resp. to the Pankl lot number shall be maintained continuously.
- Pankl material shall be clearly labelled as such.
- Bar stocks have to be labelled at both ends.
- A periodic (at least annual) reconciliation of the inventory (stock-taking) has to be made with Pankl
- The "First-in-First-out-Principle" shall be applied.

9. Configuration management

9.1. Traceability

In order to verify conformity with the specifications and order demands, the supplier shall provide for consistent traceability back to the primary material. This applies to all quality-relevant documents and data (e.g. process data, inspection records, approvals). The retention period for the records shall be agreed upon with Pankl. Unless otherwise agreed, the following retention periods shall apply:

- Aviation 40 years and approval for destruction by Pankl
- Automotive 15 years
- Racing 7 years

After consultation and in agreement with Pankl, it may be alternatively possible to submit above-mentioned data and records to Pankl.

9.2. Process changes

The supplier shall inform the purchasing department about planned changes in manufacturing process (site, method, procedure, material). This information shall be submitted in a timely manner, so that Pankl can check the changes for their impact.

Changes are subject to the approval by Pankl (see section 11).

10. Quality deviations

10.1. Request for deviation

Any deviations from the specifications or order demands have to be requested in writing or reported to Pankl. In doing so, the supplier shall submit the following information to Pankl:

- Order ID
- Kind and description of the deviation (test reports, photo documentation)
- Root cause for the deviation
- Quantity of parts affected (Assignment of deviations)
- Possible corrective actions

The purchasing department coordinates the internal management and agrees upon the further proceeding with the supplier. The components shall not be released for delivery until the responsible persons at Pankl have come to a decision.

Once the components are released for delivery, it has to be decided which labelling is going to be used for the defective parts and how these parts are going to be separated from the good component parts (e.g. different packing, different label). In any case, it has to be ensured that the parts are provided with a label which distinguishes them as a deviation. In addition to that, the supplier shall include a copy of the Concession form for the defective component parts in the delivery (see also section 7.3).

10.2. Detected deviations after delivery

Any deviation related to the system, process or product which is detected after the delivery and may or does no longer guarantee the safety of the component part shall be immediately reported to Pankl's purchasing department. Besides, a

written statement containing an explanation of the circumstances has to be submitted within 24 hours. The further proceeding shall be decided upon by Pankl.

10.3. Incoming goods reports / OPR

Once any case of non-conformity is detected at the time of the incoming goods inspection or later and this non-conformity is considered to be caused by a supplier, an Incoming Inspection Report or OPR will be created.

Pankl expects their supplier to analyse the root causes and remove these in an effective way. A written statement (e.g. 8D-reports, RVCA) containing the root causes and planned corrective actions has to be submitted to the purchasing department no later than 10 working days upon the receipt of the Incoming Inspection Report /OPR. In case of significant quality deficiencies or anticipated downtimes, the assumed causes and immediate counter-measures have to be reported within 24 hours.

The acceptance of products or services in the course of the incoming goods inspection does by no means involve the exclusion or limitation of Pankl's rights or claims with respect to any deviations, non-conformities, or other consequences which may be discovered or become obvious at a later time.

10.4. Failure costs

In the event of unforeseen expenses, inspections or tests, or reworks which become necessary due to incomplete delivery documents, wrong deliveries or missing resp. incomplete quality certificates, Pankl shall be entitled to collect the costs incurred for this from the supplier.

11. Initial samplings / FAI

Samplings are to be taken in the following cases:

- First delivery to Pankl
- Changes in specifications
- Changes according to section 9.2
- Requalification if required

Unless otherwise agreed, the initial sampling of automotive components is taken as set out in the VDA Vol. 2 resp. in line with EN/AS 9102 for aviation parts.

As a general rule, initial samplings must have been entirely manufactured using serial manufacturing equipment and in accordance with serial operating conditions.

Unless otherwise stated in the order, it is mandatory that at least one component part is completely measured and documented. The sampled components have to be clearly labelled (e.g. by means of a tag) and enclosed with the initial sampling test report to the delivery. The release of serial production is granted after the initial sampling has taken place entirely and with a positive result.

As part of the process release, Pankl may request a confirmation about the agreed quantity in the form of a performance test (Run@Rate).

Unless otherwise agreed, in automotive industry suitable evidence about successful periodical inspection for the purpose of requalification of delivered parts or services shall be provided frequently. The scope of requalification (e.g. conformity of characteristics, laboratory tests,...) shall comply to the original scope of initial sampling.

11.1. Initial sampling according to VDA Part 2

Unless otherwise agreed, the initial sampling test report according to VDA Part 2 to be submitted to Pankl shall include the following documents:

- Covering page resp. form sheets to be applied
- Test results of the material properties
- Test results of the dimensions, technical requirements, surfaces, functional requirements according to the specifications and standards set out in the drawings
- Preliminary process capability test (PPT) with respect to critical characteristics
- Released drawing (with numbered dimensions), approved request for engineering changes, as the case may be
- Process flow chart (all stages of manufacturing and tests)
- Material data sheet per IMDS

11.2. Initial sampling according to EN/AS 9102

Unless otherwise agreed, the FAI according to AN/AS 9102 to be submitted to Pankl shall include the following documents:

- The completed forms
- Released job card resp. data cards with critical component parts and processes
- Internal instructions referred to in the data card
- All records referred to in the forms (e.g. material certificates, test reports)

12. Additional requirements for critical characteristics

Critical characteristics are characteristics that bear a significant importance with respect to the function, product safety or manufacturing process. They are specifically marked in drawings and other documents.

The supplier undertakes to actively contribute in the choice and definition of the critical and, as the case may be, safety-relevant characteristics.

12.1. Process capability

The supplier undertakes to carry out regular process capability tests on the product- and process properties.

These properties or characteristics are accompanied by particular requirements with respect to the process reliability:

- Preliminary process capability amounting to at least ppk 1.66
- Long-term process capability amounting to at least cpk 1.33

In the event, that the necessary process capability is not or cannot be provided, these dimensions need to be put to 100% inspections incl. a corresponding documentation.

12.2. Measurement system analysis

The supplier shall confirm the suitability of the measurement system (capability) applied to the product- and process properties.

12.3. Process-FMEA

The manufacturing processes concerned shall be analysed and put to a risk analysis on the basis of a process FMEA by the supplier. The purpose and goal of this is to minimize the consequences of potential failures by means of appropriate (preventative) measures. The process-FMEAs have to include the appropriate producibility of at least the critical and safety relevant characteristics.

13. Miscellaneous

This Quality Assurance Agreement shall be valid and in force for the entire time of the business relationship between Pankl and the Supplier and shall be applicable for all current and future supply agreements or similar business agreements between Pankl and the Supplier. Any clauses of this Quality Assurance Agreement that from their nature are not limited by the termination of this Quality Assurance Agreement or any supply agreement shall survive the termination of this Quality Assurance Agreement.

If one or several of the clauses of this Quality Assurance Agreement become(s) void or ineffective, the validity of the entire Agreement is not affected whatsoever. Pankl and the Supplier are obliged to act in line with the objectives of this Agreement and agree on a replacement clause that complies as far as possible with the purpose of the ineffective or void clause(s). The same applies to omissions in the Agreement. No verbal agreements have been made. Changes and additions to this Agreement - including a waiver to insist on the written form - must be made in writing to become effective.

The validity and construction of this Quality Assurance Agreement as well as all actual and future business relationships between Pankl and the Supplier shall be governed by the substantive laws of the Republic of Austria without regard to the conflict of law rules of said jurisdiction.

All disputes arising between the parties concerning the interpretation and/or execution of this Quality Assurance Agreement and/or concerning actual and future business relations between PANKL and the Supplier shall be exclusively deferred to the jurisdiction of the courts of Graz, Austria.