



GKN Aerospace Engine Products West PURCHASING QUALITY NOTES

REVISION DATE:
01/17/2012

NOTE NUMBER	NOTE TEXT
000000001 07/15/2010	<p>Documented approval scopes issued by GKN Aerospace Inc., Quality Assurance department shall be adhered to at all times. When issued, the supplier shall maintain these documents for reference when servicing GKN purchase orders or providing tender in response to requests for quote.</p> <p>Supplier's facilities, contracted products, procedures and records shall be made available to GKN to verify compliance to purchase order requirements. A representative, familiar with the supplier's operations and systems, shall be provided to assist GKN in conducting surveillance activities. Access shall also be extended to GKN customers and/or regulatory agencies as applicable.</p> <p>Supplier shall maintain an effective Quality System in accordance with GKN Supplier Quality Standard, CTQS 9002, that provides for control and identification of material throughout the processing cycle, detection of nonconformance, timely corrective action and disciplines required to produce material that is representative of good workmanship. The Quality System shall be documented by the supplier's quality manual, describing the sub-systems utilized to fulfill these system requirements, including exhibits of various forms, tags and other control documents. Supplier shall maintain records essential to the effective operation of the Quality System. The system and revisions are subject to GKN review and approval.</p> <p>No substitution of material specification, size or any other nature will be allowed except by amendment on the purchase order. All materials shall be those furnished or specified by GKN.</p> <p>Supplier shall maintain a system to document nonconformance, investigate and determine root cause, initiate corrective action and follow-up in order to eliminate causes of nonconformance. Any nonconformance to the purchase order or drawing requirements must be documented on GKN's Nonconforming Material Report (NCR) utilizing the GKN supplier portal for submittal of nonconformance's. Disposition of nonconformance must have formal approval by GKN engineering. Formal corrective action will be required. Supplier is liable for any cost incurred by GKN due to rework/repair of nonconforming hardware.</p> <p>The supplier shall maintain an inspection system in compliance with the requirements of GKN Supplier Quality Standard, CTQS 9002, including a measuring instrument calibration system in accordance with ISO 10012-1 or ANSI Z540-1 (latest revision). Supplier shall maintain surveillance of their material and process sources. Supplier's sub-tier purchase document shall contain all necessary data (drawings, specifications, etc.) to fulfill the applicable GKN requirements, with correct revisions indicated. Supplier is responsible for the quality of purchased materials and services and shall develop plans to assure they are appraised to the extent required. Suppliers may be required by GKN to schedule auditing of their sources of material and services to detect possible unauthorized changes to systems, methods, or processes that could affect product quality. Audits may take the form of on-site evaluations, process reviews, documentation review or a combination of these techniques to verify the source is in compliance to GKN's purchase order requirements. Audit plans are subject to GKN approval.</p> <p>Supplier shall identify all products per drawing and/or purchase order requirements. In the event the hardware produced is an assembly/sub-assembly, part numbers and heat numbers of each component shall be documented. All hardware must be traceable back to its specific material heat lot/batch. Records of traceability shall be maintained by the supplier as part of this objective evidence of quality control and acceptability.</p>
000000002 05/10/2002	<p>The supplier shall maintain a Quality System in compliance with the requirements of MIL-Q-9858A.</p>
000000003 05/10/2002	<p>The supplier shall maintain a Quality System in compliance with the requirements of General Electric specification S-1000.</p>
000000004 05/10/2002	<p>The supplier shall maintain a Quality System in compliance with the requirements of Pratt & Whitney specification ASQR-01. Articles contained within this purchase order are for Pratt & Whitney end use and must be controlled per applicable purchase order requirements.</p>
000000005 09/23/2010	<p>The supplier must hold written approval from either Rolls-Royce per SABRe requirements or GKN approval per GKN Supplier Quality Standard, CTQS 9002. Any purchased material or subcontracted services must also be from Rolls Royce or GKN approved suppliers.</p>



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To satisfy this requirement, copies of the approval letter(s) must be delivered with the first shipment. This also applies to any/all sub-contractors. Any proposed changes to sub contractors used must be reported to GKN prior to incorporation and must follow requirements of the Rolls Royce SABRe: Source Change Process.

This quality requirement also applies to raw material suppliers of non-MSRR materials used for the manufacturer of "non-classified" parts only for Rolls-Royce. The material, however, must be fully tested prior to release. This requirement does not cover forging suppliers controlled to MSRR 9951. This quality requirement also applies to process/services not considered "sensitive" per Rolls-Royce specifications/drawings (RR SQA delegated approval letter, Addendum 3).

000000006 If software is involved in performance of work for GKN, the supplier shall maintain software control procedures that comply with DOD-STD-2168 software quality program requirements.
07/15/2010

Software quality programs are required when digital configuration data is used during realization of the product. This applies to product configuration data, coordinate inspection data, and digital data developed to control automated processes (e.g. CNC machining).

000000007 The supplier shall maintain a Quality System in compliance with the requirements of Honeywell specification SPOC 002 and the Quality System shall be to the SAE AS9000 standard. Registration to ISO 900x, D1-9000, QS9000, EN9000 or JC 9000 is acceptable providing the supplier has defined deltas between AS9000 and their current system and has evidence within the supplier quality system submitted to Supplier Performance Management Center (1-877-825-3794).
05/10/2002

000000008 HUMAN SPACE FLIGHT REQUIREMENTS
09/06/2003

FOR USE IN HUMAN SPACE FLIGHT. MATERIALS, MANUFACTURING, AND WORKMANSHIP OF HIGHEST QUALITY STANDARDS ARE ESSENTIAL TO ASTRONAUT SAFETY.

This clause will be inserted in all subcontracts and purchase orders for such items down to the lowest tier. If you are able to supply the desired items with a quality which is higher than that of the items specified or proposed, you are requested to bring this fact to the immediate attention of the purchaser.

STAMP WARRANTY

Stamp warranty is a stamp or signature that is the professional, individual warranty (guarantee) that the practitioner understood the work to be performed and personally performed or witnessed the work. Stamp warranty also guarantees that the task is performed literally as stated in the build record. The practitioner's job is to perform all tasks exactly as documented in the work instructions.

Any condition/situation in which an individual feels would compromise their stamp/signature warranty should be questioned and resolved prior to the application of the stamp/signature.

The following objectives must be satisfied in order to produce quality products guaranteed to meet customer requirements.

- A. Build documents shall correctly reflect specifications and drawing requirements:
- B. All processes specified in build documents are being performed exactly as stated.
- C. Personnel are trained and or certified to perform required operations.
- D. Planning and other instructions are clear, correct, easily executed, and can be verified.
- E. Only authorized and acceptable materials and components are used to manufacture hardware.

Remember:

Doing it right is mandatory, and you the practitioner, are the ultimate guarantor of Mission Success. Your signature represents your company's and your integrity.

000000009 The supplier shall maintain a Quality System in compliance with the requirements of GKN Aerospace document CTQS 9002.
07/15/2010



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000000010 05/10/2002	The supplier shall maintain a quality system in compliance with the requirements of the Short Brothers plc. specification SB/QC/01.
000000011 05/10/2002	Supplier must be approved by the National Aerospace and Defense Contractors Accreditation Program (NADCAP) for the process being performed. Certification of conformance must reflect approval expiration date.
000000012 05/10/2002	Seller shall not disclose (oral, visual, written or otherwise) or provide such drawings, specifications and other technical data or goods to any foreign person (including but not limited to seller's employees, seller's subcontractor's, etc) or foreign firm or institution without first obtaining prior authorization. A "foreign firm or institution" means those organized or existing under the laws of a country other than the United States, its territories, or possessions. The term includes any agency or business organizations that are owned or substantially controlled by foreign governments, firms, institutions or individuals. A "foreign person" does not include United States citizens and corporations and permanent resident aliens of the United States.
000000013 05/10/2002	Warning: This document contains technical data whose export is restricted by the arms export control act (Title 22, USC., Sec2751, ET SEQ.) Or the export administration act of 1979, as amended, title 50, U.S.C., App. 2401, ET SEQ. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with the provision of AFR 80-34.
000000014 09/23/2010	The supplier shall maintain a Quality System in compliance with the requirements of Rolls-Royce SABRe. This also applies to any/all sub-tier suppliers used to fulfill this order. Any proposed changes to suppliers used must be reported to GKN prior to incorporation and must follow requirements of the Rolls Royce SABRe: Source Change Process.
000000015 09/23/2010	Any purchased raw material or subcontracted services under this order must be from Rolls-Royce SABRe approved suppliers. Independent laboratory verification of raw material shall be in accordance with Rolls-Royce SABRe. To satisfy this requirement, copies of the approval letter(s) must be delivered with the first shipment. Any proposed changes to suppliers used must be reported to GKN prior to incorporation and must follow requirements of the Rolls Royce SABRe: Source Change Process.
000000016 12/18/2003	Supplier shall maintain current third party certification to ISO 9001.
000000017 12/18/2003	Supplier shall maintain current third part certification to AS9100.
000000018 12/08/2010	<u>GIDEP Participation Required</u> - The supplier shall be a participant in the Government Industry Data Exchange Program (GIDEP). The supplier shall compare all published alerts, safe-alerts, diminished sources, and problem advisories against the components and parts list used in the contract. The supplier shall notify GKN Aerospace of any matches found during the comparison and provide GKN Aerospace with an impact assessment and corrective action plan. The supplier shall be responsible for making any design changes,(if supplier designed) obtaining GKN Aerospace approval, and conducting any tests necessary to correct or mitigate for any impacts resulting from a GIDEP alert of safe-alert. Additionally, upon request by GKN Aerospace, The supplier shall provide and impact assessment in response to subsequent GIDEP alerts for this item. The supplier shall support these assessments for both delivered and on-order items.
000000019 01/17/2012	Subcontracted laboratory testing, and calibration sources must be accredited to ISO/IEC 17025 requirements, or GKN approved equivalent standard. The services provided by the subcontractor shall appear in the subcontractor's scope of accreditation issued by the registrar.



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Subcontracted laboratory testing and calibration sources shall have implemented procedures to ensure that eye examinations, including visual acuity and color vision, as applicable, are administered by a medically qualified/trained person to all individuals performing laboratory testing, and calibration.

Examination intervals shall not exceed one year.

Individuals shall be tested in at least one eye, either corrected or uncorrected.

Color Perception testing is required one time only. Individuals shall be capable of adequately distinguishing and differentiating colors used in the method for which certification is required, the process being performed or color discrimination activity. Documentation shall be retained for each individual.

Individuals performing visual inspection (i.e. calibration, non-weld, in-process, layout, dimensional) shall be compliant with near vision requirements of Snellen 14/18, (20/25), Jaeger 2 at 14 inches, or Ortho-Rater 8.

Note: Vision examinations may be substituted for the options listed above providing the equivalence is verified and documented by a licensed optometrist

000000020
07/15/2010

Articles contained within this purchase order are for US Government end use and must be controlled per applicable purchase order and regulatory requirements.

OEM, Original Equipment Manufacturer (e.g. Pratt & Whitney, General Electric, Boeing, etc.), drawings and/or specifications used in the execution of this purchase order must be supplied and controlled by GKN Aerospace. Said documents shall exhibit evidence of issuance from the U.S. Government or authorized agency of the same.

Tools used in the fulfillment of this purchase order shall not be owned by an OEM (see above). The supplier shall submit a tool list (including tool identification and ownership) to GKN Aerospace. Written authorization to use the proposed tools shall be secured from GKN Aerospace prior to the initiation of any work and retained by the supplier. Work performed in servicing this purchase order shall be in accordance with the authorized tool list. Subsequent modification to an authorized tool listing shall be authorized and retained as stated above.

As applicable, part marking shall be applied in accordance with the appropriate drawing (and its subordinate specifications) with the following modifications:

- 1) Part Number shall be as stated by the applicable Purchase Order line item.
- 2) Drawing revision shall be the drawing revision applicable to the Purchase Order line item.
- 3) Supplier or vendor numbers shall be the GKN assigned number as reflected in this purchase order preceded by the letters "VC" (i.e. VC#####).

000000021
08/11/2004

All sources of raw material (wrought, cast, forged, etc.), detail items (assemblies, components, hardware, etc.), and significant processes (heat treat, welding, chemical processing, coating, testing, etc.) shall be controlled by the supplier and restricted as follows:

- Sources for raw materials and detail items shall be currently approved by the OEM or CEA.
- Sources to be employed for significant process shall be currently approved by an OEM, Nadcap, or the CEA.

The supplier shall perpetuate flow-down of the requirements stated herein to their sub-tiers as appropriate.

For the purposes of this quality note clause, the following definitions apply;

CEA Cognizant Engineering Authority – The USAF engineering branch chief for the respective propulsion system.
OEM Original Equipment Manufacturer – The source or sources primarily responsible for the design and development of aircraft turbine engines for a US DoD activity or a NATO country.
Nadcap The Performance Review Institute branch responsible for the accreditation of significant process sources.

000000023

Work to be accomplished in performance of this purchase order is directly related to a Lockheed Martin



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10/04/2002	<p>Aeronautics Company PO and must be accomplished in accordance with process specification on purchase order and Lockheed Martin Aeronautics Company Appendix QJ." A copy of this purchase order shall be maintained on file and be made available for review, upon request, by Chem-tronics or by Lockheed Martin.</p> <p>A Certificate of Conformance shall be provided that includes</p> <ol style="list-style-type: none">1. a unique certification number;2. title and specification number (including revision letter) of the process;3. name and address of the process or NDT facility;4. Lockheed Martin assigned processor number;5. date the C of C was issued;6. purchase order part number;7. quantity of parts (to include quantity accepted/rejected);8. signature and title of authorized quality agent of seller; and9. fracture durability classification or serialization when required. <p>Completed parts shall be suitably wrapped, boxed or racked to guard against shipping damage. Rust or corrosion inhibitors shall be applied in accordance with the supplemental requirements of this purchase order if applicable.</p>
000000024 05/10/2002	<p>All special processes shall be performed only by sources that are listed in the Coordinating Agency for Supplier Evaluation (C.A.S.E.) register and approved by Aerojet Propulsion Division (C.A.S.E. Member 030).</p>
000000025 05/10/2002	<p>Supplier shall include the following with each shipment: certification(s) identifying the processor, part number, purchase order number, process specification number, identification of process method used, acceptance criteria document and the applicable "quality control standard" (QCS). Certifications must contain the document(s) revision(s).</p>
000000026 05/10/2002	<p>All material furnished or processing performed under this order must be by a source approved by General Electric.</p>
000000027 05/10/2002	<p>All material furnished or processing performed under this order must be by a source approved by Pratt & Whitney.</p>
000000028 09/23/2010	<p>The supplier must hold written approval from Rolls-Royce per SABRe requirements. Any purchased material or subcontracted services must also be from Rolls Royce approved suppliers. To satisfy this requirement, copies of the approval letter(s) must be delivered with the first shipment.</p> <p>This also applies to any/all sub-contractors. Any proposed changes to suppliers used must be reported to GKN prior to incorporation and must follow requirements of the Rolls Royce SABRe: Source Change Process.</p> <p>This quality requirement may apply to those components/processes/sources classified as "sensitive" by Rolls-Royce. This requirement also applies to any/all forging suppliers (regardless of classification) controlled per MSRR 9951 that includes any/all subtiers. (RR SQA delegated approval letter).</p> <p>(Note to GKN's purchasing/engineering dept: Quality requirement 55 also applies.)</p>
000000029 07/15/2010	<p>All material furnished or processing performed under this order must be by a source approved by Honeywell. GKN purchasing shall not place orders with any other supplier(s) than specified on the GKN Bill of Material (B.O.M), MFG or Quality notes.</p>
000000030 07/15/2010	<p>All materials furnished or processing performed under this order must be by a source approved by The Boeing Company per D1-4426. The supplier shall confirm that the Boeing Division and aircraft model have been properly delineated in the GKN purchase order and ensure that this information is flowed down to any subtiers as appropriate.</p>
000000031	<p>Reference General Electric specification S-343 for aluminum extrusion product control. Copy to be provided</p>



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05/10/2002	by Chem-tronics.
000000032 05/10/2002	The following requirements apply for forgings and flash welded rings: 1) applicable specifications S-306 and S-9013. 2) raw material is for a G.E. application. 3) G.E. quality plan is required as follows. A) rolled rings and round, flat forgings: 0 degrees and 180 degrees testing of all specifications properties, including "capability" test. B) other forgings: testing of specification properties, including "capability", to represent the thickest and thinnest sections. C) flash welded ring: base metal and weld test per specification, including "capability" test. 4) standard notes applicable to raw materials subtiers per S-306 Table II applies: lab certs, first article, billet/bar cert retention and NDT certs.
000000033 05/10/2002	The following requirements apply for castings. 1) applicable specifications, S-310, S-202, S-258 and S-301. 2) raw material is for a G.E. application. 3) raw material source substantiation required per S-310, Table 1. 4) standard notes applicable to raw materials subtiers per S-310, Table III applies: certificates of test, laboratory test report, radiographic film and quality plan and first article inspection.
000000034 05/10/2002	All material or processing performed under this order that have been qualified by substantiation testing shall not be deviated from without written approval from GKN.
000000035 08/24/2011	Engineering Source Approval per PWA 370 applies to this purchase order. Supplier shall maintain a system that ensures Pratt & Whitney approval of manufacturing plans and that all process audit requirements are met. Copies of P&W form 4692 shall be furnished to GKN Aerospace Quality Engineer prior to shipment of first lot and after any subsequent changes.
000000036 09/23/2010	This order has Key Process Characteristics (KPC's) designated on the drawing and / or GKN operation sheet that require Process Certification per the requirements of PWA 79345 and UTCQR -09.1. Supplier shall submit a process control plan for all features designated as KPC's. Process control plan must meet the requirements of UTCQR-09.1 and be approved by GKN Engineering.
000000037 07/12/2011	This order requires part qualification per the requirements of PWA specification ASQR-09.2 UTC, Production Part Approval Process (UPPAP). Documentation per the requirements of ASQR-09.2 must be submitted to and approved by GKN and PWA.
000000038 09/06/2011	This order requires PWA Source Qualification per PWA 300 for one or more processes required by drawing. Supplier must provide written notification to GKN within 24 hrs of any change to PWA Source Qualification status.
000000049 07/15/2010	The supplier shall submit to GKN, prior to production, a revision controlled manufacturing plan that outlines the sequence and sources of operations/processes to be applied in the execution of the contract. Once submitted to GKN, no changes in sequence or sources are permitted without written approval from GKN.
000000050 07/15/2010	The supplier shall submit to GKN, prior to production, a manufacturing plan, identified with a unique number and revision level, detailing all materials, operations, processes and tooling required to produce the hardware. Plan shall include any sub-tier's manufacturing plan. Manufacturing plan shall show evidence of quality review and shall include inspection steps necessary to ensure quality. Once submitted to GKN, no changes in sequence or methods are permitted without written approval from GKN.
000000051 07/15/2010	Registered components. The supplier shall submit to GKN, prior to production, a manufacturing plan identified with a unique number and revision level, detailing: A) the methods and the type of critical processing to be used.



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- B) the location within the processing cycle where inspections will take place.
- C) the attributes of the products which will be inspected at each inspection point.
- D) the materials and methods of preservation and packaging to be used to protect the product.
- E) the handling and transport action precautions necessary to protect the product.

This plan shall include any sub-tier's manufacturing plan. Once submitted and approved by GKN, revisions or variations to any of the above listed controls shall not take place without prior written approval from GKN.

000000052 Supplier shall maintain an effective system for tracking Material Safety Data Sheets (MSDS) for all products supplied to GKN. An appropriate MSDS will be provided to GKN, prior to the first delivery, for all products required by 20 CFR 1910 to have a MSDS.
07/15/2010

The supplier shall provide the MSDS information unless a written waiver has been received from GKN. Failure to provide the required MSDS will result in the prohibition of orders released to the supplier.

In addition, all chemical substances or products that have chemical substances as ingredients, that are supplied from outside the United States, must have a certification from the supplier that the material is on the Toxic Substance Control Act (TSCA) inventory list. Materials imported from outside the United States that are not on the TSCA inventory list cannot be sent to GKN. Payments for materials sent to GKN that are not properly identified on the TSCA list will be withheld pending approval and acceptance by GKN environmental engineering.

000000053 Distributors shall meet the applicable requirements of SAE STD AS 7103, Level C - "Requirements For Accreditation of Pass Through Distributors" or AS 7104 - "Requirements For Accreditation of Full Distributors" and/or applicable portions of SAE STD AS 9000 - "Aerospace Basic Quality System Standard".
05/10/2002

Distributor shall assure traceability of all purchased products to the source of manufacture and their related acceptance documents. The actual source of all material shall be identified.

Distributor shall not modify, rework, or repair material in-house or by subcontracting unless approval is obtained from the Purchaser or the work is performed by the actual manufacturing source of the material.

000000055 GKN purchasing shall not place orders with any other supplier(s) than specified on the GKN BOM, Manufacturing or Quality Notes.
07/15/2010

000000056 Documentation of raw material certifications (chemical and mechanical properties) and variable inspection (including laboratory testing) data are required for 100% of the items fabricated under this purchase order. These documents shall be kept on file at the supplier's facility for 30 years from the delivery date and shall be available immediately to GKN upon request.
07/15/2010

000000058 **Thermocouple Certification requirements:**
Per AMS 2750 - 3.1.1.1 - Calibration: Sensors shall have a certificate of compliance or report of calibration that identifies the following:

- Source of the calibration data
- Nominal test temperature
- Actual test temperatures readings
- Calibration technique
- Correction factor for each calibration temperature traceable to NIST or other recognized National Standard.

Calibration technique shall comply with ASTM E 220, ASTM E 207, or other national standard.

000000059 Raw materials procured in fulfillment of the purchase order must include the original mill source's certified measured test report providing mill identity and mill chemical and mechanical properties defined by the latest revision of the associated specification(s) at time of PO acceptance. These documents shall be kept on file at the supplier's facility and shall be available immediately to GKN upon request.
03/24/2011

000000060 Raw materials procured in fulfillment of the purchase order must include the original mill source's certified measured test report providing mill identity and mill chemical and mechanical properties defined by the
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specification and furnished to GKN for each heat lot number.

000000061
07/15/2010 Raw material certifications of chemical and mechanical properties shall be confirmed by an analysis from an independent laboratory not associated with the producer of the material. Testing shall be to the extent required to verify full compliance with the material specification. (e.g. AMS - acceptance tests). Obtain written approval from GKN for any laboratory planned for use. A Copy of the independent laboratory certification overchecks shall be included in the C of C package.

000000062
07/15/2010 The supplier shall provide sufficient material per heat lot for complete testing by GKN. Material supplied shall bear the original mill markings, when possible, and shall have the physical attributes (e.g. grain direction, size, etc...) to support the testing requirements of the applicable specification(s). If original mill markings can not be included on sample it shall be marked with the specification number, revision and heat lot number for traceability.

000000063
07/15/2010 Supplier shall certify that only GKN furnished material was used in the fabrication of the product. The supplier's certification must list GKN assigned "R" numbers, serial numbers and/or work order numbers as applicable to the order and delivery.

Certification must include a statement that "the material has not been subjected to any processes which may have chemically or metallurgically altered the material, except as allowed by purchase order, specification or drawing".

000000064
05/10/2002 Supplier shall submit a certification which includes a cure of manufacturing date for material whose acceptability is controlled by age. Both the cure date and shelf life shall be listed on the container and on the document certifying the material.

000000065
07/12/2011 If the supplier is a PWA approved LCS supplier reports shall include an equivalent statement to "Parts have been controlled to P&W requirements for LCS per P&W MCL Manual Section F17". If quality note 61 and 62 is a requirement of this order it shall be waived. LCS suppliers need not submit independent lab certification or test material to GKN.

Test reports per Q-Note 60 are not required for the following, provided an acceptable LCS Certification is provided:

Metallic Raw Material – Castings and Forgings
Individual shipments of assemblies, nonmetallic raw materials or finished detail parts/processing

Test reports per Q-note 60 with actual results must be provided with each shipment for Metallic Raw Material - Bar, Sheet or Tubing.

Parts are for P&W end use.

000000066
05/10/2002 Raw or partially machined castings require laboratory retest. The retest will be no less than that required to verify the material is of proper type and composition and is otherwise suitable for production. Sample tabs or products may be used for hardness, chemical and/or metallurgical verification inspection unless directed otherwise by engineering requirements. These tabs shall be taken from each production/heat lot. This is in addition to supplier's material certification.

000000067
05/10/2002 Any laboratory testing that may be required by General Electric, must be performed by a laboratory that has been approved to GE S-400. All certifications of compliance for laboratory testing must state; "GE S-400 approved".

000000068
07/15/2010 If the revision levels of specifications relevant to this order are not specified, the latest revision shall be used and documented on all certifications. To comply with this requirement the relevant specifications and revision level must be reported on the vendor's C of C, inspection reports, first articles, lab reports, etc.

000000075
07/15/2010 Supplier must include with its certification package, test reports provided from an independent "NADCAP" approved materials testing laboratory.



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000000076 12/08/2010	This purchase order is for item(s) identified as "Critical" per Rolls Royce. Supplier shall include the word "Critical" on all of its certification package documents including, but not limited to: Certificate of Conformance, Test Reports, Inspection Reports, First Article Reports, Lab Reports, Etc.
000000084 09/06/2003	<p>Specialty metals incorporated in articles delivered in fulfillment of this contract shall be melted in the United States unless allowed otherwise by DFARS 252.225-7014 Alternate I.</p> <p>The following Defense Federal Acquisition Regulation Supplement (DFARS) requirement applies to this agreement, and is binding on Supplier and each of its subcontractors:</p> <p>252.225-7014 Preference for Domestic Specialty Metals (Alternate I)</p> <p>Access to the applicable DFARS can be achieved via the website below:</p> <p>http://www.acq.osd.mil</p> <p>The Supplier shall include the terms of this clause in every subcontract or purchase order awarded under this contract in accordance with DFARS 252.225-7014 Alternate I.</p>
000000085 07/15/2010	Documented inspection data is required for 100% of the items manufactured under this purchase order. Documents shall be kept on file at the supplier's facility and shall be made available to GKN upon request.
000000086 07/15/2010	<p>Variable inspection data for each individual characteristic is required for 100% of the items manufactured under this purchase order. Sampling may be implemented where the process capability is known and is approved by GKN, prior to application, provided it's use assures fulfillment of purchase order requirements.</p> <p>A photocopy of the variable inspection data (100%) or variable sampling data shall accompany the shipment of parts.</p> <p>Sampling of nondestructive testing (NDT) is not allowed.</p>
000000087 05/10/2002	Full compliance to the engineering requirements shown on the purchase order and drawing is mandatory. Material review board acceptance or repair of any drawing feature or referenced specification is not permitted.
000000096 07/15/2010	<p>The following information is derived from GKN - Chem-tronics, Inc. Operations Manual O.M. 4.4.32 as it pertains to certified cutting tools only. If the supplier/manufacturer has any questions regarding these requirements, contact the relevant purchasing agent. The supplier awarded this order must comply with the following requirements.</p> <p>8.6 Supplier/Manufacturer</p> <p>8.6.1 The tooling supplier/manufacturer is responsible for assuring any/all CT purchase order and drawing requirements are met by providing a "certificate of conformance" referencing the appropriate part number and revision level with each shipment. In addition, a dimensional report must also be supplied for those identified features as instructed via CT drawing for each individual tool.</p> <p>8.6.2 The tooling supplier/manufacturer must physically identify designated "certified cutting tool(s)" with the tool/file number and associated revision that matches the CT supplied drawing.</p> <p>8.6.3 The tooling supplier/manufacturer to physically identify tool with a unique identifying mark/designator, assigned by the supplier, to allow full traceability of each tool back to the associated order. (P.O./certificate of conformity/dimensional report/etc.)</p> <p>8.7 Regrinds/Resharps</p> <p>8.7.1 CT's tooling engineer is responsible for identifying/authorizing those tools which can be resharpened and</p>



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	communicating such tools to the appropriate department(s).
	8.7.2 Any/all regrinds/resharps must be in accordance with the CT supplied drawing requirements.
	8.7.3 The supplier is responsible for assuring any/all CT drawing requirements are met by providing a "certificate of conformance" referencing the appropriate part number and revision level with each shipment. In addition, a dimensional report must also be supplied for those identified features as instructed via CT drawing for each individual tool.
	8.8 Test-type development tools
	8.8.1 Any/all test-type tools shall be identified by the tooling engineer and stipulated as such via the purchase order.
	8.8.2 Supplier to physically identify any/all "test-type" tools used for development by including the word "test" on the tool appropriately. These tools must not be released into production/stores/tool crib and/or used on components without written authorization by the cognizant ME/QE/MQE.
000000097 07/15/2010	All perishable cutting tools supplied under this purchase order shall conform to the requirements of GKN - Chem-tronics, Inc. Operation Manual 4.4.33 and Chem-tronics, Inc. drawings where applicable. When tools are reground/reconditioned, original manufacturer's specifications also apply. Where tools are designated "Certified Cutting Tools" operations manual 4.4.32 section 8.0 is an additional requirement to those stated above (see note code 96).
000000099 07/15/2010	A PWA SQAR/QASR/DQCR buyoff is required before this hardware can ship to GKN. Documentation of the buyoff is required.
000000100 07/15/2010	This order is subject to GKN source inspection. GKN quality control must be notified forty-eight (48) hours in advance of the time the articles or processes are ready for inspection or test.
000000101 07/15/2010	Government inspection is required prior to shipment from your plant. Upon receipt of this order promptly notify and furnish a copy to the government representative normally servicing your plant so that government inspection can be appropriately planned. If a government representative does not service your plant, contact the appropriate government inspection office in your area. If you cannot locate the government office, our purchasing agent should be notified immediately. If nonconformances are detected upon receipt at GKN, you will be notified via a supplier corrective action request and must coordinate corrective action with your government representative.
000000115 07/15/2010	A first article inspection shall be performed with variable data recorded for all drawing characteristics and referenced specifications per AS9102, latest revision. First article to be approved by GKN prior to release of multiple units for production. Copy of the first article inspection report must accompany the first shipment and the packing slip must vividly indicate that this shipment is a "first article". First article requirements apply to all revisions affecting hardware configuration for 100% of the affected characteristics.
000000125 3/24/2011	A Certificate of Conformance (C of C) shall be provided with each delivery of any item(s), material(s) and/or service(s). This can be a separate document or integrated into the packing sheet/list. <ul style="list-style-type: none">• Note: It is understood (by the supplier and GKN) that with the submittal of the Certificate of Conformance the supplier is providing legal confirmation that all delivered item(s) comply with the purchase order requirements and to the following:▪ The product has not been subjected to any processes which may have chemically or metallurgically altered the material, except as allowed by the purchase order and its subordinate requirements.



GKN Aerospace Engine Products West

PURCHASING QUALITY NOTES

REVISION DATE:
01/17/2012

NOTE NUMBER	NOTE TEXT
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- When the subcontract activity involves GKN furnished material (i.e. subcontract services), the supplier is certifying that the specific GKN furnished material (furnished for the specific contract) was used in the fabrication of the product.

All Certificates of Conformance shall include as a minimum:

- 1) Supplier's company name and address
- 2) Name of manufacturer, if different from supplier
- 3) GKN Purchase order number and (when applicable) P.O. line item(s).
- 4) Certification date.
- 5) Supplier's Pack Slip Number
- 6) Quantity.
- 7) Part number and revision as assigned by the purchase order.
- 8) Any additional information as specified by the purchase order and its subordinate requirements.
- 9) All NCR (Nonconformance Report) number(s) applicable to the delivered item(s). ie: "SG0001234 Applies"
- 10) A statement that materials and/or services provided is in conformance with the purchase order requirements. Listing any special process by specification and revision level. (ie: NDT, Heat treat, etc.)
- 11) Signature and/or stamp of Supplier's authorized Quality representative (secured computer-generated signatures are acceptable).
- 12) The information from "A" or "B" below as applicable.

A. Supplier Procured materials (raw, component or assembly) shall include:

- The drawing designation, drawing revision and engineering change order(s) as applicable.
- Material specification and revision for each unique material included in the delivered product.
- Specific material lot or material batch numbers for each unique material included in the delivered product.
- Serialization if specified by the governing requirements.

B. Processing or service shall include (GKN Supplied Material):

- GKN assigned "R" numbers, serial numbers and/or work order numbers as applicable to the order and delivery.
- A list of any GKN work instruction(s) invoked by the purchase order (e.g. operation sheet, etc.) including their revision levels as applicable.
- Specifications and revision levels for all special processes invoked by the purchase order.
- A statement that: "The product has not been subjected to any processes which may have chemically or metallurgically altered the material, except as allowed by the purchase order and its subordinate requirements."

000000126
07/15/2010

Supplier will be provided with a quantity of GKN standard "certificates of conformance" forms. Supplier shall complete the "C of C" as appropriate for the requirements of the order. The "C of C" must reflect the revision level of all drawings and/or specifications that form a part of the order, be signed by a responsible representative, and submitted with each shipment of items under this order.

000000127
3/24/2011

A Certificate of Conformance (C of C) shall be provided with each delivery of any item(s), material(s) and/or service(s). This can be a separate document or integrated into the packing sheet/list.

- Note: It is understood (by the supplier and GKN) that with the submittal of the Certificate of Conformance the supplier is providing legal confirmation that all delivered item(s) comply with all purchase order requirements and to the following:
- If the revision levels of specifications and / or drawings relevant to this order are not specified, the latest revision at the time of PO acceptance was used in the fabrication of the product.
- The product has not been subjected to any processes which may have chemically or metallurgically altered the material, except as allowed by the purchase order and its subordinate requirements.



GKN Aerospace Engine Products West
PURCHASING QUALITY NOTES

REVISION DATE:
01/17/2012

NOTE NUMBER

NOTE TEXT

- When the subcontract activity involves GKN furnished material (i.e. subcontract services), the supplier is certifying that the specific GKN furnished material (furnished for the specific contract) was used in the fabrication of the product.

All Certificates of Conformance shall include as a minimum:

- 1) Supplier's company name and address
- 2) GKN Purchase order number and (when applicable) P.O. line item(s).
- 3) Certification date.
- 4) Supplier's Pack Slip Number
- 5) Quantity.
- 6) Part number and revision level.
- 7) Any additional information as specified by the purchase order and its subordinate requirements.
- 8) All NCR (Nonconformance Report) number(s) applicable to the delivered item(s). ie: "SG0001234 Applies"
- 9) A statement that materials and/or services provided is in conformance with the purchase order requirements.
- 10) Signature and/or stamp of Supplier's authorized Quality representative (secured computer-generated signatures are acceptable).
- 11) The information from "A" or "B" below as applicable.
 - A. Supplier Procured materials (raw, component or assembly) shall include:**
 - Serialization if specified by the governing requirements.
 - B. Processing or service shall include (GKN Supplied Material):**
 - GKN assigned "R" numbers, serial numbers and/or work order numbers as applicable to the order and delivery.
 - A list of any GKN work instruction(s) invoked by the purchase order (e.g. operation sheet, etc.) including their revision levels as applicable.

000000130
09/23/2010

For Rolls Royce parts only. Group 1 or Group 2 bonding is called out on the drawing for this part. Bond testing is required by the specification and shall be defined by Rolls Royce and communicated to the supplier. Test requirements shall be incorporated into the manufacturing plan and approved by Rolls Royce, or the approved GKN delegate, prior to production of parts.

A test certificate for each test performed to satisfy the requirements shall be provided with each shipment for each part or batch as determined by the testing plan laid out by Rolls Royce Labs. A batch is defined as a group of parts cured simultaneously in the same pressure system and oven for the same period of time.

If the approved test plan does not require testing of each part or batch, the most recent test certificate shall be supplied with each shipment and shall include the date of the next required test for reference.

All testing shall be carried out by a Rolls Royce or NADCAP approved testing facility.

000000135
05/10/2002

Supplier shall submit certifications with procedure number and revision level, for thermal treatment, including items as specified below:

000000136
05/10/2002

Time/temperature chart for furnace.

000000137
05/10/2002

Independent time/temperature for furnace load.

000000138
05/10/2002

Sketch of thermocouple placements with key to multipoint recording, if utilized.



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NOTE NUMBER	NOTE TEXT
000000139 05/10/2002	Vacuum certification.
000000140 05/10/2002	Provide the following documentation with each part delivered. 1. Furnace load charts (time/temp) 2. C of C stating; A. Braze temp B. Braze soak time C. Cool down temp/time D. Part thermocouple recordings E. Part number/P.O. number/operation revision level
000000150 07/15/2010	Supplier shall submit NDT test results (performed by a NADCAP and / or OEM certified NDT facility) identifiable with acceptance requirements as specified below:
000000151 07/15/2010	Radiographic certification in accordance with ASTM E2104 of the current revision level and/or all purchase order referenced specifications and revision level for each radiographic inspection to be performed.
000000152 07/15/2010	Penetrant inspection certification in accordance with ASTM E1417 of the current revision level and/or all purchase order referenced specifications and revision level for each penetrant inspection to be performed.
000000153 07/15/2010	Magnetic particle certification in accordance with ASTM E1444 of the current revision level and/or all purchase order referenced specifications and revision level for each magnetic particle inspection to be performed.
000000154 07/15/2010	Ultrasonic inspection certification in accordance with all purchase order referenced specifications and revision level for each ultrasonic inspection to be performed.
000000155 07/15/2010	Pressure test certification in accordance with all purchase order referenced specifications and revision level for each pressure test inspection to be performed.
000000156 07/15/2010	Leak test certification in accordance with all purchase order referenced specifications and revision level for each leak test inspection to be performed.
000000157 07/15/2010	Radiographic film must conform to ASTM E1815 of the current revision level, class I or class special film speeds, only (A,B,C or D).
000000158 07/15/2010	Radiographic technique sheets must conform to the requirements of ASTM E2104 of the current revision level and/or all purchase order referenced specifications and revision level for each radiographic inspection to be performed.
000000165 05/10/2002	Supplier shall submit a certification of plating per applicable specification.
000000166 05/10/2002	Supplier shall submit a certification of anodize per applicable specifications.
000000185 07/15/2010	A certified tool list and an 8" x 10" minimum photograph of each GKN owned tool must be presented at time of shipment. Digital photographs are acceptable.
000000186 07/15/2010	Acceptance of production tooling on this order shall be contingent upon inspection and acceptance by GKN. The tooling and dimensional samples produced by this tooling must conform to the tolerance limits of the



**GKN Aerospace Engine Products West
PURCHASING QUALITY NOTES**

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NOTE NUMBER	NOTE TEXT
	engineering drawings and specifications stated on this order.
000000187 05/10/2002	All weld filler material shall be controlled per PWA MCL F-53 and PWA-300.
000000188 05/10/2002	Weld wire shall be identified in accordance with AMS 2816.
000000189 05/10/2002	An over check sample of no less than 6 inches in length shall be provided for each heat lot of weld wire. This sample shall be attached to the outside of the weld wire packaging to allow over check testing without disturbing the packaging of the production material.
000000999 05/10/2002	No quality notes apply

THIS DOCUMENT IS SUBJECT TO PERIODIC REVISION.

These quality notes are revision sensitive. It is the supplier's responsibility to ensure that the most recent version of this document is "in hand" upon acceptance of a GKN Aerospace purchase order. The applicable revision of this document directly correlates to the purchase order acceptance date. Use of this web-based document is contingent upon specific reference to the same via the GKN Aerospace Purchase Order.

CONTROLLED RESIDENCE: [HTTP://WWW.CHEM-TRONICS.COM/PROCUREMENT.HTM](http://www.chem-tronics.com/procurement.htm)

The Quality Notes listed in this document are applicable to purchase orders for the following GKN Aerospace sites only:

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