

GR9100 - Goodrich Quality Requirements for Suppliers	
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1.0 PURPOSE / SCOPE

- 1.1 This document, GR9100, provides the baseline Quality Management requirements for suppliers of Direct Product to Goodrich. Additional SBU specific requirements may apply. This document does not apply to Maintenance, Repair and Overhaul (MRO) suppliers.
- 1.2 Additional Quality requirements, from the Goodrich location, may be flowed down on the Goodrich purchase order.

2.0 RESPONSIBILITY

- 2.1 It is the responsibility of the supplier to ensure that all Goodrich purchase order requirements, including this requirement, are flowed down to the sub-tier supplier.
- 2.2 Goodrich Enterprise Supplier Quality Steering Committee is responsible for managing, maintaining and flowing down this document to suppliers.
- 2.3 Goodrich Supply Chain Management is responsible for ensuring that all appropriate quality flow down requirements are contained in the purchase order.

3.0 REFERENCES

- 3.1 Supply Chain Management Handbook (SCMH) - www.iagg.org/scmh
- 3.2 Nadcap www.pri-network.org
- 3.3 Aerospace Standards- www.sae.org/products/standards/hotaero.htm
- 3.4 FAI forms- <http://www.sae.org/iagg/forms/index.htm>
- 3.5 Goodrich Supplier Corrective Action Request (SCAR) - GRMA-005-FRM.

4.0 DEFINITIONS

- 4.1 **Direct Product(s)** – Any goods, services or processes that must conform to specifications and/or drawings and is part of the end item deliverable product.
- 4.2 **Counterfeit parts** - Realistic copies of product that may not comply with engineering drawing and/or specification requirements with intent to deceive.
- 4.3 **Rework**- Action on non-conforming product to make it conform to the requirements.
- 4.4 **Repair**- Action on non-conforming product to make it acceptable for the intended use. Repair is distinguished from rework in that the item after repair does not completely conform to the applicable engineering requirements.
- 4.5 **Non-conforming product**- Any material, process, part, or product in which one or more characteristics do not conform to the requirements of the contract, specification, drawing, or other applicable product description.
- 4.6 **Special Processes**- Those processes where the parameters are directly influenced by component geometry and/or results that cannot be confirmed by inspection.
- 4.7 **Standard Catalog Hardware**- A part or material that conforms to an established industry or national authority published specification, having all characteristics identified by text description, National/Military Standard Drawing, or catalog item (ref. AS9102).
- 4.8 **Commercial Off The Shelf (COTS)** - Items that are ready-made and available for sale, lease, or license to the general public.

5.0 REQUIREMENTS

5.1 Order of Precedence

- 5.1.1 In the event of conflict with this document and additional Quality requirements from the Goodrich locations, the order of precedence shall be as follows: (1) GR9100 Goodrich Quality Requirements for Suppliers; (2) Any additional quality requirements flowed down on the purchase

order. (Should any conflict arise, Seller shall contact Buyer for specific clarification.)

5.2 **Quality Management System Requirements**

5.2.1 Suppliers to Goodrich must maintain a Quality Management System (QMS) that is compliant as applicable to the current revision of the following:

5.2.1.1 Manufacturing: AS/EN/JISQ 9100

5.2.1.2 Special Processors (non-manufacturing): Nadcap (AC7004) as applicable.

5.2.1.3 Materials Testing, Calibration, NDT Laboratories: ISO 17025, or AS9003, or Nadcap (AC7004), or equivalent industry standards.

5.2.1.4 Distributors: AS/EN/JISQ 9120

5.2.1.5 Software Suppliers: AS/EN/JISQ 9100 and AS9006

5.2.1.6 Exceptions or additions to these QMS requirements will be documented and controlled by each Goodrich location/division.

These aerospace standards may be obtained through www.sae.org/products/standards/hotaero.htm

5.2.1.7 Suppliers not meeting the requirements above may be subject to additional oversight and requirements as specified by Goodrich.

5.3 **Records and Retention**

5.3.1 Records shall be maintained and retained per Goodrich location specified time requirements.

5.3.2 At the end of the retention period or the supplier ceases trading with Goodrich, or the supplier is unable to maintain the records, the supplier shall provide the option for Goodrich to take possession of the records. Records are not to be destroyed without written approval from Goodrich Supplier Quality Assurance. Goodrich shall maintain the right to access all or any portion of records within the time period specified by each Goodrich location.

5.3.3 “White-out” or correction fluid shall not be used on product acceptance records. Any entry on the supplier's documentation, which requires correction shall be lined through, initialed, and dated by the supplier, leaving the item in a readable condition.

EXAMPLE: ~~This is a correction.~~ T.C. 1-22-2010

5.3.4 All records supplied to Goodrich shall be in English.

5.4 **Changes in Quality System, Facilities, Management or Ownership**

5.4.1 Suppliers will immediately notify Goodrich in writing, of changes to their Quality System, management or ownership. Changes requiring notification include but are not limited to:

5.4.1.1 Change in location of facilities, processes or manufacturing equipment. Notification must be prior to relocation and with adequate time for hardware, system, and process re-qualification.

5.4.1.2 Change in ownership, name changes, or change in senior company management.

5.4.1.3 Change in quality leadership, system or controlled processes certification status, including suspensions or disapprovals.

5.5 **Work Transfer**

5.5.1 Suppliers are required to have a work transfer process in place and shall support the transfer of work to or from their facilities. This includes work transfers from one of a supplier's manufacturing site to another. Suppliers shall also use their work transfer process when moving work from one of their sub-tier suppliers to another.

5.6 **Certificate of Conformance/Compliance**

5.6.1 A Certification of Conformance/Compliance (C of C) shall accompany each shipment stating the product or services provided meet all purchase order and drawing requirements and shall contain no qualifying statements, such as “to the best of our knowledge”. The certification shall provide at a minimum:

5.6.1.1 Supplier name and manufacturing address

- 5.6.1.2 Part number (part number or raw material ordered if not the same as the supplier's internal part number) and engineering drawing revision.
- 5.6.1.3 Part name or description (as applicable)
- 5.6.1.4 Goodrich purchase order and line item number
- 5.6.1.5 Quantity of parts
- 5.6.1.6 Serial, batch, or lot numbers (as applicable)
- 5.6.1.7 Date of the certification
- 5.6.1.8 Government contract # (where applicable)
- 5.6.1.9 Waiver/deviation/non-conformance documentation (as applicable)
- 5.6.1.10 Title and signature of authorized supplier representative attesting to C of C accuracy.

5.7 **First Article Inspection Requirements**

- 5.7.1 The supplier's system must provide a process for the inspection, verification, and documentation of the first production article, and updates to it, in accordance with the current revision of AS9102 (Aerospace First Article Inspection Requirement).
- 5.7.2 Forms to complete an FAI may be obtained at <http://www.sae.org/iagg/forms/index.htm> and must be completed in English.
- 5.7.3 Goodrich suppliers utilizing sub-tiers are required to flow-down the specific First Article Inspection requirements of AS9102 and this document to all applicable sub-tier suppliers.

5.8 **Variation Management of Key Characteristics**

- 5.8.1 When specified per purchase order or design data, Goodrich requires implementation of statistical process controls that meet the intent of AS9103 Variation Management of Key Characteristics on specific characteristics, part numbers or processes.

5.9 **Non-conforming Product Deviations and Waivers**

5.9.1 Suppliers are not authorized to disposition non-conforming product, of Goodrich or Goodrich's customer design, unless material review authority is granted in writing. Follow the specific Goodrich location guidelines for disposition and control.

5.10 **Supplier Corrective Action**

5.10.1 Goodrich Supplier Corrective Action Request (SCAR) will be issued to suppliers on form GRMA-005-FRM.

5.10.2 The supplier must complete the SCAR and return to the issuing Goodrich location by specified due date. If a response cannot be generated in this timeframe, the Supplier must request an extension from the issuing Goodrich location.

5.11 **Disclosure of Delivery of Non-Conforming Product to Goodrich**

5.11.1 When a supplier has any reason to suspect or knows that non-conforming product has been delivered to Goodrich or Goodrich's customer, the supplier shall notify the Goodrich buyer (at a minimum) within 24 hours, followed by a commercial letter (reference AS9131) to the responsible buyer and/or contracts administrator. Notification will include the following information at a minimum:

- 5.11.1.1 SCAR form # GRMA-005-FRM with Immediate Correction and Containment
- 5.11.1.2 Part Numbers affected
- 5.11.1.3 Quantity
- 5.11.1.4 Detailed description of the non-conformance
- 5.11.1.5 Purchase Order number(s) and line item number(s)
- 5.11.1.6 Information required identifying the non-conforming hardware, e.g., serial number, lot number, date of manufacture, etc.
- 5.11.1.7 Shipping date, destination, carrier, bill of lading, or any other information necessary to locate the non-conforming product
- 5.11.1.8 Cause of defect, if known at the time
- 5.11.1.9 Dates when additional information or outcomes of investigations will be available.

5.12 Control of Special Processes and Materials

5.12.1 Only Goodrich approved special process suppliers are authorized to perform these processes. (Nadcap can be used as a basis of approval.) Processors must be approved prior to performing controlled process on production parts or products. The use of Goodrich approved sources does not relieve the supplier's responsibility for the quality of purchased products and services. Qualification of a subcontractor to perform a customer controlled process (e.g., the Boeing BAC or DPS specification), requires prior customer approval. Customer listings must be reviewed for approved customer providers.

5.12.1.1 ***Contact your Goodrich buyer for a listing of controlled special processes/materials and listing of approved suppliers/processors.***

5.12.2 Nadcap accreditation is required for suppliers and sub-tiers performing the following special processes:

5.12.2.1 Heat Treat (HT)

5.12.2 Non-Destructive Testing (NDT)

5.12.2.3 Chemical Processing (CP)

5.12.2.4 Composites (COMP)

5.12.2.5 Welding (WELD)

5.12.2.6 Coatings (CT)

5.12.2.7 Non-Conventional Machining (NM)

5.12.2.8 Surface Enhancement (SE)

5.12.2.9 Product Testing (MTL).

5.11.2.10 Electronics Assemblies (PCB, CCA)

5.12.3 Specific written authorization must be obtained from Goodrich in the absence of accreditation. It is the responsibility of the supplier to ensure sub-tier compliance.

5.12.4 This does not apply to Standard Catalog Hardware, raw material and Commercial Off The Shelf (COTS) items. There may be other

applications where this does not apply. See the Goodrich location for these exceptions.

5.13 **Foreign Object Debris/Damage (FOD) Prevention**

5.13.1 A foreign object damage prevention program (FOD) must be maintained to assure the prevention, detection and removal of foreign objects during design, manufacture, assembly or shipping of an item. The supplier must maintain work areas and control tools, parts and products in a manner sufficient to preclude the risk of FOD incidents.

5.14 **Counterfeit Parts**

5.14.1 Suppliers must have a counterfeit parts prevention program. The purpose of this program shall be to prevent the delivery of counterfeit parts and control parts identified as counterfeit. Further guidance can be found in SAE AS5553.