

AJR1: Quality Management Systems - Requirements for Aviation, Space and Defense Organizations (AS9100)

During the performance of this Contract/Purchase Order (C/PO), the seller shall be certified / registered to the Quality Management Systems - Aerospace - Requirements of AS/EN/JISQ 9100.

Supplier Certificate(s) of Registration must be issued by a Certification Registration Body (CRB). The CRB must be accredited under the control of the International Aerospace Quality Group (IAQG) certification/registration schemes, as recognized by the Aerospace Standard SAE AS 9104. Reference the IAQG website for a listing of accredited CRBs.

Note: You will need to register on the IAQG website and receive a password in order to view the list of accredited CRBs.

When compliance to a required QMS standard is evidenced by a current third party certification, the listing in the IAQG OASIS database shall be basis for approval. Copies of certifications shall be furnished to Aerojet Rocketdyne Buyer whenever they are renewed or changed. Any loss or change of certification (revoked, suspended, expired or cancelled) or 3rd party major findings shall be immediately reported to Aerojet Rocketdyne in writing. Send email notification to:

gppwrsq@pwr.utc.com

Suppliers shall permit Aerojet Rocketdyne access to all data in OASIS and National Aerospace and Defense Contractors Program (Nadcap) databases including registration documentation, certification, audit reports, findings, corrective actions, etc.

Aerojet Rocketdyne reserves the right to input significant and/or frequent escape data and major audit findings regarding suppliers into the relevant OASIS data base records for those Suppliers.

Seller shall notify buyer, in writing within 5 working days in the event of a change in management or ownership or facility relocation.

The buyer has the right to conduct AS9100 quality system /process assessments (audits) at seller's facility as required.

GENERAL QUALITY REQUIREMENTS:

a. Purchase Order Requirements and Quality Clauses:

Failure to comply or partial compliance with any clause specified by the purchase order and included Quality Clauses shall be cause for rejection and return of the item(s). Verbal agreements or instructions shall under no circumstances be construed as approval or authorization to proceed. Unless otherwise specified, drawings, specifications, standards, and document listings shall be the issue currently in effect on the date of the Purchase Order. Drawings and specifications listed on or part of this procurement shall have precedence over Quality Clauses. The supplier shall flow down to sub-tier suppliers all applicable requirements in the purchasing documents, including classified characteristics if so identified.

b. Right of Entry and Inspection:

Aerojet Rocketdyne and Aerojet Rocketdyne's customer and/or government representatives reserves the right to assign representatives, including, on an itinerant or resident basis at the Supplier's facility or those of lower-tier suppliers for any purpose including verifying all tests and/or inspections performed as a part of the terms and conditions of this purchase order(s). Suppliers are required to provide Aerojet Rocketdyne representatives and Aerojet Rocketdyne's customer and/or government representatives with reasonable facilities and equipment and access to all areas essential to complete this task throughout all periods of performance under this purchase order(s).

c. **Lot Control/Material Traceability:**

The Supplier shall maintain a system that assures full traceability to the material/manufacturing lot and/or any applicable requirements imposed by listed drawing or specification standards. The Supplier shall maintain records that provide lot/batch traceability/batch control number for each shipment. Materials used must be traceable to the manufacturer's records of acceptance and identified by applicable lot number, date code, material type, specification, applicable change letter or number, heat number, etc. The Supplier shall make all possible efforts to minimize the number of lot/date codes included in each shipment. If multiple lots must be used, each lot shall be segregated for packaging and shipment to Aerojet Rocketdyne. Where Aerojet Rocketdyne owns the design of an article purchased from a supplier (first-tier) who further subcontracts all or portions of that work to other subcontractors (second-tier), the first-tier supplier's purchase order must state that the articles are "for Aerojet Rocketdyne end use" and assure that all applicable requirements are flowed down.

d. **Calibration System Requirements:**

The Supplier shall maintain a calibration system that complies with one of the following specifications (or an equivalent): ANSI Z540.1 or ISO/IEC 17025. This provision shall be applicable to all inspection, test and measuring equipment used by the supplier or supplied by Aerojet Rocketdyne for inspection or test. All test equipment and gages used must be traceable to NIST standards.

e. **Foreign Object Elimination:**

Supplier shall take steps to mitigate contamination by foreign objects/debris throughout the manufacture, assembly, test and shipping processes. The Supplier will document, investigate, determine root cause, and eliminate repetitive nonconformances related to Foreign Object Debris (FOD) incidents. In addition, packaging materials will be taken into consideration when mitigating FOD; packaging materials that generate particles, fibers, or other debris are not acceptable. Specification NAS 412 shall be used as a guide for FOD programs.

f. **Nonconforming Product:**

NONCONFORMING ITEMS SHALL NOT BE SHIPPED UNLESS AUTHORIZED IN WRITING BY THE AEROJET ROCKETDYNE BUYER.

Aerojet Rocketdyne reserves the right to return, at the Supplier's expense, any or all of a lot in which nonconforming parts have been found at any time.

Rework is considered the return to conformance of a nonconforming feature or item using original instructions and processes. Nonconforming items that result in rework beyond existing instructions, requires written rework instructions and those rework instructions will capture the results of the rework. Rework documentation shall be made available for Aerojet Rocketdyne review upon request. This requirement shall be flowed down to all sub-tier suppliers. Under no circumstance shall a repair (the use of different methods, materials or processes to correct a nonconformance) be permitted without prior Aerojet Rocketdyne approval.

g. **Material Review Board Authority:**

MRB AUTHORITY IS NOT GRANTED UNLESS SPECIFICALLY AUTHORIZED IN WRITING BY THE AEROJET ROCKETDYNE BUYER.

The Material Review Board is a panel of technically qualified individuals appointed for the purpose of reviewing, evaluating and determining (or recommending) disposition of non-conformances to defined engineering requirements. IF allowed, the authority for nonconformance dispositions are delegated on the purchase order unless the material for the order is supplied by Aerojet.

Authority for a disposition of "Repair" and/or "Use-As-Is" dispositions shall come from the Aerojet Rocketdyne Quality and Mission Assurance organization.

- h. **Requests for Corrective Action:**
The supplier shall respond to Aerojet Rocketdyne requests for corrective action. The supplier's response to any such request shall be timely and **must** include the root cause of the problem, the statement of the action taken to preclude a recurrence, and the effectivity of the action. When Aerojet Rocketdyne Source Surveillance is a Purchase Order requirement, the supplier shall obtain the signature of the Aerojet Rocketdyne Quality representative on the supplier's response.
- i. **Measurement of Product:**
First Article Inspections (FAI) shall be performed in accordance with SAE AS9102. The Supplier holding the Aerojet Rocketdyne purchase order is responsible for assuring completion of the FAI Report for all finished part characteristics generated by sub-tier suppliers. For product releases subsequent to FAI, statistical sampling or the use of an operator certification program or other special manufacturing methodologies (e.g. manufacturing controlling features, die/mold control, method of manufacturing, etc.) must be approved by Aerojet Rocketdyne via [5005-X, Supplier Request for Information](#) prior to implementation. Otherwise, 100% inspection is required.
- j. **Requests for Information:**
The form [5005-X, Supplier Request for Information](#) is to be used for any requests regarding clarification of drawing or specification or for an alternate method to a quality system requirement. Send email notification to: gppwrsq@pwr.utc.com
- k. **Sources of Supply: OCM/OEM SOURCES:**
All Original Component Manufacturer (OCM)/Original Equipment Manufacturer (OEM) materials used in this order must have been procured by the Supplier from either the original / approved manufacturer or an authorized distributor of the manufacturer. In the case of raw materials (such as metal sheet, bar or tube, and similar items) distributors do not necessarily need to be "Authorized" but there must be traceability and documentation back to the original manufacturer of the material. Any items that have not been procured by the supplier per this requirement must have a statement by the Aerojet Rocketdyne Buyer explaining and allowing the deviation from this requirement prior to delivery of the item(s) to Aerojet Rocketdyne.
- l. **Special Process Sources:**
Special Processes sources used (at any level) as defined on Aerojet Rocketdyne drawings or in Aerojet Rocketdyne design information, shall be performed by Aerojet Rocketdyne approved processor as noted in Supplier Portal (www.rocketydnesuppliers.com).
- m. **Documentation Requirements:**
1. **CERTIFICATES of CONFORMANCE (C of C):** The Supplier shall provide with each shipment a legible Certificate of Conformance which states that the items were produced, processed, and/or tested in accordance with stated applicable purchase order or subcontract requirements. Certifications shall be signed by a company Quality Assurance Representative or Responsible Company Official. The following information is required on the certification at a minimum (Reference Figure 1):
 - a. Purchase Order Number, Item Number
 - b. Aerojet Rocketdyne part number (including revision), and Lot, Manufacturing Order, or Batch Number if applicable.
 - c. Supplier Name, address and contact information and manufacturer's name (if different from Supplier) if applicable or be traceable to other supplied documents
 - d. Specification Number (including revisions and amendments)
 - e. Serial numbers of Serialized Parts must appear on or be linked to the C of C.

Figure 1:

Buyer Purchase Order Number:		Item Number:		Quantity:	
Part Number:		Part Revision:			
Lot, Heat No, Manufacturing Order/Batch Number:					
Serial Number(s)					

Supplier (Processor) Name	Processor Address (including city/state)	Specification	Rev	Supplier Material Processing Procedure # / Revision	Processor Cert. No.	Date Processed

SELLER NAME: _____	BY: _____
SELLER ADDRESS: _____	
(Seller Management Representative) _____	
TITLE: _____	DATE: _____

2. The Certificate of Conformance shall provide a link (via the Supplier’s internal job number, work order number, or other identifier) to all documentation for this product. The Certificate must include the manufacturer’s certification or complete traceability from the original authorized manufacturer for the product(s) shipped.
3. If Buyer supplied materials/parts were used in performance of Buyer’s purchase order, Seller shall list reference the Buyer’s Rocketdyne Furnished Material Transmittal number on the C of C.

n. Document Legibility:

All submitted documentation, including signatures and stamps, *must* be legible. Documents requiring corrections shall comply with the following requirements:

1. Each error *must* be lined through once.
2. The correct information *must* be entered near the error.
3. All corrections must be made in ink.
4. Each entry *must* be initialed and/or stamped and dated.
5. Use of correction tape/fluid is prohibited.

o. Electronic Signatures:

Electronic signatures and dates on Supplier-submitted documentation are acceptable when the Supplier has a procedure / process to control the use of passwords or programs for the application of electronic signatures.

p. Record Retention:

Supplier shall keep on file records reflecting that all materials and finished items were controlled and tested in accordance with and met the specifications detailed on the purchase order. Such records shall be available for Aerojet Rocketdyne examination. Records shall be retained **5 years** after final payment unless otherwise stated in additional PO or Quality Clauses.

Records shall be maintained for the retention period in a manner that prevents damage from fire, moisture, pests, power interruption, or any other deteriorating effects. Supplier shall notify Aerojet Rocketdyne buyer if conformance to this requirement cannot be met. In such an instance, copies of records shall be provided to Aerojet Rocketdyne, who shall retain such records for the required record retention period. Aerojet Rocketdyne shall be notified thirty days prior to destruction of documentation related to Aerojet Rocketdyne orders.

q. Military Specification Cancellation:

DoD Acquisition Reform has resulted in the obsoleting or cancellation of some military specifications, and in some cases no replacements are noted. In some cases the obsolete specification is not for new designs but is still valid for existing applications. Aerojet Rocketdyne encourages its suppliers to request approval for use of alternate specifications that replace cancelled specifications. If a cancelled specification lists an alternate, please notify Aerojet Rocketdyne Buyer of alternate specification use.

r. Material Requirements: OBSOLESCENCE MANAGEMENT

The supplier shall monitor the life cycle status and availability of parts and/or materials through the duration of the contract. Parts/material determined to be unavailable or identified as "unavailable for new designs" shall be reported to the buyer within seven working days of obtaining this designation.

s. Suspect and Counterfeit Parts Prevention

1. Supplier shall establish and maintain controls which seek to prevent the purchase and delivery of Suspect and Counterfeit Parts to Aerojet Rocketdyne. Supplier shall only purchase products to be delivered or incorporated as Work to Aerojet Rocketdyne directly from the Original Component Manufacturer (OCM)/Original Equipment Manufacturer (OEM) or through an OCM/OEM authorized distributor chain. Work shall not be acquired by the supplier and furnished to Aerojet Rocketdyne from independent distributors or brokers **unless approved in advance and in writing by Aerojet Rocketdyne.**
2. Supplier shall immediately notify Aerojet Rocketdyne with the pertinent facts if the Supplier becomes aware that it has furnished Suspect or Counterfeit parts. After such notification, when requested by Aerojet Rocketdyne, Supplier shall provide copies of OCM/OEM documentation in its possession that authenticates traceability (up to and including other testing validation methods) of the affected items to the applicable OCM/OEM.
3. Suspect counterfeit parts and/or materials shall be immediately quarantined to prevent parts/materials from getting back into component/materials supply chain until authenticity validation can be conducted.
4. In the event that the Supplier delivers items under this Contract that are determined to be counterfeit, Supplier shall, at its expense, (i) promptly replace such Counterfeit items with items conforming to the requirements of this Contract, and (ii) reimburse Aerojet Rocketdyne for all reasonable, direct costs incurred for the removal and replacement of Counterfeit items, including any testing costs necessitated by the removal and replacement, if any.

5. Suppliers eligible for utilization of the Government-Industry Data Exchange Program (GIDEP) shall utilize the GIDEP process to alert industry of encountered counterfeit parts. Supplier is prohibited from shipping material for which a GIDEP Alert has been issued. The supplier agrees to support Aerojet Rocketdyne in GIDEP compliance efforts. Also the Supplier shall not ship any suspected counterfeit parts as notified by Aerojet Rocketdyne of any alerts or other suspect counterfeit conditions.

6. Supplier shall include paragraphs (s1) through (s5) of this clause or equivalent provisions in lower tier subcontracts for the delivery of items that will be included in or furnished as Work to Aerojet Rocketdyne.

Information specifications referenced in this document:

ANSI/ESD-S20.20	For the Development of an Electrostatic Discharge Control Program for – Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)
ANSI Z540.1 or ISO/IEC 17025	Calibration Laboratories and Measuring and Test Equipment - General Requirements Requirements for the Calibration of Measuring and Test Equipment
SAE AS 9102	Aerospace First Article Inspection Requirement
NAS 412	Foreign Object Damage/Foreign Object Debris (FOD) Prevention