



## FLYSHEET 100 Rev. 14

### QUALITY SYSTEM REQUIREMENTS

In addition to the applicable Quality System Code incorporated in this contract, Seller shall comply with the requirements of Section 2.0, titled "Additional Quality Requirements".

**1.0. Quality System Codes and Corresponding Requirements (Reference Purchase Order Face Plate Section entitled "Quality Codes or Quality System Codes" to determine which system requirement is applicable)**

- 1.1. **Quality Code 20B.** *SAE AS9003, "Inspection and Test Quality System."* Seller is required to maintain a certified/registered Quality System in compliance with SAE AS9003, "Inspection and Test Quality System", and as may be amended from time to time. Spirit reserves the right to conduct surveillance at Seller's facility to determine that Seller's Quality System meets the requirements as required herein. A copy of SAE AS9003 may be obtained from the Society of Automotive Engineers' URL at: <http://www.sae.org>.
- 1.2. **Quality Code 20B1.** Quality Code 20B1 is being phased out of use. See the requirements of Quality Code 20B for any references in the Purchase Order to Quality Code 20B1.
- 1.3. **Quality Code 20B2.** *SAE AS9100, "Quality Management Systems Aerospace Requirements."* Seller is required to maintain a certified/registered Quality System in compliance with SAE AS9100, "Quality Management Systems Aerospace Requirements," and as may be amended from time to time. Spirit reserves the right to conduct surveillance at Seller's facility to determine that Seller's Quality System meets the requirements as required herein. A copy of SAE AS9100 may be obtained from the Society of Automotive Engineers' URL at: <http://www.sae.org>.
- 1.4. **Quality Code 20B3.** Quality Code 20B3 is being phased out of use. See the requirements of Quality Code 20B2 for any references in the Purchase Order to Quality Code 20B3.
- 1.5. **Spirit Recognition of Accredited Aerospace Quality Management System (AQMS) Certification/Registration.** Spirit requires that the Seller maintain quality system certification/registration by an accredited Certification/Registration Body (CRB). Spirit reserves the right to make final determination regarding compliance to quality system requirements imposed by this Flysheet 100.
  - 1.5.1. The Seller shall ensure the following:
    - The CRB is accredited to perform AQMS assessments. The CRB must use approved auditors and operate in accordance with the corresponding International Aerospace Quality Group (IAQG) certification/registration scheme.

**Note:** IAQG sanctioned certification/registration schemes include but are not limited to AIR 5359, SJAC 9010, TS157, etc. Reference IAQG website for listing of accredited CRBs:  
[http://www.iaqg.sae.org/iaqg/audit\\_information/registrars.htm](http://www.iaqg.sae.org/iaqg/audit_information/registrars.htm)
  - 1.5.2. The Seller maintains objective evidence of CRB certification/registration on file at Seller's facility. Objective evidence shall include:
    - The accredited AQMS certificate(s) of registration;

- The audit report(s), including all information pertaining to the audit results in accordance with the applicable certification/registration scheme; and
- Copies of all CRB finding(s), objective evidence of acceptance of corrective action(s) and closure of the finding(s).

**Note:** Certification records shall be maintained in accordance with Spirit specified contractual quality record retention requirements.

- 1.5.3. The CRB services agreement provides for “right of access” to all CRB records by Spirit, applicable accreditation body, applicable Registrar Management Committee (RMC) and other regulatory or government bodies for the purpose of verifying CRB certification/registration criteria and methods are in accordance with the applicable IAQG certification/registration scheme.
- 1.5.4. The CRB has Seller’s written permission to provide audit results/data to IAQG membership as required by the applicable IAQG certification/registration scheme.
- 1.5.5. Spirit is immediately notified in writing should the Seller’s certification/registration be suspended or withdrawn, or accreditation status of Seller’s CRB is withdrawn.
- 1.5.6. Spirit identified findings and Seller’s quality performance data is provided to the CRB during certification/registration and surveillance activity.
- 1.5.7. CRB is provided access to applicable proprietary data (including Spirit’s proprietary data) to the extent necessary to assess supplier functions.
- 1.5.8. Seller complies with all CRB requirements imposed to issue and maintain AQMS certification/registration.
- 1.5.9. Spirit’s recognition of Seller’s AQMS certification/registration does not affect the right of Spirit to conduct audits and issue findings at the Seller’s facility. Spirit reserves the right to provide Spirit identified quality system findings, associated quality system data, and quality performance data to the Seller’s CRB.

## 2.0. Additional Quality Requirements

- 2.1 **Seller Approval and Shipments.** After seller has demonstrated the ability to meet all of Spirit’s Quality requirements, the seller is ‘approved’ and assigned a unique supplier code for that ***specific manufacturing location***. The ‘approved seller’ is required to perform inspections and prepare all required paperwork. An approved seller may use other divisions of their company or sub-tier suppliers in their manufacturing process, but the ‘approved seller’ is solely responsible for the final inspection, Certificate of Conformance, and shipment of product. Spirit will only accept shipments received from an ‘approved seller’. Requests for approval (and subsequent supplier codes) for other divisions/manufacturing locations of the ‘approved seller’ must be worked through the applicable Spirit Procurement Agent.
- 2.2 **Change in Quality Management Representative.** The Seller shall promptly notify Spirit of any changes in the Management Representative with assigned responsibility and authority for the quality system.
- 2.3 **Language.** The Seller shall maintain an English language translation of: (1) its quality manual, (2) an index of all other Seller procedures that contain quality requirements. Spirit may require additional documentation to be translated, including but not limited to: shop orders, technical specifications, certificates, reports, and nonconformance documents.
- 2.4 **Change in Quality System Procedures.** The Seller shall immediately notify Spirit in writing of any change to Seller’s quality manual (or top-level document) that may affect continued compliance to the Quality System Requirements of this Flysheet 100. After the issue of initial Spirit quality system approval, each change to the quality control system is subject to review by Spirit.

- 2.5 **Change in Manufacturing Facility Location.** The Seller shall immediately notify Spirit in writing of any change to the manufacturing facility location of the contracted part number or assembly.
- 2.6 **Tooling.** When a Seller receives or fabricates Spirit, or Spirit's customer owned accountable tools, then the Seller must comply with the requirements of D33200, "*Boeing Suppliers' Tooling Document*" unless otherwise stated in the Purchase Order.
- 2.7 **Use of Spirit's Digital Datasets as Authority for Design and/or Inspection.** When a Seller uses Spirit's digital data, as authority for design and/or inspection, then the Seller must be approved for Digital Product Definition and comply with the requirements of MAA1-10009-1, *Quality Assurance Standard for Digital Product Definition at Spirit AeroSystems, Inc. Suppliers, or contractual requirements.*
- 2.8 **Seller's Inspection Options.** A Seller that performs acceptance sampling on Boeing designed product shall have a Spirit approved acceptance-sampling plan. The plan shall meet the requirements of Boeing document D1-8007, *Approval Guide for Supplier Statistical Sampling Plans.* A Seller that performs acceptance sampling on non-Boeing designed product shall develop and use C = 0 acceptance-sampling plans in accordance with the guidelines of ARP9013, current revision. Inspection sampling plans for non-Boeing programs are subject to Spirit review and approval upon request.
- 2.8.1. When statistical process control is used as an option for either in process or final inspection, the Seller must satisfy the provisions for Variation Management as defined in this Flysheet 100.
- 2.8.2. In all cases, inspection requirements identified by engineering drawing/model or specification take precedence over the inspection options described herein. Spirit reserves the right to require 100 percent inspection for selected characteristics.
- 2.9 **Variation Management.** When Key Characteristics are identified on the engineering drawing/model, the Seller shall develop and implement a variation management plan consistent with the guidance of SAE AS9103, "Variation Management of Key Characteristics" unless otherwise agreed between Buyer and Seller in writing.
- 2.10 **Retention of Records.** Quality Assurance Records shall be maintained on file at Seller's facility and available upon request to customers of Spirit including any departments, agencies or instrumentalities of the United States Government and to the United States Government Federal Aviation Administration (FAA) and any successor agency or instrumentality of the United States Government and Spirit's Authorized Representatives. Seller shall retain such records for a period of not less than ten (10) years from the date of shipment under each applicable order for all products unless otherwise specified on the Purchase Order. At the expiration of such period, Spirit reserves the right to request delivery of such records and shall be notified in writing prior to disposal.
- When product, equipment, facility or process qualification is required for execution of this order, all records of such qualification are to be retained by the seller for a period of ten (10) years from the manufacturing date of the last parts produced / process performed for which special qualification was required.
- Or,
- For a period no less than the duration the Seller is listed in the Qualifying entities approval documents, (Qualified Products List, Approved Processors List, etc.), as being qualified / approved for such items / processes.
- The prevailing retention period shall be the greater of the two listed conditions.
- 2.11 **Seller Annual Internal Quality Audit.** At least annually, the Seller shall conduct an internal audit to ensure compliance to their quality system and the controlling quality assurance document.
- 2.12 **Material Review Authority.** The Seller shall not use dispositions of use-as-is or repair on any Product for which this clause is made a part of the Contract/Purchase Order

unless the Seller has documented approval from the Product design authority, (Spirit or Spirit's customer), for the Product to be dispositioned.

- 2.13 **Regrading Material.** The disposition "regrade" shall not be used on Products of Spirit or Spirit's customer's proprietary design.
- 2.14 **Control of Excess Inventory.** The Seller shall strictly control all inventory of Spirit's and Spirit's customer's proprietary Product that is in excess of contract quantity in order to prevent Product from being sold or provided to any third party without prior written authorization from Spirit.
- 2.15 **Boeing Approved Process Sources (D1-4426).** The Seller shall ensure that both they and all subcontractors use Boeing-approved special processors and manufacturers' authorized distributors, as required and listed in document D1-4426, *Boeing Approved Process Sources*; unless otherwise specified in the contract on Boeing proprietary Product. In those cases where Boeing is not the design authority and the applicable design authorities approved processors are not otherwise identified in the Contract/Purchase Order, contact the applicable Spirit's Procurement Agent for guidance.
- 2.16 **Verification of Corrective Action.** When Spirit notifies Seller of a detected nonconformance, Seller shall immediately take action to eliminate the nonconformance on all Products in Seller's control. Seller shall also maintain on file verification that root cause corrective action has occurred and has resolved the subject condition. At the specific request of Spirit, this verification shall occur for the next five (5) shipments after implementation of the corrective action to ensure detected nonconformance has been eliminated. Spirit reserves the right to review the verification data at Seller's facility or have the data submitted to Spirit for review.
- 2.17 **Corrective Action Report (CAR).** Where Seller is requested to submit a CAR, Seller will submit its response within ten (10) business days of receipt of such request unless Spirit otherwise provides an extension. Failure to respond within the required CAR due date will result in the number of nonconforming parts being doubled in the Sellers quality performance rating and repeated every additional five (5) days the CAR response is delinquent. Any CAR shall as a minimum, include any immediate corrective measures taken, the cause of the nonconformance, the root cause corrective action taken and the date of implementation. In the event Seller is unable to respond within the allotted ten (10) day time frame, Seller will notify Spirit of its inability to fully respond as soon as possible but no later than five (5) days after receipt of said request at which time Seller shall submit a request for extension which shall include the reason for the extension request and the time needed to complete the corrective action report. Spirit reserves the right to disapprove any CAR that are deemed inadequate or incomplete and to withhold the acceptance of future Product and/or prohibit the placement of any further Contracts/Purchase Orders between the Seller and Spirit until such time as the corrective action is accepted and approved by an authorized agent of Spirit. Spirit's assertion for Seller corrective action and the Sellers responsibility to provide requested corrective actions under the provisions of this Flysheet 100 shall remain in whole regardless of whether Spirit returns any nonconforming Product to the Seller or otherwise makes such nonconforming Product available to the Seller for review.
- 2.18 **Nonconformance Reporting for Delivered Product.** Seller shall provide written notification to Spirit within one (1) business day when a nonconformance is determined to exist, or is suspected to exist, on Product already delivered to Spirit under this Agreement and the following is known:
- Affected process or Product number and name
  - Applicable Purchase Order number(s), quantity, and dates delivered
  - Description of the problem (i.e., what it is and what it should be)
  - Affected drawing number (s) and zones (s)
  - Suspect/affected serial number (s) or date codes, when applicable

- Proposed actions/requests (i.e., units to be checked, recording required, method of check, etc.)

Notification shall include above information as a minimum. The Seller shall notify Spirit's Procurement Agent who manages the Purchase Order and the Spirit Tulsa Procurement Quality Assurance organization.

## 2.19 **Supplier Quality Performance.**

2.19.1. The Seller shall be responsible for achieving and maintaining a minimum quality performance level of either:

- A Spirit Tulsa supplier quality acceptance rating of 99.8% as calculated by taking the ratio of acceptable units delivered to the total units delivered for the prior twelve (12) month period. This calculation may be based on a composite performance score from all Purchase Orders between the Seller and the Spirit contracting site, or specific by program to which this Agreement applies; or
- Equivalent alternate quality performance rating as defined by the site(s) when the standard quality acceptance rating calculation does not accurately reflect the Seller's quality performance.

2.19.2 If Seller fails to achieve and maintain the acceptable performance criteria above, the Seller shall be responsible for one or more of the following as directed by Spirit and at no additional costs to Spirit:

- The Seller shall at the Seller's own expense obtain source inspection from a Spirit qualified contractor.
- The Seller shall reimburse the Spirit contracting site(s) for reasonable Spirit costs incurred at the point of manufacture. Such costs shall include travel, lodging and Spirit labor costs.

2.20 **First Article Inspection (FAI).** First Article Inspection shall be performed by the Seller. The FAI will be conducted in accordance with SAE AS9102, Aerospace First Article Inspection Requirement, (or international equivalent). FAI supporting documents shall also be provided within FAI reports (attached PDF. Files). Delta FAIs shall have applicable supporting documentation as necessary. A copy of the AS9102 standard can be obtained through the Society of Automotive Engineers (SAE) at the following website address: <http://www.sae.org>

Spirit AeroSystems utilizes a web based quality module known as Netinspect ([www.netinspect.com](http://www.netinspect.com)) for the purpose of performing and recording FAIs in accordance with AS9102. The use of this system will require Seller to have computer access, a web connection, (preferably high speed), and a document scanner at no additional cost to Spirit. The web-based quality module will be provided at no additional cost to Seller when used on Spirit's Product. Seller's use of this system shall be at no additional cost to Spirit.

## Summary of Changes

<b>Revision Number</b> <b>Date</b>	<b>14</b> <b>April 12, 2011</b>
<b>Changes in this Revision</b>	<b>Section 2.0 Paragraph 2.10 – Retention of Records.</b> <b>Changed: Product record retention to ten (10) years.</b> <b>Added: At time of expiration Spirit reserves the right to request delivery of records and shall be notified prior to disposal.</b> <b>Added: Quality record retention requirements for qualifications of product, equipment, facility or process.</b>