

Inspection and Test Quality System

FOREWORD

The supplier is to maintain an effective quality system derived from AS9100 to ensure product and process integrity. The intent of AS9100 Less Than, Inspection and Test Quality System is to ensure that the inspection, conformity, and airworthiness of products are maintained.

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## SAE AS9003

### 1. SCOPE:

This document contains the minimum requirements for supplier Inspection and Test Quality System. It is emphasized that the quality system requirements specified in this standard are complementary (not alternative) to the contractual and applicable law and regulatory requirements.

### 2. NORMATIVE REFERENCES:

(See AS9100 for applicability)

### 3. DEFINITIONS:

For the purposes of this document, the definitions are given in the International Standard ISO 8402.

### 4. QUALITY SYSTEM REQUIREMENTS:

#### 4.1 Management Responsibility:

4.1.1 The supplier's management shall define and document its policy for quality, including objectives for quality and commitment to quality. They shall also ensure that the policy is implemented, maintained at all levels of the organization, and accessible to all employees.

4.1.2 The supplier shall define and document the responsibility and authority of personnel who perform work affecting quality and for ensuring that the quality system is established, effectively implemented, and maintained.

#### 4.2 Quality System:

4.2.1 The supplier shall establish, document and maintain a quality system as a means of ensuring that product conforms to specified requirements. The supplier shall prepare a quality manual covering the requirements of this document. The quality manual shall include or reference the quality system procedures. A flow down of the requirements from this document through the supplier's documented procedures must be shown.

4.2.2 The supplier shall ensure that the quality system procedures are readily available to supplier personnel who are responsible for ensuring compliance with requirements, and to customer and/or regulatory agency representatives.

#### 4.3 Contract Review:

The supplier shall establish and maintain documented procedures for contract review. Before acceptance of a contract, contract change notice or other required change, the supplier shall:

- a. Determine that the requirements are adequately defined and documented.
- b. Determine that they have the capacity and capability to meet all contract requirements.
- c. Records of contract reviews shall be maintained

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### 4.4 Design Control:

The scope of Less Than AS9100 does not include quality system requirements for design control.

### 4.5 Document and Data Control:

- 4.5.1 The supplier shall establish and maintain documented procedures to control all documents and data and to ensure that only approved, released, pertinent revisions are available, including those in electronic format.
- 4.5.2 The supplier shall establish a process to ensure the timely review, distribution, implementation, and maintenance of all authorized and released drawings, standards, specifications, planning and changes. The supplier shall maintain a record of change incorporation and, when required, shall coordinate these incorporations with the customer and/or regulatory authority.

### 4.6 Purchasing:

- 4.6.1 The supplier shall establish and maintain documented procedures to ensure that the purchased product meets specified requirements.
- 4.6.2 Purchase documents shall clearly define the product ordered, including the applicable drawings, specifications, processing requirements, and other relevant data.
- 4.6.3 Purchased products shall be verified upon receipt or at the subcontractor's facility before shipment.
- 4.6.4 The supplier shall include right-of-entry provisions in any subcontract. These provisions shall allow the supplier, its customers, and regulatory agencies to determine and verify the quality of work, records, and material at any place, including the plant of the subcontractor.
- 4.6.5 The supplier shall regularly review and evaluate the quality performance of its subcontractors and take appropriate actions.
- 4.6.6 The supplier shall ensure, when required, that both the supplier and their subcontractors use customer-approved special process sources.
- 4.6.7 The supplier shall have a process for evaluating and approving their subcontractors and shall maintain a list of those subcontractors.

### 4.7 Control of Customer-Supplied Product:

The supplier shall establish and maintain documented procedures for the control, verification, storage, and maintenance of customer-supplied products.

### 4.8 Product Identification and Traceability:

The supplier shall establish and maintain documented procedures for identifying a product or lot by suitable means from receipt and during all stages of production, delivery, and installation.

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### 4.9 Process Control:

- 4.9.1 The supplier shall establish and maintain documented procedures that define the method for controlling manufacturing, applicable service, production and installation processes.
- 4.9.2 The supplier shall prepare, maintain, and monitor manufacturing work instructions (e.g., manufacturing plans, traveler, router, work order, process cards) reflecting requirements.
- 4.9.3 The supplier shall maintain accountability and configuration control of all parts during all phases of production.
- 4.9.4 The supplier shall document and maintain control of split order quantities.
- 4.9.5 When customer approval of a process or processor is required, the supplier shall use only customer-approved sources.
- 4.9.6 The supplier shall have procedures and maintain records that demonstrate care and control of tooling, including customer supplied tooling.

### 4.10 Inspection and Testing:

- 4.10.1 The supplier shall establish and maintain documented procedures for inspection and test activities that verify product compliance with specifications.
- 4.10.2 The supplier shall inspect the product to ensure that it conforms to the purchase order or contract, drawing, and specifications.
- 4.10.3 When certification test reports are utilized to accept material, the supplier shall assure that data in said reports are acceptable per applicable specifications. The supplier shall periodically validate test reports.
- 4.10.4 The supplier shall perform final inspections and verify that all inspections and tests have been completed.
- 4.10.5 First Article Inspection: The supplier's system shall provide a process, as appropriate, for the inspection, verification, and documentation of the first production article.

First Article Inspection documentation shall be retained (see 4.16) and shall include a list of the characteristics required by the design data and any required tolerances, the actual results, and when testing is required, the results of the test.

The First Article Inspection shall be updated to include changes to production processes or product configuration.

Guidance for the performance of First Article Inspection is provided in AS9102, First Article Inspection.

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### 4.11 Control of Inspection, Measuring, and Test Equipment:

- 4.11.1 The supplier shall establish and maintain documented procedures to control, calibrate, and maintain all inspection, measuring, and test equipment that can affect product quality, including test software and personally owned equipment, and customer-supplied equipment.
- 4.11.2 Calibrations shall be traceable to internationally or nationally recognized standards. Where no such standards exist, the basis used for calibration shall be documented.
- 4.11.3 Equipment shall be identified with suitable indicators or an approved identification record of the calibration status.
- 4.11.4 The supplier shall assess the validity of previous inspection results when equipment is found to be faulty or out of calibration and shall recall the product for reinspection when the assessment indicates the result may be a nonconforming product.

### 4.12 Inspection and Test Status:

- 4.12.1 The supplier shall establish and maintain a documented process for identification of inspection and test status.
- 4.12.2 The inspection and test status of a product shall be identified by suitable means, which indicate the conformance or nonconformance of a product with regard to the inspection and tests performed.
- 4.12.3 The inspection and test status of a product shall be traceable to the individual performing the acceptance.

### 4.13 Control of Nonconforming Product:

- 4.13.1 The supplier shall establish and maintain documented procedures for the identification, documentation, evaluation, segregation, disposition, and for notification to concerned parties of a nonconforming product.
- 4.13.2 The supplier procedures shall restrict the application of preliminary review on dispositions to "rework," "regrade," "scrap," or "return to supplier," or shall submit such to the customer for authorization to "repair" or "use as is."
  - 4.13.2.1 Procedures shall prohibit "regrade" dispositions on products of customer proprietary design.
  - 4.13.2.2 Regrading Material: Product dispositioned for regrade requires a change in product identification to preclude the product's original use. Adequate test reports and certifications shall reflect the regrading.