

Report number A0436

PRODUCT REQUIREMENTS FOR
SELLERS OF BOEING DESIGNED DETAIL PARTS
AND NON-FUNCTIONAL MINOR ASSEMBLIES

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INDEX OF CHANGES

REVISION DATE AND LETTER	SECTIONS AFFECTED			REMARKS	REVISED BY	APPROVED
	REVISED	ADDED	REMOVED			
11-01-98 P				Total Revision of Entire Document	<u>E. N. Jones</u>	<u>C. S. Korkoian</u>
12-18-01 Q				Total Revision of Entire Document	<u>D. G. Dressel</u>	<u>K. L. Heffernan</u>
06-10-02 R				Total Revision of Entire Document	<u>D. G. Dressel</u>	<u>K. L. Heffernan</u>
12-14-07 T	1, 4.5.3, 4.6.2, 4.6.6, 4.10.2, 4.13, 4.16	4.9	4.20	Revisions as noted	(signature on file) <u>D. G. Dressel</u>	(signature on file) <u>M. F. Mattison</u>

1. Scope

The requirements in this document shall supplement the requirements of SAE AS9003, Inspection and Test Quality System. These requirements pertain to the inspections, tests and process controls necessary to substantiate product conformance to Boeing Integrated Defense Systems, St. Louis (hereafter referred to as Boeing IDS, St. Louis) requirements. This document applies to the manufacture of Boeing designed products produced under a Boeing IDS, St. Louis purchase contract. These are minimum requirements and do not relieve the supplier of the obligation to produce material meeting all requirements of the purchase contract.

The following specifications form a part of this document to the extent referenced herein. Current revisions are to be used.

Table 1 - Specifications

Specification Number	Title
P.S. 23038	Authority for Material Substitution
17M9Y1001	Authority for Material Substitution (C17 Aircraft)
D1-4426	Boeing Approved Process Sources
D6-51991	Quality Assurance Standard for Digital Product Definition
SAE AS9003	Inspection and Test Quality System
SAE AS9102	Aerospace First Article Inspection Requirement
SAE AS9103	Variation Management of Key Characteristics
ISO 10012	Quality Assurance Requirements For Measuring Equipment

Boeing intends to discontinue the use of BQMS App B (AS9003) and require Suppliers obtain AS9100 Industry Controlled Other Party (ICOP) certification no later than June 2008. See the January 2006 letter on the link below for more details.

<http://www.boeing.com/companyoffices/doingbiz/letters.html>

Boeing IDS St Louis supplemental requirements to SAE AS9003 are listed below. All other portions of SAE AS9003 apply.

4.5 Document and Data Control

No change to SAE AS9003 requirements except as noted below.

Supplement SAE AS9003 4.5 as follows:

- 4.5.3 Seller is required to obtain Buyer approval (prior to July 2008) as a DPD capable supplier if Seller receives, downloads and/or uses Computer Aided Design (CAD) geometry in any format from any Boeing facility. Boeing digital datasets are reference only (not design or inspection authority) until

DPD approval status is obtained. The Seller shall utilize Buyer document D6-51991, Quality Assurance Standard for Digital Product Definition at Boeing Suppliers for implementation of Digital Data control processes.

- 4.5.3.1 All geometric features of model based definition (MBD) files must be validated.

4.6 Purchasing

No change to SAE AS9003 requirements except as noted below.

Supplement SAE AS9003 4.6.2 as follows:

- 4.6.2.1 All purchase contracts between the Supplier and their sub-tier suppliers, in fulfillment of the Boeing IDS - St. Louis Purchase Order, shall address the following:
- a. The applicable requirements appearing in the Boeing IDS - St. Louis Purchase Order, engineering drawing, and/or Specification Outside (SPECO) instructions.
 - b. The use of Boeing approved sources for processes listed in D1-4426, Approved Process Sources.
 - c. Identification of the product model or program the part number represents (e.g. 68A = F15, 74A = F18, 75A = AV8, DA = T45, 17P = C17).
 - d. Identification of the prime division of The Boeing Company that is the design authority (e.g. IDS St. Louis for FSCM Number 76301 and the T45 program, IDS Long Beach for FSCM Number 88277).

Note: The supplier shall furnish copies of needed specifications upon request of their sub-tier suppliers.

- 4.6.2.2 The supplier shall ensure special requirements for parts designated as "Fracture Critical" or "Fracture Critical Traceable" or other designations as defined in the applicable control drawings are clearly defined in all subcontracts for critical parts.
- 4.6.2.3 Unless P.S. 23038 or 17M9Y1001 (unless otherwise specified by engineering specifications) allow automatic substitution of material, any substitution of materials (sizes or specifications) from engineering definition requirements, the Supplier shall have specific prior written approval from Boeing IDS - St. Louis. When substitution is anticipated, contact the Boeing IDS - St. Louis procurement agent to initiate authority for material substitution (AMS).
- 4.6.2.4 If P.S. 23038 or 17M9Y1001 (unless otherwise specified by engineering specifications) allows automatic substitution of the material being used by the supplier, the supplier is required to annotate the material information on the supplier's corresponding shop traveler / work order.

Supplement SAE AS9003 4.6.6 as follows:

- 4.6.6.1 The Seller and or Seller's subcontract process sources shall be an approved processor or shall use approved processors as required by D1-4426. A list of the approved processors and associated processes are available from Buyer's Procurement Agent or at <http://www.boeing.com/companyoffices/doingbiz/d14426/index.html>. For the processes listed in D1-4426, the processors must have approval for the specific Process Specification required by the Engineering definition. Quality problems arising from the use of Boeing approved sources must be reported to the Boeing contact as listed on the Boeing web site. Any non-conforming hardware resulting from these problems must be processed per Section 4.13, Control of Nonconforming Material.

NOTE: Material processed by sources not listed in the Boeing Approved Processor List (when applicable per D1-4426, Approved Process Sources) will result in non-conforming material. Such material will be processed in accordance with Boeing IDS - St. Louis non-conforming material procedures. Such material shall not be shipped from the supplier's facility until a disposition has been received and complied with or until authorized in writing by Boeing IDS St. Louis.

4.9 Process Control

No change to SAE AS9003 requirements except as noted below.

Supplement SAE AS9003 4.9.6 as follows:

4.9.6.1 Control of Customer Tooling

Customer supplied tooling shall be maintained and inspected periodically and shall include verification of the first article produced to the design data / specification. Use of Customer supplied tooling does not relieve the Seller of the responsibility to provide acceptable product nor preclude subsequent rejection by the customer.

4.10 Inspection and Testing

No change to SAE AS9003 requirements except as noted below.

Supplement SAE AS9003 4.10.2 as follows:

4.10.2.1 Control of Key Characteristics (KC)

- a. KC's identified by Boeing IDS St. Louis shall be controlled as defined in SAE AS9103. In lieu of variation management control techniques, the supplier

may conduct 100% inspection of key characteristics provided that actual measurements are recorded and available for review.

Supplement SAE AS9003 4.10.5 as follows:

4.10.5.1 First Article Inspections (FAI) shall be performed by the supplier in accordance with SAE AS9102. When documenting the FAI, the Supplier may use the forms contained within AS9102 or their equivalent, so long as the forms contain all the information required by AS9102. Suppliers shall have a complete and valid FAI report on file at all times during the production effort for any specific item.

4.11 Control of Inspection, Measurement and Test Equipment

No change to SAE AS9003 requirements except as noted below.

Supplement SAE AS9003 4.11.1 as follows:

4.11.1.1 These procedures shall be in accordance with ISO 10012.

4.13 Control of Nonconforming Product

No change to SAE AS9003 requirements except as noted below.

Supplement SAE AS9003 4.13.1 as follows:

4.13.1.1 Suppliers with Boeing IDS - St. Louis Material Review Authority shall process nonconforming product per Report No. 96X0005 or other applicable purchase contract requirements.

4.14 Corrective Action

No change to SAE AS9003 requirements except as noted below.

Supplement SAE AS9003 4.14 as follows:

4.14.3 Any nonconformance identified by Boeing IDS - St. Louis or the customer on supplier furnished hardware shall be evaluated and corrected on subsequent shipments.

4.16 Control of Quality Records

No change to SAE AS9003 requirements except as noted below.

NOTE: Certain Boeing IDS - St. Louis parts designated critical material such as "Fracture Critical" or "Fracture Critical Traceable" have extended record retention requirements. Refer to the applicable requirement document for retention of critical material records.