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Document D1-4426 - User Instructions & Processor Requirements

D1-4426 Approval Report updated February 15, 2012
Revision HF - effective February 1, 2012

USER INSTRUCTIONS/PROCESSOR REQUIREMENTS

Current Revision: HB Release Date 10/03/11

This section will explain general information pertinent to processors and suppliers performing processing or contracting processing to specifications for which Boeing requires approval. This section also identifies the quality requirements imposed on a processor/supplier for obtaining and maintaining a Boeing approval. Also, see [Exhibits and Appendices](#) and [Glossary](#).

IMPORTANT NOTICES

Any reference to Boeing includes all Divisions listed in the "Division Tables" as well as previous identities, e.g., McDonnell Douglas Corporation, except where a limitation is noted.

Certain sections of "Processor Requirements" may be applicable to all users of the D1-4426 document.

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1. Purpose:

This document:

- 1.1 Identifies those processes and materials that Boeing Supplier Quality has determined requires approval of the Processor/Supplier prior to being contracted.

Note: D1-4426 is not the only document that requires or lists approved sources. Engineering specifications may have approved sources. It is the responsibility of the user to review the contract, drawing, specifications and other documents in determining need for an approved source.
- 1.2 Lists those processors and suppliers that have Boeing approval for identified processes and materials.
- 1.3 Lists Processor/Supplier approvals and limitations. Questions relative to specific equipment and process capabilities, etc. should be directed to the listed Processor/Supplier.
- 1.4 Lists qualified manufacturers and their authorized distributors, see the D1-4426 Home page "Authorized Manufacturers of Designated Fasteners" and "Authorized Manufacturers of Aircraft Bearings."
- 1.5 Identifies metallic materials that require Boeing approval of non-U.S.A. suppliers and all suppliers of Titanium ingot (i.e. non-U.S.A. and U.S.A.) in accordance with D042T601 ("Requirements for Engineering Approval of Metallic Raw Material Suppliers"). Metallic raw material supplier approval is applicable only to Boeing Commercial Airplane Suppliers excluding Long Beach Division.
- 1.6 Lists those raw material sources that have Boeing approval for purchaser testing suppression. (Applicable to codes 1000 - 1099, Raw Materials with Suppressed Purchaser Testing)

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2. Scope:

- 2.1. In accordance with Federal Regulations and other customer requirements, D1-4426 approval **is required** for those processes and raw materials listed in the "Specification Index" for:
 - 2.1.1. Processing and/or manufacturing of Boeing deliverable hardware including performing support testing as described in paragraph 5.12. below.
 - 2.1.2. MRB (Material Review Board) disposition when utilizing processes listed in D1-4426, unless otherwise authorized by Boeing Supplier Quality Liaison and documented as part of the MRB permanent record. Suppliers with delegated MRB authority shall consult with Boeing Supplier Quality Liaison prior to authorizing sources not listed in D1-4426, and document the consultation as part of the MRB permanent record.
Exception: For the Boeing Defense, Space & Security (BDS) division, all MRB dispositions utilizing specifications listed as approved processes in D1-4426 must be accomplished by D1-4426 approved Processors.

Note: Prime and lower tier subcontractors cannot perform the MRB function on Boeing designed hardware unless given specific authorization from The Boeing Company. Suppliers of proprietary designed articles and their sub-tier contractors cannot conduct MRB on a discrepancy that will result in a departure from the

requirements of the Boeing control drawing or specification.

- 2.2. D1-4426 approval is not required for:
- 2.2.1. Military, government and industry standards and specifications when used in Boeing Part Standards (i.e., D-590 or other similar specifications) unless there is a direct statement of requirement for the use of Boeing approved facilities. (If Engineering utilized any BAC, DPS, PS or other Boeing internal documents listed in D1-4426 within their Part Standards specification, this document will apply.)
- 2.2.2. D-590 Boeing Part Standards manufactured, tested, and certified before April 30, 1996.
- 2.2.3. Military, government and industry standards and specifications when used in supplier design items for which Boeing establishes performance requirements by specification control document/drawing or source control document/drawing.
- Exceptions: If Boeing Engineering utilized any BAC, BMS, DMS, HMS or Boeing internal documents listed in the D1-4426 Specification Index within their specification or Source Control Drawing (SCD), D1-4426 approval is required.
If Boeing Engineering has assigned a Boeing internal process document to a SCD, it is the responsibility of the Processor/Supplier to negotiate inclusion of an equivalent process specification.
- 2.2.4. Calibration/certification by manufacturers servicing equipment or testing chemistry of their own manufacture with standards traceable to NIST or equivalent.
- 2.2.5. Processing of Metallic Raw Materials as follows:
Metallic Raw Material definition for this item: Material purchased to a metallic raw material specification which may include a size or shape. Examples: sheet, plate, bar, tube, extrusions, etc. Exception: Items purchased as part numbers such as castings and forgings are considered as Metallic Raw Material for this item but their processing does require D1-4426 approval.
- 2.2.5.1. Processing identified within an industry raw material specification (AMS, MIL, QQ-A, etc.);
- 2.2.5.2. Processing to industry standard specifications (MIL-H, AMS, etc.) identified within a Boeing Material Standard (BMS);
- 2.2.5.3. Heat treat processing to industry standard specifications (MIL-H, AMS, etc.) identified within a Boeing material specification (DMS, MMS, HMS).
- 2.2.6. Nondeliverable items such as tooling, test components, etc.
- 2.2.7. Ground Support Equipment with the following exception:
Space Shuttle Type 1 (which does require approval).
- 2.2.8. Government agencies performing welder qualification services. However, Processor/Suppliers using those government agencies shall be responsible for ensuring that all applicable welder qualification specification requirements have been met.

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3. Glossary:

This Glossary section will either explain or define the different terms used within the D1-4426 web application.

AIRCRAFT BEARINGS - For the purpose of this document, bearings are defined as any bearing listed in D-590 where it states, "manufacturers listed and their authorized distributors are the only approved sources for the above qualified products."

APPROVAL - Acceptance of a Processor/Supplier or raw material supplier for listing in D1-4426 as a result of satisfactory surveillance and qualification.

APPROVED PROCESSOR LIST (APL) - D1-4426 document section which lists alphabetical all approved Processor/Suppliers and their applicable approvals. Limitations and/or modifications to the Approval are noted by a limitation code (use "Limitation Code Index") or a notation following the Process Code approval. An asterisk (*) next to the company name denotes all approvals are for "Internal Support Only."

AUTHORIZED DISTRIBUTOR - An entity identified and controlled (for traceability) under this D1-4426 for the purpose of stocking, maintaining, (re) packaging and/or selling standards by any manufacturer of standards direct to Boeing or to Boeing subcontractors and suppliers for subsequent sale to Boeing.
Authorized distributors will not alter, modify, or otherwise change the properties of the product unless approved by the manufacturer and Boeing. Authorized distributors, including the Boeing Engineering-qualified standards manufacturers, will be listed in D1-4426 by the Boeing Engineering-qualified standards manufacturers.

BROKER/TRADING COMPANY - A company/entity used by a subcontractor for the purpose of purchasing standards for a specific subcontractor. The Broker/Trading Company must purchase standards only as authorized by the originating subcontractor's Purchase Orders. Broker/Trading Company must purchase standards directly from qualified manufacturers or authorized distributors and is responsible for maintaining traceability between the subcontractor and the manufacturer/distributor. Broker/Trading Company will not maintain stock or repack standards. The Broker/Trading Company shall only distribute standards to the customer subcontractor initiating the transaction. Broker/Trading Companies do not require listing in D1-4426.

DELIVERABLE - Production hardware that is intended for final installation on a Boeing product.

DESIGNATED FASTENER - For the purpose of this document, designated fasteners are defined as those bolt, nut, collar and rivet part numbers that require manufacturing, testing and certification to the Boeing Part Specifications (BPS) listed herein.

DISAPPROVED - Status given a supplier's quality system, Processor/Supplier and/or process code approval that has been removed due to major non-conformance(s) or unresponsive corrective action.

DIVISION TABLES - D1-4426 document section listing each participating Division/area with a corresponding letter/s (identifier) used within this document and web site for identification purposes. Access this table from sections Geographic Map or Boeing Contacts.

GEOGRAPHIC APL - D1-4426 document section listing by Process Code. For each Process Code with one or more approved source there follows a list alphabetical by geographic location with the approved Processor/Suppliers below each geographic location as noted. For complete company address and limitations applicable to the approval, refer to APL listing.

INDUSTRY STANDARDS - A part manufactured in complete compliance with an established industry or U.S. Government specification which includes design, manufacturing, test and acceptance criteria and uniform identification requirements; or for a type of part which the Administrator has found demonstrates conformity based solely on meeting performance criteria, is in complete compliance with an established industry or U.S. Government specification which contains performance criteria, test and acceptance criteria, and uniform identification requirements. The specification must include all information necessary to produce and conform the part and be published so that any party may manufacture the part. Examples include, but are not limited to, National Aerospace Standard (NAS), Army-Navy Aeronautical Standard (AN), Society of Automotive Engineers (SAE), SAE Sematec, Joint Electron Device Engineering Council, Joint Electron Tube Engineering Council, and American National Standards Institute (ANSI). (Ref: FAA Advisory Circular 21-29, Detecting and Reporting Suspected Unapproved Parts.)

Note: Neither Boeing BAC D-590 qualified standard parts nor DAC standard parts meet these criteria for categorization as Industry Parts, and thus require FAA production approval.

INTERNAL SUPPORT - Approval when a Processor/Supplier is limited to perform special processing on products they produce for their customer and not as a subcontract effort for another supplier.

LIMITATION INDEX - D1-4426 document section which tabulates a list of 1 to 3-character codes used to denote a limitation to an approval. The limitation code follows the process code in the "APL."

MAJOR NONCONFORMITY - The absence of, or total systemic breakdown of a quality requirement, or any nonconformity where the effect is judged to be detrimental to the integrity of the product, process or service.

METALLIC RAW MATERIAL - Material purchased to a metallic raw material specification which may include a size or shape. Examples: sheet, plate, bar, tube, extrusions, etc.

NOTE: Items purchased as part numbers, including castings and forgings are considered as Metallic Raw Material for AMS pyrometry purposes and their processing does require D1-4426 approval.

NADCAP - An aerospace industry managed accreditation program administered by the Performance Review Institute. [More info](#)

NON-U.S.A. METALLIC RAW MATERIAL SUPPLIER - Processor/Supplier whose facilities are located outside the United States.

PROBATION - Interim status denoting non-compliance(s) of sufficient importance that may require cessation of all affected processing. No new work shall be placed with the Processor/ Supplier during this period without oversight by the affected Boeing site(s).

PROCESS CODES - a three to five character code used to designate the process requiring approval.

PROCESS CODE LISTING - D1-4426 document section which tabulates a list of 3 to 5-character codes used to designate the primary Approvals listed in the "APL" and "Geographic APL" sections of D1-4426.

PROCESS IMPLEMENTING PROCEDURES - Documentation, specific to a particular shop, with sufficient detail to implement all applicable requirements of the controlling specification(s). Documentation may include procedures, work instructions, and records that address, but are not limited to the following:

- Qualification requirements
- Facility and equipment requirements
- Material requirements
- Personnel training and certification requirements
- A sequential process flow
- All necessary process parameters
- All required process control tests
- All inspection requirements including special tooling / gauges

PROCESS REPRESENTATIVE - A representative of The Boeing Company assigned to the Boeing Supplier Quality organization who is responsible to oversee D1-4426 process activities.

PROCESS SPECIFICATION - A Process Specification is a statement of engineering requirements. Process specifications provide a process for manufacturing procedures, process materials, facility control, tool certification, processing solution make-up and control, quality assurance plans, test methods, and process of Processor/Supplier qualification (any or all as necessary).

PROCESS SPECIFICATION DEPARTURE (PSD) - (Applies to BACs only) - A PSD is an expedited change to a Process Specification for program, shop, or supplier unique differences in materials, processing, or facilities. PSDs are identified by a number which corresponds to the issuing group/division ("6" for Boeing Commercial Airplane Group, "9" for Boeing Defense Systems, and "8" for Boeing Helicopters); e.g., PSD 6-XX was issued by the Boeing Commercial Airplane Group.

NOTE #1: Group/Division identifiers other than 6, 8, or 9 exist; however, identifiers other than 6, 8, or 9 are not valid for new PSDs. Existing PSDs are valid until superseded or canceled.

A PSD is only applicable to the indicated products and facilities.

EXAMPLE: When a BD&SG (9-) shop does work in support of BCA (6-) hardware, use the basic specification and all 6- PSDs for the hardware being built. (Do not use 9- PSDs.)

NOTE #2: Process specification departures for other divisions of The Boeing Company are as defined in the specific division's command media (i.e. Long Beach Division DPS is a Serial Process Engineering Order [SPEO]).

PROCESSOR/SUPPLIER or PROCESSOR/MANUFACTURER (these terms used interchangeably within D1-4426) - The facility providing those processes or raw materials listed in D1-4426.

PROFESSIONAL LEVEL 3 CERTIFICATION - A Level 3 or equivalent NDI certificate issued by a regulatory agency or recognized society (for example: ASNT, NRC, etc.). The certificate shall have a periodic renewal based on performance in the method or by examination.

QUALIFIED PROCESSOR LIST (QPL) - Engineering qualified list of processors/manufacturers which is part of certain Boeing Process/Material Specifications.

QUALIFICATION - A procedure in accordance with the Qualification section of the applicable specification or qualification document, typically consisting of a facility survey and processor capability testing. Process, equipment and part qualifications are frequently performed as a separate activity but may be performed in conjunction with D1-4426 activities.

SPECIFICATION CONTROL DRAWING/DOCUMENT or SOURCE CONTROL DRAWING/DOCUMENT (SCD) - Any product whose design is controlled by Boeing source or specification control drawing or document. (Used interchangeably within this document.)

SPECIFICATION INDEX - D1-4426 document section listing processes and raw materials requiring approved sources. [More info](#)

WITHDRAWN - Status assigned to a Processor/Supplier due to issues not related to performance (i.e. inactivity, at Processor/Supplier request, etc.).

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4. General Information:

- 4.1. Processing of parts to any process listed in the Process Specification Index requires Boeing approval (see Section 2.1).

The listing of a process source in this document does not guarantee satisfactory performance by the Processor/Supplier nor does it relieve the subcontractor using the source from its obligation to deliver satisfactory parts in accordance with the contractual requirements of The Boeing Company purchase orders. All work is subject to random and/or normal audit activity or special investigation by The Boeing Company.

- 4.2. General conditions for Processor approval and listing in this document are in section 6. "Requirements." Applicability and interpretation of instructions and requirements are at the discretion of The Boeing Company.
- 4.3. Approvals listed by this document may be revoked at any time by The Boeing Company. Processing or supplying raw material in support of Boeing contracts cannot be conducted without reinstatement of approvals.
- 4.4. When a new Process Code is added to D1-4426, processing may continue at affected facilities provided an audit is requested within three months of the addition of this process. A request for an audit, including justification, shall be made through contractual channels to a Boeing Procurement representative. If Boeing decides an initial on-site audit is warranted, it shall be completed within three months of receipt of an audit request for this purpose. Processing may continue at affected facilities while the audit is pending. If the process is listed in D1-4426 as requiring Nadcap accreditation, the Processor shall submit proof of Nadcap accreditation or have a Nadcap audit scheduled to be conducted within a period of time agreed to by Boeing for the applicable process.
- 4.5. This document title, contents and individual D1-4426 approval or any other Boeing approval shall not be used for advertising or sales promotion purposes, or solicitation of contracts. Use is limited to the selection of, or verification of Boeing approved Processors required in support of Boeing subcontract procurement.
- 4.6. The fact that a Processor's facility is not approved by The Boeing Company should in no way be considered a reflection upon the ability of the Processor/Supplier to provide satisfactory services or materials to non-Boeing contractors.
- 4.7. The section entitled "Boeing Contacts" lists individuals to answer questions concerning content.
- 4.8. Although Boeing subcontractors and/or suppliers may utilize the standards manufacturers and authorized distributors identified in D1-4426 for purchases in support of Boeing requirements, *no representation concerning their quality management system or the acceptability of any products or services procured direct from these entities is expressed or implied.* The Boeing subcontractor and/or supplier shall be responsible to Boeing for the quality and conformity of the products shipped to Boeing.
- 4.9. A three to five character Process Code is assigned to each process specification, material and quality system requiring Boeing Quality approval.
- 4.10. Approval to specifications will be to the latest revision of the specification at the time of the approval unless otherwise specified by contract.
- 4.11. Processors/material suppliers are required to incorporate subsequent revisions as appropriate.
- 4.12. Refer to the "Frequently Asked Questions" for the following link on the "Boeing Policy on Replacement for Military & Federal Specification, etc. Cancellations."

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5. Use of Document

- 5.1. Data compiled in this document includes all reports or other information at time of release (reference "Revision Summary"). Subsequent reports or data affecting status will appear in the next update. This information will be updated on an approximate 30-day cycle.
- 5.2. Processes and raw materials requiring approved sources are listed in the "Specification Index." The "Specification Index" also provides a cross reference to "Process Code Listing."
- 5.3. Nadcap accreditation is required when a Nadcap Commodity is identified within the Process Code Listing or Specification Index Listing for the following:
 - Aerospace Quality Systems (AQS)
 - Chemical Processing (CP)
 - Composites (COMP)
 - Heat Treating (HT)
 - Materials Testing (MTL)
 - Non-Destructive Testing (NDT)
 - Surface Enhancement (SE)
 - Welding (WLD)

The specific Boeing process codes that are encompassed within each of those Nadcap categories can be found by referring to either of the following D1-4426 indexes:

[Process Code Listing](#)
[Specification Index Listing](#)

Cross reference to Nadcap AC matrix list. This list defines the correlation between Boeing process codes and Nadcap checklists.

[Cross Reference Matrix](#)

Exceptions when Nadcap may not be applicable.
[Nadcap Exceptions Table](#)

NOTE: For detailed information on Nadcap accreditation as a pre-requisite for Boeing approval as a special processor for The Boeing Company, [click here](#).

- 5.4. The "Process Codes Listing" tabulates a list of 3 to 5-character codes used to designate the primary approvals listed in the D1-4426.
- 5.5. Each Processor/Supplier's information indicates an "Area" which represents their geographic region and the Boeing Division with audit responsibility for the facility. The "number" refers to geographic region (refer to Geographic Map). The "letter/s" identify the Division (refer to Division Table).
- 5.6. The "Limitation Index" tabulates a list of 1-character to 3-character codes used to denote a limitation to an approval. The limitation code follows the process code in the "APL."
- 5.7. The "Approved Processor List" (APL) is an alphabetical listing of approved Processor/Suppliers and their applicable approvals. Limitations and/or modifications to the approval are noted by a limitation code (use "Limitation Code Index") or the notation in the doc notes. An asterisk (*) next to the company name denotes all approvals are for "Internal Support Only."
- 5.8. The "Geographic APL" primary sort is by Process Code. For each Process Code with one or more approved source there follows a list alphabetical by geographic location with the approved Processors at each geographic location as noted. For complete company address and limitations applicable to the approval, refer to APL listing.
- 5.9. When Designated Fasteners or Aircraft Bearings listed in D-590 Part Standards are purchased, only those qualified manufacturers listed on the D-590 QPL or their Authorized Distributors shown in section under "Authorized Distributors" are to be used.
- 5.10. Specification Revision: Processor/Supplier must use the revision as noted by contract. For assistance in obtaining the

current revision level of specifications contact your customer. Links are provided for reference only to determine current specification revision level and departure information for certain specifications. These links contain many specifications not in the D1-4426 Specification Index Listing:

- DoD Index of Specifications and Standards
- BCA (BAC, BSS) Rev Level
- BDS C-17 Division Specifications Revisions
- Long Beach Commercial Division Specifications Revisions
- Mesa AVL and HP Specifications Revisions
- St. Louis Specifications Revisions

- 5.11. 600 series codes identify those metallic raw materials that require Boeing Engineering approval. Approval to these codes is required only for non-U.S.A. raw material suppliers and all titanium ingot suppliers (non-U.S.A. and U.S.A.) for Boeing Commercial Airplane Group products excluding Long Beach Division.

NOTE: Approval requirements **DO NOT APPLY** for U.S.A. titanium ingot produced, certified and procured prior to 6/1/2000.

Identified are mill products by specification that require approval and ingot by alloy that require approval when used for the mill products specified. Suppliers approved to these codes shall be surveyed to the requirements of D042T601 by Boeing Engineering. Approval and listing will be made upon receipt of a memo from Boeing Engineering.

Code numbers will be modified to show changes of materials referenced in D042T601.

- 5.12. The requirement for approval for "Support Testing" Process Codes listed under the 800 codes (800-899) is limited to the testing imposed by other specifications listed in D1-4426. Testing per the 800 series codes that is not directly referenced from other D1-4426 specification requirements, does not require special approvals.

EXCEPTION: Mechanical and metallurgical testing or raw material verification to Boeing Part Specifications (BPSs) does require specific approval to the BPS and support process codes (codes 590-596 and appropriate 800 codes), listed herein. (This applies only to BPS manufacturer testing, not receiving contractor testing.)

- 5.13. For processes that have no individual specification referenced (process codes 802, 803 and 809), the Processor shall follow the requirements of Appendix 'A'.
- 5.14. 900 series codes identify Division unique processes.
- 5.15. 1000 series codes list those raw materials where the engineering requirement for purchaser acceptance testing may be suppressed. The user shall verify that the engineering specification allows for suppression, such as "The requirement for purchaser testing may be removed for material suppliers approved for testing suppression in Boeing Quality Assurance Documentation, such as D1-4426." If suppression is allowed, and the raw material supplier is listed with a 1000 series code, the purchaser may suppress the testing and verify the product according to the purchaser's quality system. If a raw material supplier is not listed in D1-4426 for the respective 1000 series code, the product may still be procured. In this situation, the purchaser shall verify product by performing all purchaser acceptance tests defined in the engineering specification.
- 5.16. DPS 4.804 / Process Code L586, DPS 4.813 / Process Code L588 and DPS 4.814 / Process Code L589 require approval of processors manufacturing outline prior to manufacturing of parts. For a listing of approved part numbers by supplier follow this link Approved Part Listing.

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6. REQUIREMENTS

The following requirements are general conditions for Processor/Supplier approval and listing in this document. Applicability and interpretation of these conditions are at the discretion of The Boeing Company.

- 6.1. Processor/Suppliers' facilities, processes, personnel, and process controls shall be adequate for the performance of the applicable process or specification.
- 6.2. Processor/Suppliers are required to hold Nadcap accreditation for processes identified in the "Nadcap Commodity" column in the D1-4426 Specification Index or Process Code Index.
- 6.3. Processor/Suppliers shall submit to an on-site evaluation of their facilities by a Boeing representative to verify process capability and capacity.
- 6.4. Processor/Suppliers shall maintain adequate records and furnish, on request, objective evidence of compliance with specification and purchase contract requirements. When the purchase order deviates from the drawing or engineering standard requirements, the Processor/Supplier shall state the deviations on their certificate of conformance.
- 6.5. Have a system to implement International Traffic and Arms Restrictions (ITAR)/Export Administration Restrictions (EAR) compliance as applicable.

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6.6. Quality system requirements:

- 6.6.1. Code 001
Processors Quality Management System (QMS) meeting the Basic Processor Quality System requirements of D1-4426 Exhibit III or is otherwise based on AS9003 or processors with a current AC7004 accreditation certificate will be identified with a 001 approval code. Boeing 2nd party QMS audits are required for processors who have been granted QMS Deviations and identified with a 001 approval code.
- 6.6.2. Code 002
Suppliers/Processors with a direct Boeing Contract holding a current third party QMS certificate by a Boeing recognized accreditation organization (such as OASIS), listed as a Boeing approved supplier in the SQ Supplier Data System will be identified with a 002 Approval Code. Boeing recognized QMS for Code 002 include:
- AS9100
 - AS9110
 - AS9120
 - ISO 17025 (Material Testing Laboratories with 800 codes only)
- NOTE: ISO/IEC 17025 accreditations shall be verified through the website of the accreditation body and the validation of the accreditation body through the ILAC website - www.ilac.org
- 6.6.3. Code 003
Processors that do not have a direct Boeing Contract holding a current third party QMS certificate (reference QMS for 002 code above) by a Boeing recognized accreditation organization will be identified with a 003 approval code.
- 6.6.4. Processor/Suppliers are required to adequately define and document prior to accepting an order, including but not limited to: specification, specification revision, Type, Class, Grade, program number, design authority, pre/post processing steps, as applicable.
- 6.6.5. Ensure quality records provide objective evidence of compliance with specification and purchase contract requirements. Quality records shall be maintained and available for review by Boeing or regulatory agencies for a period of seven years, from the date of the certification, unless otherwise specified.
- 6.6.6. Have documented "Process Implementing Procedures" implemented and available to Boeing personnel, on request. If the procedures are not in English, an English translation of the current revision must be available (including the Quality Manual).

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- 6.6.7. Deviations from Boeing specification requirements shall only be acceptable under the following conditions:
- 6.6.7.1. Processor/Suppliers desiring to deviate from Boeing specification requirements must obtain written approval from the applicable Boeing Engineering group and site in order to deviate from the specific specification requirements.
 - 6.6.7.2. Deviations could be in the form of a Process Specification Departure (PSD), Process Document Departure (PDD) for BAC or BSS specifications, a SPEO for Boeing Long Beach division specifications, or other procedurally approved formats depending upon the Boeing division receiving the end item product.
 - 6.6.7.3. Written deviation approval must be in place for the applicable specification prior to processing parts to be supplied to Boeing. Requests for deviation may be made directly to The Boeing Company or through a Boeing supplier having a direct contract with Boeing.
 - 6.6.7.4. Further, it is the responsibility of the Boeing supplier or Processor to perform a contract review sufficient to determine if a valid Engineering Specification Departure meeting their contract flowdown is already in existence.
 - 6.6.7.5. When the Purchase Order deviates from the Drawing or Engineering Standard requirements, the Processor / Supplier shall state the deviations on their certificate of conformance.

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- 6.6.8. Have a system to implement applicable deviations (such as PSDs and SPEOs) into the processing of each order, as applicable.
- 6.6.9. Issue a Certification of Conformance listing the scope of the work performed including any deviations or exceptions and the specification(s) and revision level to which the hardware is processed.
- 6.6.10. Have a system to review D1-4426 Revision Summary for changes and updates.
- 6.6.11. Processor shall promptly provide written notification to their customer and the Boeing SQ Representative when a noncompliance is determined to affect hardware, or is suspected to affect hardware, on a Boeing product already delivered to the customer. All affected hardware must be disclosed to Boeing for proper evaluation and disposition. When a process nonconformance is suspected to affect hardware, the Processor shall provide written notification within one (1) business day to the Boeing Supplier Quality (SQ) Field Representative that has oversight of the Processor's facility. The following Background Notification form [Exhibit IV](#) may be used to communicate the non-conformance. The Boeing SQ Representative will review the information submitted and instruct the Processor as to the course of action to be taken. When known, written notification to the customer and Boeing shall include as a minimum:
 - affected process or product number and name
 - concise description of discrepancy (what it is and what it should be)
 - parts and serial numbers/date codes affected
 - lot numbers
 - delivered quantities
 - delivered dates
 - Purchase Order / Invoice Number
 - Boeing Program(s) / Site(s) / Divisions(s) affected
 - Notification to Boeing shall include a list of all affected customers

NOTE: The requirements in paragraphs 6.4 and 6.6 do not apply to Processors approved by Boeing Engineering per D042T601 with only 600 series Process Codes.

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- 6.7. Processor/suppliers shall provide test panels and data as requested to support verification of process evaluation.
 - 6.8. Non-Destructive Inspection Level 3 Personnel:
 - 6.8.1. Any Level 3 acting as a consultant for multiple processors must have a current Professional Level 3 Certificate. The Professional Level 3 Certification will meet the requirements of the general examination portion of the NAS 410/MIL-STD-410 requirements.
 - 6.8.2. Non-Destructive Inspection Level 3 personnel who do not possess a current Professional Level 3 Certification will be limited to "Internal Support Only."
 - 6.8.3. Employees of Boeing subsidiaries who are trained and/or qualified by Boeing Level 3s will be considered as having met the requirement of being trained and qualified by a D1-4426 approved Level 3.
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- 6.9. Qualified fastener and aircraft bearing manufacturers who have authorized distributors listed in D1-4426 shall have procedures for control of their authorized distributors. This control shall include on-site audits, at a minimum frequency of once every three years, or more current distributor's Industry Controlled Other Party (ICOP) AS9120 "Quality Management Systems - Aerospace Requirements for Stockist Distributors" certification, to assure that the distributors:
 - 6.9.1. Shall not change the product design, modify the product, or change any engineering or quality requirements of the product.
 - 6.9.2. Shall keep all individual inspection lots separate so as to preclude co-mingling of inspection lots.
 - 6.9.3. Shall maintain on file, and provide, if/and when requested the individual lot inspection reports and/or certificates of conformance as required by specification.
 - 6.9.4. Shall maintain complete traceability throughout all operations.
 - 6.9.5. Shall provide with each order, at no additional cost to the purchaser, copies of all test reports and other data as required by procurement specifications.
 - 6.9.6. Shall upon discovery or notification, segregate all non-conforming products or suspect product and take necessary action to notify the manufacturer and any known purchaser of the product.
 - 6.10. Part Standards - 787 Partners:
 - 6.10.1. 787 Partners may provide part standards for emergent Boeing 787 production support to any other Boeing 787 Partner.
 - 6.10.2. This only applies for partner to partner transfer when these part standards will be incorporated into an article that will ultimately be delivered to Boeing for 787 production airplanes. It does not provide authorization to provide part standards to any other Boeing programs, or to the aftermarket.
 - 6.10.3. Sufficient periodic surveillance testing shall be accomplished by the initial purchaser in accordance with a Boeing Quality Assurance approved test plan, to assure that specification requirements are met on a continual basis. The purchaser may either perform these tests in their own laboratory, or shall utilize the services of a commercial laboratory, qualified by the receiving contractor, to accomplish such testing.

The adequacy of the test facilities may be verified at the option of The Boeing Company by a survey of the

facilities conducted by Boeing Representatives.

- 6.10.4. At the time of transfer, at a minimum, the seller shall provide the following items, to be verified and recorded by the purchaser:
- 6.10.4.1. Manufacturer is listed in Boeing Engineering documents as a Qualified Manufacturer for such part standards.
 - 6.10.4.2. If applicable, Authorized Distributor is listed as approved by original manufacturer in D1-4426.
 - 6.10.4.3. Copy of manufacturer's original Certificate of Conformance as furnished with standards.
- 6.10.5. Seller shall ensure that lot traceability has not been compromised and that boxes and/or bags are clearly labeled with the following information, to be verified and recorded by the purchaser.
- 6.10.5.1. Distributor's name, if applicable
 - 6.10.5.2. Manufacturer's name
 - 6.10.5.3. Part Standard number
 - 6.10.5.4. Quantity
 - 6.10.5.5. Lot number
 - 6.10.5.6. Date of manufacturer

NOTE: Standard Parts, transferred from one partner to another, on which receiving inspection has been carried out, must be accompanied by the above supporting documentation, and may only require identification and damage inspection on receipt. Seller and purchaser shall retain records of such receiving inspection data. Records of both sale and receipt of parts, including the above documentation, shall be retained by the seller and purchaser until seven years after the end of any contract

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- 6.11. Processor/Suppliers listed in this document must notify the cognizant Boeing Process Representative in writing when a change occurs that may affect the ability to deliver or process hardware. Examples of changes that shall be reported include:
- 6.11.1. Address / facility change.
 - 6.11.2. Equipment deleted or added to the process.
Equipment relocation.
Note that adding or moving equipment may require qualification or re-qualification prior to production.
 - 6.11.3. Change of certified or key personnel including, but not limited to: quality manager, NDT Level 3, or other personnel that may affect Process or product.
 - 6.11.4. Fire or other harsh environment condition.
 - 6.11.5. Name and/or ownership change of the facility.
 - 6.11.6. Change in Authorized Distributor list for Designated Fasteners or Aircraft Bearings.

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7. REQUESTS FOR APPROVAL

- 7.1. Boeing suppliers may submit requests for survey of Processor facilities to a Procurement department of The Boeing Company for the purpose outlined below. If justified, a survey shall be conducted by representatives of The Boeing Company.
- 7.1.1. For the purpose of employing a Processor not currently approved (or not currently approved for a specific Process Code).
 - 7.1.2. For the purpose of obtaining approval for their own in-plant facility.
- 7.2. A Processor not under contract to produce parts for Boeing or Boeing supplier, desiring approval for processing encompassed by this document, must make application for approval of their facilities through an active Boeing supplier for whom they wish to perform their services.
- 7.3. Boeing approval of processing facilities is based upon the applicable specification listing in this document. If the facility is not approved, notice will be given of existing discrepancies for corrective action. Approval may still be granted upon acceptance of the corrective action.
- 7.4. Nadcap accreditation is in place (per Section 5.3) prior to Boeing audit being performed unless otherwise authorized by Boeing Supplier Quality management.
- 7.5. Processor/Suppliers desiring to deviate from Boeing specification requirements must obtain written approval from Boeing Engineering in the form of a drawing revision or Process Specification Departure (PSD - for BAC specifications and PSD/SPEO for Long Beach Division or other authorized Engineering deviations) to the applicable specification prior to processing of Boeing parts. Request for deviation may be made directly to The Boeing Company or through a Boeing supplier.
- 7.6. Request for listing of an Authorized Distributor for Qualified Fasteners / Bearings shall be to the manufacturer's Boeing SQ Field Representative. Only qualified manufacturers of D-590 fasteners / bearings may make such requests. Requests must be in writing and be accompanied by a copy of a recent on-site audit of the distributor, performed by the manufacturer; or a copy of the distributor's current ICOP AS9120 certification. The Boeing Company is not responsible for control of these distributors or their products.

Requests for removal of a distributor from the D1-4426 listing shall be made to the manufacturer's Boeing SQ Field Representative. Requests shall be in writing and shall include the reason for the removal.

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8. PROCESSOR/SUPPLIER APPROVAL MAINTENANCE

For maintaining approval status, the Processor/raw material manufacturer must:

- 8.1. Continue to meet all requirements in Section 6.
- 8.2. Maintain a performance history acceptable to engineering and quality standards as determined by periodic maintenance activities.
- 8.3. Be presently performing Boeing and/or Boeing supplier work or have an active contract with Boeing or a Boeing supplier.
- 8.4. Provide test data as required by specification to substantiate process or material control capabilities.
- 8.5. Provide for timely review (maintenance survey) of process facilities, records, and other pertinent data by Boeing SQ Field Representative to assure conformance to applicable process and/or material specifications.
- 8.6. Maintain Nadcap accreditation for those process codes that require it.

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9. CHANGE OF APPROVAL STATUS

The approval status of Processors, as established by this document, shall be changed only by a Boeing SQ Field Representative and effective upon release of a survey form ("Supplier Evaluation Report" or equivalent) to the affected

Processor. Change in approval status is limited to the following categories and may be partial by process code number or complete by Processor.

- 9.1. Probation Status:
This category is a temporary suspension of the Processor/Supplier approval and requires immediate attention and completion of all required phases of survey action and/or corrective action. Processing on Boeing hardware or supplying materials per the affected approvals shall not occur during the Probation period without oversight by the affected Boeing program(s).

The unauthorized processing of product to specifications under Probation status is grounds for disapproval of all D1-4426 processes. Authorization to process parts during probation shall be the responsibility of the assigned Process Representative.

Processor/Supplier's Approval/s will be removed from D1-4426 during the Probation period (for individual process code approval or for all approvals).

Probation status shall be assigned to a processor/manufacturer for, but not limited to, the following reasons:

- 9.1.1. Inability to pass or failure to submit test panels for qualification/verification testing. Required test panels are to be provided by the Processor/Supplier.
- 9.1.2. A nonconformance that is systemic and indicates a severe process or sub-process breakdown, which may impact the Processor/Supplier's ability to meet customer quality system requirements, or may result in significant hardware nonconformance (Major Nonconformity).
- 9.1.3. Failure to submit acceptable corrective action within the time period established on the Supplier Evaluation Report (SER).
- 9.1.4. Failure to implement corrective action as planned to correct a known deficiency (i.e. repeat consecutive occurrence).

- 9.2. Disapproved Status:
This category will result in the removal of a portion of or all of a Processor/Supplier Approval to perform processes and/or manufacture materials in accordance with D1-4426. Processing or supplying of material shall not occur while a processor is Disapproved unless source accepted by an authorized Boeing representative. In addition, a Disapproved Processor cannot accept new contracts for Boeing hardware. Processor's status will be altered in D1-4426 to reflect the change in status. A full Processor/Supplier disapproval will result in the removal of the Processor from D1-4426.

Processor/Suppliers Disapproved will not be considered for reapproval for a period of five (5) years from the date of disapproval unless the affected purchasing organization and Supplier Quality Directors agree to a reduced period.

Disapproved status may be assigned for, but not limited to, one of the following reasons:

- 9.2.1. Failure to adequately address and implement corrective actions while on Probation.
- 9.2.2. Activities that are perceived to be deliberate affecting the quality of the hardware.
- 9.2.3. Gross negligence affecting the quality of the hardware.

- 9.3. Withdrawn Status:
This category is provided for the removal of a Processor's Approval for reasons other than disapproval. An Approval for one or more processes may be Withdrawn for one of the following reasons. Withdrawal will result in the removal of the listing from D1-4426.

Withdrawn status may be assigned for, but not limited to, one of the following reasons:

- 9.3.1. Insufficient activity during the certification period or 12 months, whichever is less.
- 9.3.2. A request by the Processor/Supplier to be removed from D1-4426.
- 9.3.3. Removal of equipment, personnel or facilities required to perform approved process(es).
- 9.3.4. Relocation of facility or change of ownership.

Processors whose approval has been Withdrawn are still eligible for possible reinstatement provided there is a justified need.

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10. CORRECTIVE ACTION FORMAT

- 10.1. All Processor/Supplier's procedures for corrective action shall include:
- 10.1.1. The effective handling of customer complaints and reports of product nonconformities;
- 10.1.2. Investigation of the cause of the nonconformities relating to product, process and quality system, and recording the results of the investigation;
- 10.1.3. Determination of the corrective action needed to eliminate the cause of nonconformities;
- 10.1.4. Application of controls to ensure that corrective action is taken and that it is effective;
- 10.1.5. Flowdown (or up) of the corrective action requirements to a supplier, when it is determined that the root cause of a nonconformity is the responsibility of the supplier;
- 10.1.6. Flow charts that show how the processor takes corrective action for both Boeing-identified and Processor-identified nonconformities (see sample flow chart, [Exhibit I](#)).
- 10.2. A flow chart that shows steps that a processor may take for corrective action for both Boeing-identified and processor-identified nonconformities may be found in [Exhibit I](#).
- 10.3. In response to a Boeing corrective action request, the processor shall document their corrective action using the format shown in [Exhibit II](#).

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11. CONTACTS

- 11.1. Processor/Supplier Inquiries to Boeing:
- 11.1.1. Questions concerning distribution and content of this document should be addressed to the D1-4426 Administrator (access "Boeing Contacts").
- 11.1.2. All processor or supplier questions concerning surveillance schedules or technical assistance shall be directed to the Boeing regional office. For information access "Boeing Contacts" and "Regions."

EXHIBITS AND APPENDICES

- [Exhibit I](#) Sample Flow Chart for Corrective Action
- [Exhibit II](#) Example Corrective Action Response

[Exhibit III](#) Processor Quality Systems Checklist
[Exhibit IV](#) Background Notification (BN Form)
[Appendix A](#) Requirements for Laboratories Approved for Testing

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