



AEROSPACE STANDARD

AS6834™

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Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Bearings

RATIONALE

Counterfeit bearings are a threat to product safety, reliability, and performance. The AS6834 Aerospace Standard builds upon the processes stated in AS6174 and adds bearing commodity specific requirements with the goals of preventing the acquisition and use of counterfeit bearings and mitigating the impacts of any counterfeit incursion.

FOREWORD

This document standardizes requirements for bearings: (a) supply chain management, procurement, inspection, parts management, and test/evaluation to assure the authenticity of bearings being acquired/used, and (b) response strategies when suspect counterfeit or counterfeit bearings are discovered.

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1. SCOPE

1.1 Purpose and Applicability

The purpose of this document is to provide detailed requirements to preclude the acquisition and use of suspect counterfeit or counterfeit bearings and/or bearing components/materiel.

The term bearings referenced throughout this document includes bearings and/or bearing components/materiel (e.g., balls, races, lubricant, cage, seal).

The requirements of this document supplement the requirements of a higher-level quality standard (e.g., AS/EN/JISQ9100, ISO 9001, ANSI/ASQ E4, ASME NQA-1, AS9120, AS9003, and IATF 16949 or equivalent) and other quality management system documents.

All appendices are provided for guidance and are not mandatory.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. For references with dates, only the edition cited applies. For references without dates, the latest edition of the referenced document applies. In the event of conflict between the text of this document and other references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org. The referenced documents are deemed applicable as of the publication date of this document.

AIR6273 Terms, Definitions, and Acronyms, Counterfeit Materiel or Electrical, Electronic, and Electromechanical Parts

AS6174 Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel

AS9003 Inspection and Test Quality Systems Requirements for Aviation, Space, and Defense Organizations

AS9100 Quality Management Systems - Requirements for Aviation, Space, and Defense Organizations

AS9120 Quality Management Systems - Requirements for Aviation, Space, and Defense Distributors

2.1.2 U.S. Government Publications

Copies of these documents are available online at <https://quicksearch.dla.mil>.

FAR 52.246-26 Reporting Nonconforming Items

Government-Industry Data Exchange Program (GIDEP) Operations Manual SO300-BT-PRO-010 (GIDEP Manuals and Guides are available from <http://www.gidep.org/>.)

Government-Industry Data Exchange Program (GIDEP) Requirements Guide SO300-BU-GYD-010

2.1.3 ANSI Accredited Publications

Copies of these documents are available online at <https://webstore.ansi.org/>.

ANSI/ASQ E4 Specifications And Guidelines For Quality Systems For Environmental Data Collection And Environmental Technology Programs

ANSI/ASNT CP189 ASNT Standard for Qualification and Certification of Nondestructive Testing Personnel

2.1.4 ASME Publications

Available from ASME, P.O. Box 2900, 22 Law Drive, Fairfield, NJ 07007-2900, Tel: 800-843-2763 (U.S./Canada), 001-800-843-2763 (Mexico), 973-882-1170 (outside North America), www.asme.org.

ASME NQA-1 Quality Assurance Requirements for Nuclear Facility Applications

2.1.5 ASNT Publications

Available from ASNT, 1201 Dublin Road, Suite #G04, Columbus, OH 43215-1045, Tel: 614-274-6003, www.asnt.org.

ASNT SNT-TC-1A Personnel Qualification and Certification in Nondestructive Testing

2.1.6 IATF Publications

Available from International Automotive Task Force, 26200 Lahser Road, Suite 320, Southfield, MI 48033, Tel: 248-799-3939, <https://www.iatfglobaloversight.org>.

IATF 16949 Automotive Quality Management System Standard

2.1.7 ISO Publications

Available from International Organization for Standardization, ISO Central Secretariat, 1, ch. de la Voie-Creuse, CP 56, CH-1211 Geneva 20, Switzerland, Tel: +41 22 749 01 11, www.iso.org.

ISO 9001 Quality Management Systems - Requirements

ISO 9712 Non-destructive testing - Qualification and certification of NDT personnel

ISO IEC 17025 General requirements for the competence of testing and calibration laboratories

ISO 22383 Authenticity, integrity and trust for products and documents — Guidelines for the selection and performance evaluation of authentication solutions for material goods

2.1.8 AIA Publications

Available from Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928, Tel: 703-358-1000, www.aia-aerospace.org.

NAS410 NAS Certification & Qualification of Nondestructive Test Personnel

2.2 Acronyms and Abbreviations

AIR Aerospace Information Report

AS SAE Designation Prefix for Aerospace Standards

GIDEP Government-Industry Data Exchange Program

ISO	International Organization for Standardization
OEM	Original Equipment Manufacturer
OM	Original Manufacturer
QML	Qualified Manufacturers List
QMS	Quality Management System
QPL	Qualified Products List

2.3 Definitions

For the purposes of this document, the terms and definitions listed in AIR6273 and the following apply:

APPROVED SUPPLIER: An entity selling bearings that has been determined, by the procuring organization, to use acceptable counterfeit risk mitigation and quality management processes.

AUTHORIZED AFTERMARKET MANUFACTURER: A manufacturer that meets one or more of the following criteria: The manufacturer is authorized by the original manufacturer (OM) to produce and sell replacement bearings, usually due to an OM decision to discontinue production of a bearing. Bearings supplied are produced from materials that have been:

- a. Transferred from the OM to the aftermarket manufacturer
- b. Produced by the aftermarket manufacturer using OM tooling and/or intellectual property (IP)

AUTHORIZED SOURCE: Authorized manufacturers and their authorized distribution, i.e., OMs, manufacturers specified via a QPL/QML, original equipment manufacturers (OEM), OM or OEM authorized sources of supply for bearings (i.e., franchised distributors, authorized distributors, authorized aftermarket manufacturers), or any organization with written authority from the OM.

DOCUMENTED INFORMATION: Procurement records, risk assessment and mitigation records, authenticity inspection and test records (including subcontractor authenticity inspection and test records), objective evidence required by this standard, and production records.

ORGANIZATION: The entity implementing this standard.

3. PROCUREMENT, RISK, AND AVOIDANCE REQUIREMENTS

3.1 Bearing Authenticity Assurance Plan

The organization shall develop, communicate within the organization, implement, and make available to the customer upon request a bearing authenticity assurance plan, which includes the following:

- a. Processes as described in 3.1.1 through Section 7
- b. A process to maintain and update the plan and training based on evolving counterfeiting techniques and trends

3.1.1 Training

The organization shall train employees in the awareness, avoidance, detection, mitigation, disposition, and reporting of suspect counterfeit or counterfeit bearings, relevant to their organizational role and/or function.

NOTE: Relevant personnel may include, but are not limited to, those involved with customer interface(s), management, program and project management, procurement, quality assurance, inspection, receiving, manufacturing, aftermarket support, and engineering activities.

3.1.2 Authentic Bearing Life Cycle Management

The organization shall have a documented plan for management of bearing availability and obsolescence risks.

NOTE: When availability or obsolescence risks are identified, the resolution process should consider: lifetime buys, alternate/multiple sources, adequate procurement lead time for development of new items or sources, redesign, or other appropriate mechanisms to proactively reduce the risk of exposure to suspect counterfeit or counterfeit bearings. The organization should notify customers of availability and/or obsolescence risks and proposed actions.

3.2 Purchasing

The organization shall document anti-counterfeit requirements to be flowed down to suppliers, including applicable requirements from this standard, from customers, and from other appropriate sources.

3.2.1 Authorized Sources and Approved Suppliers

3.2.1.1 Procurement Process

The organization's procurement/purchasing processes shall procure bearings directly from authorized sources and approved suppliers.

NOTE 1: Procuring bearings directly from an authorized source or an approved supplier per the organization's higher level quality management system is considered low risk for receiving suspect counterfeit or counterfeit bearings and does not normally warrant additional counterfeit risk mitigation steps.

NOTE 2: Approved suppliers are authenticated by the procuring activity per the organization's QMS procedures and have available documentation specified in 3.2.1. Periodic assessments are performed based on the organization's QMS. When periodic assessments are not available for the supplier, the organization implements risk mitigation practices (see Section 4).

NOTE 3: Forms of verification or authentication that may be conducted include:

- a. Determining if the supplier is authorized;
- b. Use of the same group of suppliers on a consistent basis that comply with the requirement to only procure from an authorized source or approved supplier
- c. Requesting traceability history from the supplier that provides evidence of the chain of custody

NOTE 4: Some sources might present themselves as an authorized manufacturer, but instead they may offer parts or sub-components (balls, races, retainers) designed/built by other OMs/OEMs as their own, including applying their own part numbers and/or branding to their parts. The performance and reliability of these parts may not be well characterized or fully disclosed. The organization should follow a rigorous part substitution, qualification, and supplier evaluation process prior to use.

NOTE 5: Some customers contractually require notification if bearings are procured from an other-than-authorized source or approved supplier.

3.2.1.2 Objective Evidence

The organization shall maintain objective evidence that the OM authorized the organization's supplier or that the organization approved the supplier.

NOTE: Examples of objective evidence can include: an authorized source list published on the OM website, written communication from the OM, and supplier assessment records.

3.2.2 Sources for Bearing Purchases that are Not an Authorized Source and Not an Approved Supplier

When the organization cannot purchase bearings from an authorized source or an approved supplier, the organization shall utilize risk assessment and risk mitigation actions as outlined in this standard, applicable specifications, and by the organization's QMS to approve or reject a potential source for bearing procurement. See Appendix A for additional guidance.

3.2.2.1 Risk Assessment and Mitigation

3.2.2.1.1 Risk Assessment

The organization shall assess and document the risk of a bearing source that is not an authorized source and is not an approved supplier, the risk of the transaction, and the application risk (if known by the organization).

3.2.2.1.2 Risk Mitigation Plan

The organization shall document a risk mitigation plan to mitigate risk identified in 3.2.2.1.1, which includes, at a minimum, the following:

- a. Document review
- b. Package inspection
- c. Bearing inspection and/or testing, including criteria for rejection or acceptance. Include inspection and testing specified by the customer if applicable. See Appendix A for inspection and/or test guidance.

3.2.2.1.3 Implementing the Risk Mitigation Plan

The organization shall implement the risk mitigation plan for procurement of bearings from a source that is not an authorized source and is not an approved supplier to mitigate risk identified in 3.2.2.1.1.

See Appendix A for guidance on risk indications related to the source, the transaction, and the organization's application and mitigation techniques.

If any bearings in a lot are found to be suspect counterfeit or counterfeit, then the entire lot will be considered suspect counterfeit or counterfeit. Pre-screening of bearings in a lot to remove suspect counterfeit or counterfeit bearings shall not be allowed.

3.2.3 Purchasing Information

The organization shall flow down applicable anti-counterfeit requirements, including requirements from this standard, to applicable suppliers.

4. RECEIVING, INSPECTION, ACCEPTANCE, MATERIEL CONTROL, TRACEABILITY, AND REPORTING

4.1 Procurement from an Authorized Source or Approved Supplier

4.1.1 Receiving, Inspection, and Acceptance

The organization's standard receiving, inspection, and acceptance processes shall be followed.

4.2 Procurement from a Source that is Not an Authorized Source and Not an Approved Supplier

4.2.1 Risk Mitigation Plan

The organization shall implement the risk mitigation plan in 3.2.2.1.2.