NOT MEASUREMENT SENSITIVE

MIL-STD-962D w/CHANGE 2 9 January 2014

SUPERSEDING MIL-STD-962D w/CHANGE 1 2 April 2008

# DEPARTMENT OF DEFENSE STANDARD PRACTICE

## DEFENSE STANDARDS FORMAT AND CONTENT



AMSC D7504 AREA STDZ

#### **FOREWORD**

- 1. This standard is approved for use by all Departments and Agencies of the Department of Defense (DoD).
- 2. This standard covers the format and content requirements for DoD standards, which include interface standards, standard practices, design criteria standards, test method standards, and manufacturing process standards. The previous revision to MIL-STD-962 also covered the requirements for DoD handbooks. These have been removed from this standard and are now covered by MIL-STD-967.
- 3. The policies governing such procedural matters as authorization for document development, coordination, comment resolution, indexing and distribution, application, and document maintenance can be found in DoD 4120.24-M, "Defense Standardization Program Policies and Procedures"
- 4. This revision has resulted in many changes to standard format, but the most significant ones are:
- a. Replacement of stand-alone change notices with changes integrated into the full standard.
- b. Limiting the number of changes for a specific issuance to a maximum of five before the document must be revised.
- c. Introduction of administrative notices to allow for nontechnical changes to be made quickly and without the need for coordination.
- d. Additional requirement to provide Internet addresses to contact organizations and obtain referenced documents.
  - e. Elimination of the DD Form 1426.
- f. Replacement of the DoD Index of Specifications and Standards (DoDISS) with the Acquisition Streamlining and Standardization Information System (ASSIST) database.
- 5. Proper preparation and use of defense standards is a difficult task requiring careful analysis and good judgment. The following points are some helpful reminders to be considered when developing a standard:
- a. DoD standards should be developed or revised to address military-unique requirements. If the requirements are not military unique, consider working with industry on a technical committee of a non-Government standards body to develop a new standard or revise an existing one.

- b. Whenever possible, DoD standards should be written in terms of performance requirements, stating what is required rather than how to achieve the requirement.
- c. DoD interface standards should be developed to specify the physical, functional, or military operational environment interface characteristics of systems, subsystems, equipment, assemblies, components, items, or parts to permit interchangeability, interconnection, interoperability, compatibility, or communications. Non-Government standards should be used to the extent possible to specify interface requirements. DoD interface standards should only be developed to specify military-unique interface requirements.
- d. DoD standard practices should be developed when it is necessary to define consistent procedures on how to conduct technical or technical management functions. Standard practices should only be developed for functions that, at least some of the time, are obtained via contract from commercial firms. Procedures for functions performed only by DoD personnel should be covered by non-directive military handbooks or directive documents as regulations, directives, instructions, technical manuals, or standard operating procedures.
- e. DoD design criteria standards should be developed to specify military-unique design or functional criteria that must be adhered to in the development of systems, subsystems, equipment, assemblies, components, items, or parts. These design criteria are not primarily related to requirements that affect interchangeability, interoperability, interconnection, compatibility, or communications. Adherence to these design criteria standards, however, will affect the manufacturing of a product. Some examples would include military-unique design selection, nuclear blast protection, safety requirements, and human factors requirements.
- f. Non-Government standards can usually be used to satisfy DoD requirements for test methods. A DoD test method standard should only be developed if it reflects a military-unique requirement.
- g. The DoD discourages the development of manufacturing process standards. The concept of DoD manufacturing process standards is inconsistent with both Department's emphasis on using commercial processes and reliance on performance specifications that state desired outcomes rather than "how-to's." The role for DoD process standards is limited to situations where the DoD alone has the technological expertise to specify a military-unique process. If there is an advantage to establishing requirements for an industry-wide commercial process, a non-Government standard should be developed.
- h. Standards should include application guidance to help users know when and how to use a document. Such guidance might include: (1) how to apply a document to different contract types and different program phases; (2) how to make use of any flexibility allowed by the standard; (3) lessons learned; (4) the extent of Government review and approval; and (5) the relationship between the standard and other related documents.
- i. Standards should be structured to facilitate tailoring of requirements -- either to remove requirements that are not always needed or include requirements that may be needed under certain conditions.

- 6. The figures appearing at the back of this standard are fictitious and are used only as examples to illustrate format. If there is any conflict between the text of the document and the figures at the end of this document, the text applies.
- 7. Comments, suggestions, or questions on this document should be addressed to the Defense Standardization Program Office (DSPO), 8725 John J. Kingman Road, Stop 5100, Fort Belvoir, VA 22060-6220 or emailed to <a href="mailto:DSPO@dla.mil">DSPO@dla.mil</a>. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.

#### SUMMARY OF CHANGE 2 MODIFICATIONS

- 1. Changed the Uniform Resource Locator (URL) for the Acquisition Streamlining and Standardization Information System (ASSIST) database throughout the document.
- 2. Provided clarification in the foreword when it is appropriate to develop a defense standard.
- 3. Change 5.4.6.1 to cite the most recent change as part of the superseding information on the cover page of the standard.
- 4. Added option of either cite the specific color from FED-STD-595 in the specification or to specify the color in the contract or order.
- 5. Changed the URL for the Environmental Protection Agency list of toxic chemicals and hazardous substances
- 6. Added requirement to consider the use of biobased and environmentally preferable materials.
- 7. Clarified the requirement for what can be included in the key word listing.
- 8. Updated review activities in concluding material.
- 9. The following modifications to MIL-STD-962D have been made:

<u>PARAGRAPH</u>	<u>MODIFICATION</u>
<u>Foreword</u>	Changed
<u>2.2.1</u>	Changed
<u>2.2.2</u>	Changed
<u>3.2</u>	Changed
<u>3.2.1</u>	Added
<u>3.10.1</u>	Added
<u>5.4.6.1</u>	Changed and added another example
<u>5.5.2</u>	Changed
<u>5.8.2.1.2</u>	Changed
<u>5.8.2.1.3</u>	Changed
<u>5.8.2.2.2</u>	Changed
<u>5.8.3.2</u>	Changed
<u>5.10.1</u>	Changed
<u>5.10.2</u>	Changed
<u>5.12.4</u>	Changed
<u>5.12.9</u>	Changed
<u>5.12.10</u>	Changed
<u>5.12.11</u>	Changed
<u>5.13.8</u>	Changed
<u>6.3</u>	Changed
Figure 2	Changed

<u>PARAGRAPH</u>	<b>MODIFICATION</b>
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Figure 7	Changed
Figure 10	Changed
Figure 11	Changed
Figure 12A	Changed
Figure 12B	Changed
Figure 13	Changed
Figure 14	Changed
Figure 15	Changed
Figure 16	Changed
Figure 17	Changed
Concluding material	Changed

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#### 1. SCOPE

1.1 <u>Scope</u>. This standard establishes the format and content requirements for the preparation of standards prepared either by DoD activities or by contractors for the DoD.

#### 2. APPLICABLE DOCUMENTS

2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, or 5 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this standard, whether or not they are listed.

#### 2.2 Government documents.

2.2.1 <u>Specifications, standards, and handbooks</u>. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

#### DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-963 - Data Item Descriptions (DIDs)

(Copies of this document are available online at http://quicksearch.dla.mil.)

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

#### DEFENSE STANDARDIZATION PROGRAM OFFICE

SD-1 - Standardization Directory

SD-10 - Guide for Identification and Development of Metric

Standards

(Copies of these documents are available online at <a href="http://quicksearch.dla.mil">http://quicksearch.dla.mil</a>.)

#### DEFENSE LOGISTICS INFORMATION SERVICE CATALOGING HANDBOOKS

H2 - Federal Supply Classification Groups and Classes

H6 - Federal Item Name Directory

(Copies of these documents are available online at <a href="www.dlis.dla.mil/hardcopy.asp">www.dlis.dla.mil/hardcopy.asp</a>.)

#### UNITED STATES GOVERNMENT PRINTING OFFICE

United States Government Printing Office (GPO) Style Manual

(Copies of this document are available online at <u>www.access.gpo.gov</u>.)

2.3 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

#### AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME Y14.5M - Dimensioning and Tolerancing ASME Y14.38 - Abbreviations and Acronyms

(Copies of these documents are available from <u>www.asme.org.</u>)

#### INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

Letter Symbols for Units of Measurement (SI Units, Customary Inch-Pound Units)

(Copies are available from <a href="www.ieee.org">www.ieee.org</a>.)

#### IEEE/ASTM INTERNATIONAL

IEEE/ASTM SI 10 - Use of the International System of Units (SI) – The Modern Metric System

(IEEE and ASTM International publish this standard jointly. Copies are available from <a href="https://www.ieee.org">www.ieee.org</a> or <a href="https://www.astm.org">www.astm.org</a>.)

2.4 <u>Order of precedence</u>. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the 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.

#### 3. DEFINITIONS

3.1 <u>Acquisition Management Systems Control (AMSC) number</u>. A control number assigned by the cognizant data management approval authority listed in the SD-1, which indicates that a data item description (DID) or a defense specification or standard that cites DIDs has been cleared for use by the DoD.

- 3.2 <u>Acquisition Streamlining and Standardization Information System (ASSIST)</u>. The official database containing information about standardization documents used in the DoD. ASSIST also provides electronic access to government documents included in the database over the Internet. ASSIST can be accessed at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.
- 3.2.1 <u>Biobased material</u>. A material made from substances derived from living (or onceliving) organisms.
  - 3.3 <u>Class</u>. An additional categorization of differences in characteristics, other than that afforded by type classification. It does not constitute a difference in quality or grade, but is for specific, equally important uses, and is usually designated by Arabic numerals, such as, "class 1" or "class 2."
  - 3.4 <u>Composition</u>. A term used in classifying commodities that are differentiated strictly by their respective chemical composition, which is designated in accordance with accepted trade practice.
  - 3.5 <u>Coordinated standard</u>. A document required by more than one Military Department, Defense Agency, or Civilian Agency, which is coordinated with various activities of the interested departments and agencies.
    - 3.6 <u>Data</u>. Recorded information, regardless of form or method of recording.
  - 3.7 <u>Data Item Description (DID)</u>. A standardization document that defines the data content, preparation instructions, format, and intended use of data required of a contractor. DIDs are prepared in accordance with MIL-STD-963.
  - 3.8 <u>Department of Defense (DoD) standard</u>. A standard used to satisfy primarily multiple, military-unique applications. There are five types of DoD standards: interface standards, design criteria standards, manufacturing process standards, standard practices, and test method standards.
  - 3.9 <u>Design criteria standard</u>. A standard that establishes military-unique design or functional criteria for the development of systems, subsystems, equipment, assemblies, components, items, or parts.
  - 3.10 <u>DoD Single Stock Point</u>. An office under the Defense Logistics Agency's Document Automation and Production Service, which is responsible for the indexing and distribution of defense specifications, standards, and other related documents and the maintenance of the ASSIST database.
- 3.10.1 Environmentally preferable. Products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance or disposal of the product or service.

- 3.11 <u>Grade</u>. A term that implies differences in quality and is usually designated by capital letters, such as, "grade A" or "grade B."
- 3.12 <u>Inch-pound document</u>. A document having measurement requirements given in rounded, rational, inch-pound units. The magnitudes are meaningful and practical (for example, 1 ounce, not 28.3495 grams). Inch-pound documents are developed for items to interface or operate with other inch-pound items. NOTE: Documents in which magnitudes expressed in metric units (as a result of mathematical conversion from rounded, rational, inch-pound units) are given first as preferred units with the rounded, rational inch-pound units given in parentheses or in a nonpreferred position are still inch-pound documents.
- 3.13 <u>Interface standard</u>. A standard that specifies the physical, functional, or military operational environment interface characteristics of systems, subsystems, equipment, assemblies, components, items, or parts to permit interchangeability, interconnection, interoperability, compatibility, or communications.
- 3.14 International standardization agreement. The record of an agreement among several or all of the member nations of a multinational treaty organization to adopt like or similar military equipment, ammunition, supplies, and stores. The North Atlantic Treaty Organization (NATO), American-British-Canadian-Australian Armies (ABCA), and the Air and Space Interoperability Council (ASIC) are examples of multinational treaty organizations that issue international standardization agreements. Do not confuse this term with standards issued by private sector international organizations, such as the International Organization for Standardization (ISO) or the International Electrotechnical Committee (IEC), which are categorized as non-Government standards.
- 3.15 <u>Limited-coordination standard</u>. A standard that covers items of interest to a single activity, Military Department, or Defense Agency.
- 3.16 <u>Manufacturing process standard</u>. A standard that states the desired outcome of manufacturing processes or specifies procedures or criteria on how to perform manufacturing processes.
- 3.17 <u>Metric documents</u>. A document in which requirements are expressed in rounded, rational, metric units. The magnitudes expressed are meaningful and practical (for example, 10 grams, not 0.35273 ounces). Metric documents are developed for items to interface or operate with other metric items. Documents containing only electrical units that are used in both the metric and inch-pound systems (for example, volts, amps, and ohms) are classified as metric documents. Documents also containing dimensional interfaces must describe these interfaces in metric sizes to be classed as metric documents.
- 3.18 <u>Metric units</u>. A system of basic measures defined by the International System of Units based on "Le Systeme International d'Unites (SI)," of the International Bureau of Weights and Measures. These units are described in IEEE/ASTM SI 10.

- 3.19 <u>Non-Government standard</u>. A national or international standardization document developed by a private sector association, organization, or technical society that plans, develops, establishes, or coordinates standards, specifications, handbooks, or related documents. The term does not include standards of individual companies. Non-Government standards adopted by the DoD are listed in the ASSIST database.
- 3.20 <u>Not measurement sensitive standard</u>. A standard in which application of the requirements does not depend substantially on some measured quantity. This type of document can be used with either a metric system or an inch-pound system.
- 3.21 <u>Recovered material</u>. Waste materials and by-products that have been recovered or diverted from solid waste. It does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.
- 3.22 <u>Recycled material</u>. Product or other material recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion.
- 3.23 <u>Soft conversion</u>. The process of changing a measurement from inch-pound units to equivalent metric units within acceptable measurement tolerances without changing the physical configuration of the item.
- 3.24 <u>Standard</u>. A document that establishes uniform engineering or technical criteria, methods, processes, and practices.
- 3.25 <u>Standard practice</u>. A standard that specifies procedures on how to conduct certain non-manufacturing functions. Standard practices are developed for functions that, at least some of the time, are obtained via contractor from private sector firms.
  - 3.26 Style. A term used to denote differences in design or appearance.
- 3.26.1 <u>Supersedes</u>. A condition where one document replaces another document. The replacement document is technically equivalent or superior to the superseded document and may be used as a replacement.
- 3.27 <u>Tailoring</u>. The process by which individual requirements (sections, paragraphs, or sentences) of the selected specifications, standards, and related documents are evaluated to determine the extent to which they are most suitable for a specific system and equipment acquisition, and the modification of these requirements to ensure that each achieves an optimal balance between operational needs and cost.
- 3.28 <u>Test method standard</u>. A standard that specifies procedures or criteria for measuring, identifying, or evaluating qualities, characteristics, performance, and properties of a product or process.

3.29 <u>Type</u>. A term that implies differences in like items or processes as to design model, shape, or other configuration, which is usually designated by Roman numerals, such as "type I" or "type II."

#### 4. GENERAL REQUIREMENTS

- 4.1 <u>General</u>. This section covers general aspects of style, format, and requirements for preparing a DoD standard.
- 4.2 <u>Coverage</u>. A standard shall be prepared to describe essential technical requirements for engineering or technical criteria, methods, processes, or practices. To the greatest extent possible, standards shall be written so that commercial practices and processes may be used to meet the requirement, and requirements should be stated in terms of desired outcomes as opposed to detailed procedures.
- 4.2.1 <u>Tailoring of requirements</u>. Standards shall be written and structured so that referenced documents, requirements, and verification provisions can be readily tailored to suit different applications. If possible, standards should be written in a sectionalized format to facilitate tailoring and selective application of requirements. The following are options that may be used to sectionalize standards:
- a. Group common requirements under different classifications in the body of the standard (see 5.7.2).
  - b. Group common requirements in different appendixes (see 5.14).
  - c. Establish individual tasks, requirements, or test methods (see 5.11.1).
  - d. Develop a standard that is divided into separate parts (see 5.16).
- 4.3 <u>Data requirements</u>. Standards shall not contain requirements for the development, preparation, acquisition of rights, submission, delivery, maintenance, updating, approval, or distribution of plans, reports, drawings, manuals, or other data products. Data can only be required in the contract. A standard may be the source document for a DID. The DID will cite specific tasks in the standard, which when performed, will result in the need for data. For example, a test method standard on shock testing may result in the need for a DID for a shock test report. Standards that are the source document for DIDs shall have an AMSC number assigned by cognizant DID Approval Authority listed in the SD-1. The information specified in <u>5.12.4</u> shall be included in section 6 of the standard to identify the DIDs for inclusion in the contract to acquire the data. For sectionalized standards, DIDs may be listed with the associated individual tasks, requirements, or test methods described in <u>5.11.1</u> using the same language as required by <u>5.12.4</u>.
- 4.4 <u>Use of copyright or patent material</u>. Copyright or patent material shall not be included in a standard without the prior consent of the copyright or patent owner. When such

consent is obtainable, a credit line, if requested by the copyright or patent owner, shall be placed in the standard close to the material involved.

- 4.5 Contractual and administrative requirements. A standard shall not include requirements that are properly a part of the contract, such as cost, quantity required, time or place of delivery, methods of payment, liquidated damages, rework, repair, resubmittal, packaging, requirements for preparation, submission, delivery, approval, and distribution of data, and record keeping. In addition, a standard shall not include contract quality requirements, such as responsibility for inspection, establishment of quality or inspection program requirements, warranties, instruction for nonconforming items, and contractor liability for nonconformance. Contractual and administrative provisions considered essential for acquisition may be included in section 6 of the standard for information. The standard also shall not prescribe mandatory requirements or instructions for the Government Contract Administration Office. These include directions relating to quality assurance functions such as inspections, audits, reviews, certifications, and technical approvals.
- 4.6 <u>Classified material</u>. Standards are working documents and shall be designed to avoid unnecessary restrictions in their dissemination. Standards containing classified information shall be appropriately marked and handled in accordance with security regulations. The title of standards shall not be classified. If only a limited amount of classified information is found in a standard, consider including such information in a classified annex or reference document to keep the main document unclassified. An unclassified administrative notice shall be prepared for classified standards to indicate where to submit release requests and to identify information that must be included in the request (see <u>5.19.6</u>).
- 4.7 <u>Text</u>. The text shall be written in clear and simple language, free of vague terms or those subject to misinterpretation. All sentences shall be complete and in accordance with the rules of grammar.
- 4.7.1 <u>Grammar and style</u>. Except when Department of Defense requirements differ, the United States Government Printing Office Style Manual shall be used as a guide for capitalization, spelling, punctuation, syllabification, compounding words, tabular work, and other elements of grammar and style.
- 4.7.2 <u>Abbreviations</u>. Abbreviations shall be in accordance with ASME Y14.38. Abbreviations not covered by ASME Y14.38 shall be in accordance with the GPO Style Manual. The first time an abbreviation is used in text, it shall be placed in parentheses and shall be preceded by the word or term spelled out in full (for example, circuit (ckt), frequency converter (freq conv), and maximum working pressure (mwp)). The rule does not apply to abbreviations used for the first time in tables and equations. Abbreviations used on figures and in tables, but not referenced in the text or in any other portion of the standard, shall be spelled out in a footnote to the applicable figure or table.
- 4.7.3 <u>Acronyms</u>. The first time an acronym is used in text, it shall be placed in parentheses and shall be preceded by the word or term spelled out in full (for example, North Atlantic Treaty Organization (NATO)). The rule does not apply to acronyms used for the first

time in tables and equations. Acronyms used on figures and in tables, but not referenced in the text or in any other portion of the standard, shall be spelled out in a footnote to the applicable figure or table. A complete list of acronyms may also be included in section 3 of the standard.

- 4.7.4 <u>Symbols</u>. Symbols shall be in accordance with IEEE 260.1. Symbols not covered by IEEE 260.1 shall be in accordance with the GPO Style Manual.
- 4.7.5 <u>Proprietary names</u>. Trade names, copyrighted names, proprietary names, manufacturer's part numbers or drawing numbers, or any other designation that would require the use of a product or process of one company shall not be used unless the item or process cannot be adequately described because of technical unknowns. In such instances, one, and if possible, several commercial alternatives shall be included, followed by the words "or equal" and a description of required salient features or particular characteristics to try to ensure wider competition. The use of "brand name or equal" is discouraged but, when determined to be necessary, shall be supported by written justification and retained in the permanent document file.
- 4.7.6 <u>Commonly used words and phrases</u>. The following rules shall apply for these commonly used words and phrases:
  - a. Referenced documents shall be cited in the following manner:
    - (1) "conforming to ..."
    - (2) "as specified in ..."
    - (3) "in accordance with ..."

In any case, use the same wording throughout a given document and a series of directly related documents.

- b. "Unless otherwise specified" shall be used to indicate an alternative course of action. The phrase shall always come at the beginning of the sentence, and, if possible, at the beginning of the paragraph. This phrase shall be used only when it is possible to clarify its meaning by providing a reference, such as to section 6 of the standard, for further clarification in the contract or reference to another paragraph in the standard.
- c. The phrase "as specified herein" may be used when making reference to a requirement in a standard that is rather obvious or not difficult to locate.
- d. The phrase "to determine compliance with" or "to determine conformance to" should be used in place of "to determine compliance to." In any case, use the same wording throughout.
- e. In stating limitation, the phrase shall be stated thus: "The diameter shall be not greater than ..." for the upper limit, or "The diameter shall be not less than ..." for the lower limit.
- f. The words "drawing" and "bulletin" shall be capitalized only when they are used immediately preceding the document identifier. However, specifications, standards, and

handbooks shall be identified in the text only by their document identifier; thus, MIL-E-000 (not: "specification MIL-E-000").

- g. The following prepositional phrases shall be used when referencing figure and table information: "on a figure" or "in a table".
- h. "Shall", the emphatic form of the verb, shall be used throughout sections 4 and 5 of the standard whenever a requirement is intended to express a provision that is binding. For example, in the requirements section, state that "The gauge shall indicate . . ." and in the test section, "The indicator shall be turned to zero, and 220 volts of alternating current shall be applied." For specific test procedures, the imperative form may be used, provided the entire method is preceded by "The following test shall be performed" or similar wording. Thus, "Turn the indicator to zero and apply 220 volts of alternating current." "Shall" shall not appear in sections 1, 2, 3, or 6 of the standard.
- i. "Will" may be used to express a declaration of purpose on the part of the Government. It may be necessary to use "will" in cases when simple futurity is required.
  - j. Use "should" and "may" to express nonmandatory provisions.
  - k. "Must" shall not be used to express a mandatory provision. Use the term "shall."
- l. Indefinite terms, such as "and/or," "suitable," "adequate," "first rate," "best possible," "and others," and "the like" shall not be used. Use of "e.g.," "etc.," and "i.e.," should be avoided.
- m. The term "flammable" shall be used in lieu of "inflammable," and "nonflammable" shall be used in lieu of "unflammable" and "noninflammable."
- 4.8 <u>Measurements</u>. Decimals shall be used in documents instead of fractions wherever possible. Measurements such as length, time, or weight shall be stated as a limit or with a tolerance.
- 4.9 <u>Metric practices</u>. Metric practices shall conform to IEEE/ASTM SI 10. Preference shall be given to expressing measurements in metric units, if practicable. The SD-10 provides guidance on when to develop a metric standard or to convert inch-pound standards to metric.
- 4.9.1 <u>Metric units</u>. Metric units shall be in accordance with IEEE/ASTM SI 10. Metric sizes should generally be expressed in whole numbers. There shall be no soft conversion of units merely for the sake of conversion.
- 4.9.2 <u>Dual dimensions</u>. When preference is given to inch-pound units, acceptable metric units may be shown in parentheses. When preference is given to metric units, inch-pound units may be omitted or included in parentheses. The mixed use of both metric and inch-pound as primary measurements should be avoided.

- 4.10 <u>Paragraph numbering</u>. Each paragraph and subparagraph shall be numbered consecutively within each section of the standard, using a period to separate the number representing each breakdown. Lower-case letters followed by a period shall be used to identify listings within a paragraph or subparagraph. Bullets shall not be used. For clarity of text, paragraph numbering should be limited to three sublevels, unless additional sublevels are unavoidable. Paragraphs in this standard are an example of how to number paragraphs.
- 4.11 <u>Paragraph identification</u>. Each paragraph and subparagraph shall be given a subject identification. The first letter of the first word in the paragraph and subparagraph identification shall be capitalized. Paragraph and subparagraph identifications shall be underlined, italicized, or bold type.
- 4.12 <u>Standard identifier</u>. The standard identifier shall be placed on each page, at the upper right corner of the first page and at the upper center of each successive page. Drafts shall be identified by having the word "DRAFT" appear under the document identifier.
- 4.13 <u>Page number</u>. The cover page shall not be numbered. Pages between the cover and the first section shall be numbered consecutively in the bottom center of each page with lower-case Roman numerals, omitting number i (for example, ii, iii, and iv). The first page of the first section shall be numbered with an Arabic numeral 1. All following pages, including appendixes and the index, shall be numbered consecutively in the bottom center of the page with sequential Arabic numerals.
- 4.14 <u>Tables</u>. A table shall be used when information can be presented more clearly than in text. The tables shall be placed immediately following or within the paragraph containing the first reference. If space does not permit, the table may be placed on the following page. If tables are numerous or their location would interfere with correct sequencing of paragraphs and cause difficulty in understanding or interpretation, they may be placed in numerical order at the end of the standard and before any figures, appendix, or index. Information included in tables shall not be repeated in the text.
- 4.14.1 <u>Table numbering</u>. All tables shall be numbered consecutively throughout the document with Roman numerals in the order of their reference in the text. The word "TABLE" shall be in full capitalization, followed by the Roman numerals and a period, centered above the table.
- 4.14.2 <u>Table title</u>. All tables shall have a title. The title shall be underlined, italicized, or boldfaced. Only the first letter of the title shall be capitalized. Table titles shall be centered above the table on the same line with the table number. If the title is too long to fit on one line, the second line shall be aligned with the first letter of the title. If a listing or tabulation appears within a paragraph as an integral part of that paragraph, and obviously does not require a title, the listing or tabulation need not be titled.
- 4.14.3 <u>Table format</u>. Tables shall be boxed in and ruled horizontally and vertically as necessary to ensure clarity of the table contents. If a table is of such width that it would be

impractical to place it in a vertical position, it may be rotated counterclockwise 90 degrees. Large tables may be divided and, if possible, printed on facing pages.

- 4.14.4 <u>Continuation of tables</u>. If a table is continued to additional page(s), a horizontal line shall not be drawn at the end of the page, unless the table is a group or method type that requires a line of separation between the groups. When the table is continued to the next page, the title shall be repeated and a dash followed by the word "Continued" at the end of the title; for example, "TABLE II. <u>Vector analysis</u> Continued." The column headings shall be repeated at the top of the page on which the continuation is presented. The table shall be closed with a horizontal line when all information has been entered.
- 4.15 <u>Figures</u>. Dimensioning practices for outline drawings shall comply with ASME Y14.5M. Figures should not be confused with numbered and dated drawings. Figures should be placed immediately following or within the paragraph containing the first reference to the figure. If figures are numerous or their location would interfere with correct sequencing of paragraphs and cause difficulty in understanding or interpretation, they may be placed in numerical order at the end of the standard following any tables and before any appendix or index. If the figure is of such width that it would be impractical to place it in a vertical position, it may be rotated counterclockwise 90 degrees.
- 4.15.1 <u>Figure numbering</u>. All figures shall be numbered consecutively throughout the document with Arabic numerals in the order of their reference in the text. The word "FIGURE" shall be in full capitalization, followed by the Arabic numeral and a period, centered below the figure.
- 4.15.2 <u>Figure title</u>. All figures shall have a title. The title shall be underlined, italicized, or boldfaced. Only the first letter of the title shall be capitalized. Figure titles shall be centered below the figure on the same line with the figure number. If the title is too long to fit on one line, the second line shall be aligned with the first letter of the title.
- 4.15.3 <u>Continuation of figures</u>. Large figures may be broken and, if possible, printed on facing pages. When a figure is continued on the next page, the number and title shall be repeated below the figure with a dash followed by the word "Continued" at the end of the title; for example, "FIGURE 6. <u>Pump interface dimensions</u> Continued."
  - 4.16 <u>Footnotes and notes</u>. Footnotes and notes may be used as indicated below.
- 4.16.1 <u>Footnotes to text</u>. Footnotes may be used to convey additional information that is not properly a part of the text. A footnote to the text shall be placed at the bottom of the page containing the reference to it. Footnotes shall be consecutively numbered throughout the standard with Arabic numerals.
- 4.16.2 <u>Footnotes to tables</u>. Footnotes shall be numbered separately for each table as they appear in the table. Footnote numbers or symbols shall be placed immediately following a word and preceding a numeric value requiring the footnote. Numbered footnotes shall be listed in order immediately below the table. When numbered footnotes may lead to ambiguity (for

example, in connection with a chemical formula), superscript letters, daggers, and other symbols may be used.

4.16.3 <u>Notes to figures</u>. Notes to figures are numbered separately from textual footnotes within the document. Drafting or dimensional notes shall be numbered consecutively and placed below the figure and above the title. The word "NOTES:" shall be placed below the figure at the left margin of the figure followed by the explanatory information in Arabic numeral sequence under "NOTES." For example:

#### "NOTES:

- 1. Dimensions are in millimeters.
- 2. Inch-pound equivalents are given for information only."
- 4.17 <u>Foldouts</u>. Foldouts should be avoided since their use will require special printing and handling procedures. Whenever possible, lengthy tables should be reformatted as multiple, single-page tables. When foldouts are required, they shall be grouped in one place, preferably at the end of the document (in the same location as figures) and suitable reference to their location shall be included in the text.
- 4.18 <u>Cross-reference</u>. Cross-reference shall be used only to clarify the relationship of requirements within the standard and to avoid inconsistencies and unnecessary repetition. When the cross-reference is to a paragraph or subparagraph within the standard, the cross-reference shall be only to the specific paragraph number. The word "paragraph" shall not appear; for example, "(see 3.1.1)".
- 4.19 <u>References to other documents</u>. Judicious referencing of other documents in standards is a valuable tool that eliminates the repetition of requirements and tests adequately set forth elsewhere. However, unnecessary or untailored referencing of other documents can lead to increased costs, excessive tiering, ambiguities, and compliance with unneeded requirements. The following rules shall apply when referencing another document as a requirement in a standard and listing it in section 2 as an applicable document:
- a. If the information is less than a page and if it is not a violation of copyright provisions (see <u>4.4</u>), it should be included directly into the standard without referencing another document.
- b. Referenced documents shall be current (not canceled or superseded), approved for use (not drafts), and readily available.
- c. Inactive-for-new-design documents may be referenced in other inactive-for-new-design documents. For active documents, referencing of inactive-for-new-design documents shall be avoided. For active documents, inactive-for-new-design documents may only be referenced for guidance or for specific item types, grades, or classes, which the standard designates as inactive and will be eventually replaced.

- d. Unless the entire referenced document applies, it shall not be cited in total, but shall be tailored by citing the appropriate sections of the document, such as specific types, grades, or classes; test methods; or definitive descriptions (for example, "the painting requirements of MIL-STD-000"). Do not reference specific paragraph, table, or figure numbers from another document since these may change when the document is revised.
- e. References to policy-type documents, such as directives, instructions, and regulations should be avoided. Many Government regulatory agencies, such as the Environmental Protection Agency or the Occupational Safety and Health Administration, issue directives and regulations that serve as technical standards. It is acceptable to reference these types of directives and regulations.
  - f. The referencing of DIDs is subject to the restrictions specified in 4.3.
- g. Referencing of management, manufacturing, and process-type documents should be avoided.
- h. Specifications, standards, drawings, or other documents that contain proprietary or unique design solutions that would restrict competition or not be readily available should not be referenced.
- 4.20 <u>Approved document format</u>. The approved and dated document shall have one-inch margins. Approved and dated unclassified documents shall be sent to the DoDSSP in searchable Portable Document Format (PDF) using the Electronic Document Submittal tool in the ASSIST database. Hyperlinks may be inserted into the document to facilitate electronic viewing of the document. Hyperlinks are encouraged for a table of contents and index. Classified documents shall be transmitted to the DoDSSP in accordance with procedures for handling classified materials.

#### 5. DETAILED REQUIREMENTS

- 5.1 <u>General</u>. The detailed format and content requirements required for the preparation of standards and their notices are given in this section.
- 5.2 <u>Types of standards</u>. There are five types of DoD standards: interface standards; design criteria standards; test method standards; standard practices; and manufacturing process standards.
- 5.2.1 <u>Interface standards</u>. Interface standards shall specify the physical, functional, or military operational environment interface characteristics of systems, subsystems, equipment, assemblies, components, items, or parts to permit interchangeability, interconnection, interoperability, compatibility, or communications.
- 5.2.2 <u>Design criteria standards</u>. Design criteria standards shall specify military-unique design or functional criteria that must be adhered to in the development of systems, subsystems,

equipment, assemblies, components, items, or parts, but do not relate to interface requirement discussed in 5.2.1.

- 5.2.3 <u>Test method standards</u>. Test method standards shall specify the procedures or criteria for measuring, identifying, or evaluating qualities, characteristics, performance, and properties of a product or process.
- 5.2.4 <u>Standard practices</u>. Standard practices shall specify procedures on how to conduct non-manufacturing functions that, at least some of the time, are obtained via contract from private sector firms.
- 5.2.5 <u>Manufacturing process standards</u>. In general, the DoD should not develop manufacturing process standards. However, on rare occasions, it may be necessary for the DoD to develop a standard that specifies manufacturing processes where the DoD alone has a need and the knowledge to specify such processes. A manufacturing process standard shall specify the desired outcome of a manufacturing process or specific procedures or criteria on how to perform a manufacturing process.
- 5.3 <u>Organization of standards</u>. Standards shall be organized as shown below. Every element and section, unless it is followed by the words "if applicable," shall be included in a standard. If there is no information pertinent to any of the six sections, the following shall appear below the section heading: "This section is not applicable to this standard."

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a. Self-cover (see 5.4).
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- b. Foreword (see 5.5).
- c. Contents page (see 5.6).
- d. Section 1: Scope (see 5.7).
- e. Section 2: Applicable documents (see <u>5.8</u>).
- f. Section 3: Definitions (see 5.9).
- g. Section 4: General requirements (see <u>5.10</u>).
- h. Section 5: Detailed requirements (see <u>5.11</u>).
- i. Section 6: Notes (see 5.12).
- j. Individual numbered tasks, requirements, and test methods, if applicable (see 5.11.1).
- k. Appendixes, if applicable (see 5.14).
- 1. Index, if applicable (see 5.15).

- m. Concluding material (see 5.13).
- 5.4 <u>Self-cover</u>. All standards shall have a self-cover. The security classification (if applicable), title, document identifier, date of issue, the DoD seal, either the AMSC number or "AMSC N/A", and the FSC, FSG, or AREA shall appear on the self-cover (see the self-cover of this standard for an example). In addition, drafts of proposed standards shall carry one of the following notes at the top of the self-cover, as applicable:

"NOTE: This draft, dated (date) prepared by (preparing activity), has not been approved and is subject to modification. DO NOT USE PRIOR TO APPROVAL. (Project )"

"NOTE: This draft, dated (date) prepared by (name of agent), as agent for (preparing activity), has not been approved and is subject to modification. DO NOT USE PRIOR TO APPROVAL. (Project )"

This note shall be removed from the approved document prior to publication.

5.4.1 <u>Heading</u>. Standards shall have one of the following headings on the self-cover, as applicable:

DEPARTMENT OF DEFENSE INTERFACE STANDARD

DEPARTMENT OF DEFENSE DESIGN CRITERIA STANDARD

DEPARTMENT OF DEFENSE TEST METHOD STANDARD

DEPARTMENT OF DEFENSE STANDARD PRACTICE

#### DEPARTMENT OF DEFENSE MANUFACTURING PROCESS STANDARD

- 5.4.2 <u>Titling</u>. Under the heading, there shall be a short title that indicates the scope of the document. The title should be constructed as if it were the title to a book, rather than having an inverted title with the main noun name first.
- 5.4.3 <u>Document identifiers</u>. The preparing activity shall assign the document identifier for a new standard using the Automated Document Number module in ASSIST.
- 5.4.3.1 <u>Identification of coordinated standards</u>. Coordinated standards shall be identified by the letters "MIL-STD" followed by a hyphen and an Arabic numeral. For example, "MIL-STD-123."

- 5.4.3.2 <u>Identification of limited-coordination standards</u>. Limited-coordination standards shall be identified in the same manner as coordinated documents, except that a parenthetical suffix to the document identifier containing the symbol designation of the preparing activity, Military Department, or Defense Agency shall be added consistent with the degree of coordination of the document. For example, "MIL-STD-123(SH)" or "MIL-STD-123(USAF)."
- 5.4.4 <u>Date of document</u>. The date of approval shall appear under the document identifier on the self-cover page only. Drafts shall not have a date in this location. The space shall include the word "DRAFT" until the document is approved. For draft standards, the phrase "DRAFT DATED (DATE OF DRAFT)" shall be included below the header of each page and removed when the document is approved.
- 5.4.5 <u>Measurement system identification</u>. A standard shall indicate whether its units of measurement are in metric or inch-pound, or whether the document is not measurement sensitive by placing one of the designations below in a rectangular box above the standard identifier. Documents that include a mixture of metric and inch-pound units shall be identified by "INCH-POUND."

METRIC INCH-POUND NOT MEASUREMENT SENSITIVE

MIL-STD-123 MIL-STD-123 MIL-STD-123

- 5.4.6 <u>Superseding document indicator</u>. When applicable, a superseding document indicator shall appear in the upper right corner of the self-cover, below the standard identifier and date, to identify those documents that have been replaced by the issuance. A line shall separate the standard identifier and date of the superseding document from the superseding data. The word "SUPERSEDING" shall be entered below the separation line, followed by the number and date of the superseded document(s).
- 5.4.6.1 <u>Superseding revisions</u>. When a standard is revised, the superseding information shall indicate that the revision supersedes the prior issuance of the standard, as well as the most recent incorporated change, if applicable.
  - a. Example of revision superseding another revision.

MIL-STD-12345B 11 August 2002 SUPERSEDING MIL-STD-12345A 5 May 1996

<sup>1</sup> At one time, the letters "DOD" were used in the document identifier to designate standards that could be used in metric design; for example, DOD-STD-12345. This policy was changed in 1988, and preparing activities were instructed to change the "DOD" identification back to "MIL" when the standard was next revised.

b. Example of revision superseding another revision with most recent change.

MIL-STD-12345B 11 August 2002 SUPERSEDING MIL-STD-12345A W/CHANGE 2 5 May 2001

- 5.4.6.2 <u>Superseding other documents</u>. A standard may supersede other documents totally or in part. When this happens, an explanatory note shall be included in section 6 of the standard to clarify cross-referencing information (see <u>5.12.6</u>) and provide any other information that contributes to understanding how to apply the superseding document.
  - a. Example of document superseding a different document.

MIL-STD-56789 11 August 2002 SUPERSEDING DRAWING 123456C 5 May 1996 (See 6.\_)

b. Example of document superseding two documents.

MIL-STD-890B 11 August 2002 SUPERSEDING MIL-STD-890A 6 June 1996 MIL-C-12345 18 July 1987 (See 6.\_)

c. Example of document superseding a document in part.

MIL-STD-56789 11 August 2002 SUPERSEDING MIL-A-123D (IN PART) 5 May 1986 (See 6.\_)

d. <u>Example of document superseding three or more documents</u>. When superseding three or more documents, place the list of superseded documents in section 6 and include a reference to the paragraph that has the superseding information.

MIL-STD-890B 11 August 2002 SUPERSEDING (See 6. )

When a document supersedes a document of a different number, the cancellation notice for the superseded document should be processed for issuance simultaneously with the superseding document. The approval dates of the superseding document and of the cancellation notice should be the same.

- 5.4.7 Inactivation, reactivation, and reinstatement note.
- 5.4.7.1 <u>Inactive for new design note</u>. When documents are made inactive for new design concurrent with a revision action, the following note shall appear directly below the DoD seal on the self-cover and be boxed for emphasis. Superseding documents for new design shall be noted in the box, when applicable.

Inactive for new design after (date). For new design, use (identify superseding document).

5.4.7.2 <u>Reactivation note</u>. When inactive for new design standards are returned to an active status concurrent with a revision or change action, the following note shall appear directly below the DoD seal on the self-cover and be boxed for emphasis.

Reactivated after (fill in date) and may be used for new and existing designs and acquisitions.

5.4.7.3 <u>Reinstatement note</u>. When cancelled standards are returned to an active status concurrent with a revision or change action, the following note shall appear directly below the DoD seal on the self-cover and be boxed for emphasis.

Reinstated after (fill in date) and may be used for new and existing designs and acquisitions.

5.4.8 <u>Designation of federal supply class (FSC)</u>, group (FSG), or area assignment. Standards shall be assigned a FSC or FSG as defined in the Cataloging Handbook H2 or a standardization area as defined in the SD-1. The applicable FSC, FSG, or area assignment shall appear in the lower right corner of the first page of the standard below the point of contact box. The symbol "GP" shall follow the FSG number (for example, 59GP) when the FSG number

identifies the assignment or project. Standards covering more than one FSC shall be designated with the applicable FSG or with the appropriate standardization area if more than one FSG is covered. Dual or multiple FSC, FSG, or standardization area designations shall not be used.

- 5.4.9 <u>AMSC number</u>. Standards shall reflect either an AMSC number or "AMSC N/A" at the bottom left of the self-cover. All new and revised standards that are the source documents for DIDs require an AMSC number. Those standards that are not source documents for DIDs shall be marked "AMSC N/A." Changes to standards shall show the same AMSC number as shown on the document being amended. Notices shall be marked "AMSC N/A".
- 5.4.10 <u>Restriction statements</u>. Any statements that restrict access, availability, or use of standards shall be placed at the bottom of the self-cover below any FSC, FSG, or standardization area.
- 5.5 <u>Foreword</u>. A foreword shall be included in all standards. The foreword shall include a preamble and a point of contact paragraph. Additional numbered statements may be included to explain the purpose of the document, background information, or reasons for changes, if it is a revision to a document. The foreword shall begin on the backside of the self-cover and shall be numbered with Roman numeral ii. See the foreword of this standard for an example.
- 5.5.1 <u>Preambles</u>. One of the following preambles shall appear as the first paragraph of the foreword:
  - a. Preamble for coordinated standard.

"This standard is approved for use by all Departments and Agencies of the Department of Defense."

b. <u>Preamble for limited-coordination standard for use throughout a Military Department</u> or Defense Agency.

"This standard is approved for use by the Department of the ( ) and is available for use by all Departments and Agencies of the Department of Defense."

- c. Preamble for limited-coordination standard for use in a single DoD activity.
- "This standard is approved for use by the (Preparing Activity), Department of the (), and is available for use by all Departments and Agencies of the Department of Defense."
- d. <u>Preamble for standards with restricted distribution</u>. If distribution of a standard is restricted, the following shall be added at the end of the appropriate preamble: "within the distribution limitations noted at the bottom of the cover."
- 5.5.2 <u>Contact information</u>. The last paragraph of the foreword shall include contact information in case users have comments or questions. The information shall include a mailing

address, an email address, and reference to the ASSIST database. This information may be omitted for standards with classified or sensitive information if there are security concerns.

"Comments, suggestions, or questions on this document should be addressed to (fill in mailing address) or emailed to (fill in email address). Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <a href="https://assist.dla.mil.">https://assist.dla.mil.</a>"

5.6 <u>Contents page</u>. The contents page shall be on the page following the foreword. The single word "CONTENTS" in capital letters shall head the contents page. The contents page shall include section, paragraph, figure, table, and appendix numbers or letters and titles, as appropriate; and an index, if used, and the page numbers to locate them. See the contents page of this standard for an example.

#### 5.7 SECTION 1 – SCOPE.

- 5.7.1 <u>Scope</u>. Section 1 shall include a scope that briefly states the coverage of the standard. Section 1 may also include paragraphs on the standard's purpose, applicability, and classifications of items, materials, methods, practices, or processes. This section shall not contain requirements. Figure 1 provides an example of a scope.
- 5.7.2 <u>Classification</u>. When applicable, types, grades, classes, or other classifications shall be listed under this heading in section 1 and shall be in accordance with accepted industry practice (see <u>figure 1</u>). The same designation shall be used throughout the standard. When more than one type, grade, class, or other classification is listed, each shall be briefly defined. The classification should remain constant from revision to revision of the standard. When the characteristics of an item change enough to affect interchangeability, the original designation shall be deleted and a new classification added. If it becomes necessary to change the designation without changing the characteristics of the item, a cross-reference shall be included in the "NOTES" section indicating the relationship between the old and new designations. This cross-reference shall remain in "NOTES" section in all successive revisions identifying designations in all revisions since the original designation change. Such changes shall be kept to a minimum.

#### 5.8 SECTION 2 – APPLICABLE DOCUMENTS.

- 5.8.1 <u>Listing of applicable documents</u>. Section 2 shall list only those documents referenced in sections 3, 4, or 5 of the standard that are needed to meet requirements or provide useful information for meeting requirements (see <u>figure 2</u>). If a document is only cited as an example or for background information, it does not have to be listed in section 2. For the types of documents that may be referenced in standards, see <u>4.19</u>. The first paragraph in section 2 shall be as follows:
- "2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to

ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this standard, whether or not they are listed."

- 5.8.2 Government documents. The second paragraph in section 2 shall be titled as:
- "2.2 Government documents."

This paragraph shall identify all types of Government documents required in sections 3, 4, or 5, if applicable. The first subparagraph under this heading shall identify Government specifications, standards, and handbooks, if applicable. The second subparagraph under this heading shall identify other types of Government documents, drawings, and publications, if applicable.

5.8.2.1 Government specifications, standards, and handbooks. Government specifications, standards, and handbooks shall be listed by document identifier and title. Documents shall exclude the revision letters, suffix (preparing activity symbols), and the "00" designation for interim specifications. Titles shall be taken from the documents rather than an index. Government specifications, standards, and handbooks shall be listed numerically (except federal specifications, which shall be listed alphanumerically) under the following headings in the order shown, as appropriate:

INTERNATIONAL STANDARDIZATION AGREEMENTS
FEDERAL SPECIFICATIONS
FEDERAL STANDARDS
FEDERAL INFORMATION PROCESSING STANDARDS
COMMERCIAL ITEM DESCRIPTIONS
DEPARTMENT OF DEFENSE SPECIFICATIONS
DEPARTMENT OF DEFENSE STANDARDS
DEPARTMENT OF DEFENSE HANDBOOKS

- 5.8.2.1.1 Standards shall include the following paragraph as 2.2.1 if specifications, standards, and handbooks are to be listed as applicable documents:
- "2.2.1 <u>Specifications, standards, and handbooks</u>. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract."
- 5.8.2.1.2 The parenthetical source statement below shall follow the listing of Government specifications, standards, and handbooks. The ASSIST database shall be checked to verify that all of the listed Government specifications, standards, and handbooks are in the ASSIST database. If they are not, contact the DoD Single Stock Point to determine if the missing documents can be included in ASSIST and what action must be taken. If the documents are not in the ASSIST database and they cannot be included in the database, the source for obtaining these documents shall be included.

"(Copies of these documents are available online at http://quicksearch.dla.mil.)"

- 5.8.2.1.3 When listing FED-STD-595 in section 2, include the specific color number(s) required by the standard unless the color is to be specified in the contract or order in 6.2. Listing of the color name in section 2 is optional. See <u>figure 2</u> for example of how to list FED-STD-595. (NOTE: FED-STD-595 is not included in section 2 of this standard since it is not a requirement for this standard.)
- 5.8.2.2 Other Government documents, drawings, and publications. The following types of documents shall be listed after the paragraph of 2.2.1 above, in appropriate order (numerically or alphanumerically), under the headings of the issuing Government agency. The document(s) shall be listed by identifier and title, if applicable. Titles shall be taken from the document rather than from an index.
- a. Other types of DoD publications, which might include technical manuals, design guides, cataloging handbooks, or reports.
- b. Drawings. When detailed drawings referred to in a standard are listed in an assembly drawing, it is only necessary to list the assembly drawing. Figures bound integrally with the standard are not considered drawings and shall not be listed in section 2, unless they are reduced-size copies of drawings provided in the standard for information only and use of the full-size drawings is normally required with the standard.
- c. Government documents issued by non-DoD agencies, such as the Environmental Protection Agency, National Aeronautics and Space Administration, and the Occupational Safety and Health Administration.
- 5.8.2.2.1 Standards shall include the following paragraph as 2.2.2 if Government documents, drawings, and publications not listed under 2.2.1 are to be listed as applicable documents:
- "2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract."
- 5.8.2.2.2 A parenthetical source statement shall follow each individual document or each group of related documents citing the Internet source for viewing or obtaining the documents. If an Internet source is not available, a postal address shall be provided.
- 5.8.3 Non-Government standards and other publications. Non-Government standards and other publications not normally furnished by the Government shall be listed in appropriate order (numerically or alphanumerically) under the headings of the respective non-Government standards organization. The document(s) shall be listed by identifier and title, if applicable. Titles shall be taken from the document rather than from an index.

- 5.8.3.1 Standards shall include the following paragraph as 2.3 if non-Government standards are to be listed as applicable documents:
- "2.3 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract."
- 5.8.3.2 A parenthetical source statement shall follow each individual document or each group of related documents citing the Internet source for viewing or obtaining the documents. If an Internet source is not available, a postal address shall be provided.
- 5.8.4 Order of precedence. In order to avoid confusion in the possible conflict between the requirements of the standard and the documents referenced therein, the following statement shall be included:
- "2.4 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the 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."
- 5.9 <u>SECTION 3 DEFINITIONS</u>. Definitions of all key terms used in the standard shall be stated in sufficient detail to provide for adequate clarity, unless the terminology is generally accepted and not subject to misinterpretation. Definitions may be included by reference to another document. When a standard definition exists, a different definition shall not be used. Definitions shall be listed in alphabetical order. A list of acronyms and abbreviations may also be included under definitions.
- 5.10 <u>SECTION 4 GENERAL REQUIREMENTS</u>. Requirements included in this section shall apply across the interfaces, practices, processes, test methods, or other criteria addressed by the standard.
- 5.10.1 <u>Toxic chemicals</u>, hazardous substances, and ozone-depleting chemicals. The use of toxic chemicals, hazardous substances, or ozone-depleting chemicals shall be avoided, if feasible. The desired performance requirements should be specified rather than the specific chemical or substance. If a toxic chemical, hazardous substance, or ozone-depleting chemical must be specified, it shall be listed as a key word in section 6 (see <u>5.12.9</u>). The Environmental Protection Agency maintains an online list of toxic chemicals and hazardous substances at <a href="http://www.epa.gov/emergencies/tools.htm#lol">http://www.epa.gov/emergencies/tools.htm#lol</a> that should be consulted.
- 5.10.2 Recycled, recovered, environmentally preferable, or biobased materials. Where applicable, standards shall include the following paragraph in section 4 to encourage the use of products made from recycled, recovered, environmentally preferable, or biobased materials.
- "4.X <u>Recycled, recovered, environmentally preferable, or biobased materials</u>. Recycled, recovered, environmentally preferable, or biobased materials should be used to the maximum

extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs."

- 5.11 <u>SECTION 5 DETAILED REQUIREMENTS</u>. Requirements included in this section shall apply to specific interfaces, practices, processes, test methods, or other criteria addressed by the standard. If section 1 of the standard identifies different grades, types, classes, or other classifications, section 5 should be used to describe the differences in requirements. In general, section 5 should be written in a sectionalized format in order to tailor requirements to a particular application.
- 5.11.1 <u>Individual tasks</u>, requirements, or test methods. When there are many individual tasks, requirements, or test methods in a standard, they may be presented as individual or common groups of requirements under a task, requirement, or test method numbered identifier appearing in numerical sequence after section 6 and before any appendix (see figures <u>3</u> and <u>4</u> as examples). In such instances, section 5 would usually serve as a pointer to the individual tasks, requirements, or test methods. Any numbering system may be used, but shall provide for consecutive numbering upon revising the task, requirement, or test method. For example:
- a. If a requirement is numbered 204 for the first issue, the first revision could be 204A, the second revision 204B, and so forth.
- b. If a requirement is numbered 1100 for the first issue, the first revision could be 1100.1, the second revision 1100.2, and so forth.
- c. Pages, tables, and figures may be numbered consecutively within each individual task/requirement/test method.
- 5.12 <u>SECTION 6 NOTES</u>. Section 6 is not contractually binding. No requirements shall be included. It shall only contain information of a general or explanatory nature. Such information shall assist in determining the applicability of the standard, additional superseding data, changes in classification, and other information deemed appropriate. <u>Figure 5</u> provides an example of section 6. This section shall include the following in the order listed, as applicable:
  - a. Parenthetical note (see <u>5.12.1</u>).
  - b. Intended use (see 5.12.2).
  - c. Acquisition requirements (see <u>5.12.3</u>).
  - d. Associated DIDs (see 5.12.4).
  - e. Tailoring guidance for contractual application (see 5.12.5).
  - f. Supersession data (see 5.12.6).
  - g. Cross-reference of classifications and substitutability data (see 5.12.7).

- h. Patent notice (see 5.12.8).
- i. Subject term (key word) listing (see <u>5.12.9</u>).
- j. International standardization agreement implementation (see 5.12.10).
- k. Identification of changes (see <u>5.12.11</u>).
- 5.12.1 <u>Parenthetical note</u>. The following parenthetical note shall appear immediately below "6. NOTES":
  - "(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)"
- 5.12.2 <u>Intended use</u>. Information relative to the use of the subject matter covered by the standard shall be included under this heading as 6.1. If there are any particular applications for which the document is not well adapted, this information shall also be included. The intended use shall also indicate what about the product covered by the defense standard causes it to be military-unique.
- 5.12.3 <u>Acquisition requirements</u>. All of the options that must be exercised by the procuring activity in invitations for bids, contracts, or other purchasing documents shall be listed under acquisition requirements as 6.2. Options shall be listed in the sequence in which they appear in the standard and shall include the following information as a minimum:
  - "6.2 Acquisition requirements. Acquisition documents should specify the following:
  - a. Title, number, and date of this standard."
- 5.12.4 <u>Associated DIDs</u>. If a standard is the source document for a DID(s), the following paragraph shall be included in section 6. In the case of a sectionalized standard, it may be included under an associated individual task, requirement, or test method.
- "6.X <u>Associated Data Item Descriptions (DIDs)</u>. This standard has been assigned an Acquisition Management Systems Control (ASMC) number authorizing it as the source document for the following DIDs. When it is necessary to obtain the data, the applicable DIDs must be listed on the Contract Data Requirements List (DD Form 1423).

#### DID Number

#### DID Title

The above DIDs were current as of the date of this standard. The ASSIST database should be researched at <a href="http://quicksearch.dla.mil">http://quicksearch.dla.mil</a> to ensure that only current and approved DIDs are cited on the DD Form 1423."

- 5.12.5 <u>Tailoring guidance for contractual application</u>. When appropriate, section 6 shall include a paragraph to assist users of the document to identify and select options contained within the standard.
- 5.12.6 <u>Supersession data</u>. If a standard supersedes three or more documents, those documents shall be listed.
- 5.12.7 <u>Cross-reference</u>. A cross-reference of old to new classifications showing substitutability relationship shall be included, if applicable.
- 5.12.8 <u>Patent notice</u>. When a standard is prepared to cover a patented process, method, practice, or item, the standard shall list the patents involved and include the following paragraph.
- "6.X <u>Patent notice</u>. The Government has a royalty-free license under the following listed patents for the benefit of manufacturers of the item either for the Government or for use in equipment to be delivered to the Government.

# U.S. patent number"

If royalty-free licenses are not obtainable, the standard shall list the patents together with their expiration date and the statement that the Government does not have a royalty-free license.

- 5.12.9 Subject term (key word) listing. Standards shall contain a listing of subject terms (key words) to enable the document to be identified during retrieval searches. If the standard requires the use of any toxic chemicals, hazardous substances, or ozone-depleting chemicals, these should be included in the key word listing. The subject terms shall not repeat words found in the title of the document, except if the word is used in a phrase not part of the document title. The subject terms are to be listed alphabetically in a single column with the main noun or word first, followed by sequential modifiers separated by commas. Word groups that are considered to be proper or recognized nouns, such as "printed circuit board," should not be separated. The number of subject terms listed shall not exceed 25.
- 5.12.10 <u>International standardization agreements</u>. If the standard implements an international standardization agreement, the following statement shall be included in section 6:
- "6.X <u>International standardization agreement implementation</u>. This standard implements (insert the document number and title of the international standardization agreement(s)). When changes to, revision, or cancellation of this standard are proposed, the preparing activity must coordinate the action with the U.S. National Point of Contact for the international standardization agreement, as identified in the ASSIST database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>."
- 5.12.11 <u>Identification of changes from previous issue</u>. Revisions of standards shall include vertical lines, asterisks, or other markings at the margins of the pages to indicate where changes have been made with respect to the previous issue. The note below shall be included as the last paragraph in section 6 of the standard. The words "vertical lines" may be replaced with whatever marking is used to denote changes.

"6.X <u>Changes from previous issue</u>. The margins of this standard are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue."

If the changes are extensive and too numerous to annotate, the following note shall be included in section 6 of the standard, but every effort should be made to annotate the changes:

- "6.X <u>Changes from previous issue</u>. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes."
- 5.13 <u>Concluding material</u>. The concluding material shall be provided at the end of the document following any tables, figures, appendixes, or indexes. The concluding material shall indicate the preparing activity, custodians, review activities, civil agency interest, industry association interest, and project number, as applicable (see 5.13.1 through 5.13.8). The following is an example of the concluding material format:

"Custodians:

Army - AR

Navy – SH

Air Force – 11

Preparing activity:

Navy – SH

(Project 9110-2008-003)

Review activities:

Army – AT, GL4, MI

Navy - AS

Air Force – 68

DLA - GS

DISA – DC1, DC3

NGA - MP

Civil agencies:

GSA – FSS

NASA – NA

Industry associations:

AIA, ASTM, EIA, SAE"

Agent: DLA – GS

- 5.13.1 <u>Preparing activity</u>. Standards shall identify the preparing activity using the appropriate symbol for that activity from the SD-1.
- 5.13.2 <u>Custodians</u>. The preparing activity shall list potential custodians during document development from interest as registered in the ASSIST database. The preparing activity shall confirm custodian interest during coordination. Limited coordination standards shall not indicate

custodians. Coordinated standards shall identify custodians, as determined by coordination. It is not necessary for every Military Department and Defense Agency to have a custodian. The symbols used to identify the custodians shall be in accordance with the SD-1. The listing of custodians shall be in the order of Army, Navy, Air Force, and DLA. If other Defense Agencies identify a custodian, they shall be listed in alphabetical sequence by their agency acronym.

- 5.13.3 Review activities. The preparing activity shall list potential review activities during document development from interest as registered in the ASSIST database. The preparing activity shall confirm review interest with these activities during coordination. Both coordinated and limited coordination standards may have review activities listed as determined by coordination. The symbols used to identify review activities shall be in accordance with the SD-1. The listing of review activities shall be ordered by Army, Navy, Air Force, and DLA. If other Defense Agencies identify a review activity, they shall be listed in alphabetical sequence by their agency acronym.
- 5.13.4 <u>Civil agencies</u>. The preparing activity may list the acronyms of interested civil agencies (and their SD-1 symbols, if available) for coordinated and limited coordination standards.
- 5.13.5 <u>Industry associations</u>. The preparing activity may list interested industry associations (including Non-Government Standards Bodies) for coordinated and limited coordination standards.
- 5.13.6 <u>Project number</u>. New and revised standards, as well as changes and notices shall have a project number assigned by the cognizant Lead Standardization Activity. The only document covered by this standard that does not require a project number is the administrative notice.
- 5.13.7 <u>Agent</u>. If the preparing activity authorizes another activity listed in the SD-1 act as its agent and prepare a standard, the agent activity shall be identified by its SD-1 symbol.
- 5.13.8 <u>Advisory note</u>. The following note shall be placed underneath the concluding material:
- "NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>."

### 5.14 Appendix.

5.14.1 General. Appendixes may be added to a standard for purposes of illustration, application, or to group similar requirements together for clearer presentation. When required, an appendix shall be included as an integral part of a standard, beginning on the next page following section 6; individual tasks, requirements, or test methods; or tables or figures, and before an index or concluding material. Appendixes may also be added to individual tasks/requirements/test methods (see 5.11.1). Appendixes shall be referenced in the applicable

part of the main body of the standard. Table of contents and cover shall not be used. <u>Figure 6</u> provides an example of an appendix.

- 5.14.2 <u>Identification</u>. The upper center of each page shall be marked with the standard identifier and the word "APPENDIX" followed by the appendix letter (for example, APPENDIX A) directly below the identifier. If more than one appendix is needed, identification shall be alphabetical (A, B, etc.).
- 5.14.3 <u>Title</u>. The appendix title shall be located two lines below the word "APPENDIX" on the beginning page only.
- 5.14.4 Section and paragraph numbering. The sections in the appendix shall be designated by a letter corresponding to the appendix letter, followed by a period and an Arabic numeral. For example, the first section in Appendix A would be "A.1" and the second section in Appendix B would be "B.2." Paragraphs and subparagraphs shall be numbered consecutively within each section of the appendix. For example:

Requirements section of Appendix D	D.3
First paragraph	D.3.1
First subparagraph	D.3.1.1
Second paragraph	D.3.2

- 5.14.5 <u>Table numbering</u>. All tables shall be numbered consecutively throughout an appendix. The word "TABLE" shall be in full capitalization, followed by the applicable appendix letter, the Roman numeral and a period, centered above the table. For example, the second table in Appendix B would be numbered "TABLE B-II."
- 5.14.6 <u>Figure numbering</u>. All figure shall be numbered consecutively throughout an appendix. The word "FIGURE" shall be in full capitalization, followed by the applicable appendix letter, the Arabic numeral and a period, centered below the figure. For example, the fourth figure in Appendix C would be numbered "FIGURE C-4."
- 5.14.7 <u>Page numbering</u>. Page numbers shall be numbered consecutively following the last page of the standard.
- 5.14.8 <u>Scope</u>. An appendix shall have a statement of scope as its first paragraph to indicate the coverage and limitations of the appendix to ensure its proper application and use. The following shall be included: "This Appendix (is or is not) a mandatory part of the standard. The information contained herein is intended for (compliance or guidance only)."
- 5.14.9 <u>References</u>. References that are required and relate only to the appendix shall be listed in the appendix under the section heading "APPLICABLE DOCUMENTS" and shall not be referenced in section 2 of the standard. The references shall be listed as specified in <u>5.8</u>. This section shall be omitted from the appendix if not applicable.

- 5.14.10 <u>Definitions</u>. Definitions that relate only to the appendix shall be listed in the appendix under the section heading "DEFINITIONS." Definitions already appearing in section 3 of the standard shall not be repeated. This section shall be omitted from the appendix if not applicable.
- 5.15 <u>Index</u>. An alphabetical index may be placed at the end of a standard to permit ready reference to contents. Its use shall be limited to lengthy documents. If used, an index follows the basic document and any appendix. The pages are numbered continuously following the last page of the basic document or appendix, as applicable. The document identifier shall appear in the upper center of each page.
- 5.16 <u>Standards issued in parts</u>. When there is a family of related, processes, practices, methods, or other criteria, it may be useful to have separate standards that all bear the same basic number, but are divided into parts. Each part shall be a complete six-section standard. When there are definitions, requirements, or other information that are common across all of the part standards, it may be beneficial to issue a general standard that contains all of common information, and refer back to general standard in the individual part standards. Part standards shall be identified by the same document identifier followed by a dash and sequential number.

Example: MIL-STD-176-1

MIL-STD-176-2 MIL-STD-176-3

Using the above example, should a general standard containing common requirements be necessary, it would be designated as MIL-STD-176.

5.17 <u>Revisions</u>. Revisions shall follow the content and format instructions prescribed for new standards. Revisions shall be indicated by a capital letter immediately following the document identifier. The first revision shall be marked with the letter "A" and succeeding revisions shall be indicated by letters in alphabetical sequence, except the letters "I", "O", "Q", "S", and "Z" shall not be used. For example, when MIL-STD-123B is revised, it becomes MIL-STD-123C. For part standards, the revision letter shall be placed after the last number. For example, MIL-STD-176-3A.

#### 5.18 Changes.

- 5.18.1 <u>Purpose</u>. Changes shall be prepared to make limited modifications to standards. A standard may be changed a maximum of five times after which, it shall be revised. If the security classification is changed, the document shall be revised.
- 5.18.2 <u>Format</u>. Changes shall be incorporated into the standard and not issued as separate documents. When changes are issued, the entire text of the standard shall be issued with the modifications identified as described in 5.18.4. Figure 7 provides an example of a change.
- 5.18.3 <u>Document identifiers for changes to standards</u>. The document identifier of the change shall be the same as the standard with which it is associated. Since changes are

cumulative and incorporated into the standard, the current change shall be listed on the first page of the standard and shall show appropriate superseding information as shown below. In addition, the change number shall be placed below the document identifier on each page following the cover page as shown in <u>figure 7</u>.

a. The first change to a standard would be shown as follows:

MIL-STD-12345B w/CHANGE 1 22 July 1999

SUPERSEDING MIL-STD-12345B 11 August 1995

b. The second change to a standard would be shown as follows:

MIL-STD-12345B w/CHANGE 2 18 February 2002

SUPERSEDING MIL-STD-12345B w/CHANGE 1 22 July 1999

- 5.18.4 <u>Identification of changes</u>. Changes to standards shall include vertical lines, asterisks, or other markings at the margins of the pages to indicate where modifications have been made. Only modifications made by the current change shall be notated. Modifications made by previous changes shall not be notated. The note below shall be included as the last paragraph in section 6 of the standard. The words "vertical lines" may be replaced with whatever method is used to denote changes.
- "6.X <u>Change notations</u>. The margins of this standard are marked with vertical lines to indicate modifications generated by this change. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations."
- 5.18.4.1 <u>Identification of modifications for standards that contain individual tasks, requirements, or test methods (see 5.11.1)</u>. When a change is used to revise an individual task, requirement, or test method rather than revising the entire standard, a note shall be placed at the bottom of first page to indicate that the change resulted in a revision of the task, requirement, or test method and the date of the revision. See figure 8 for an example.

- 5.18.4.2 <u>Summary of change modifications</u>. A summary of change modifications shall be prepared for each notice of change and inserted into the standard following the foreword and before the table of contents. <u>Figure 9</u> is an example of such a summary.
- 5.18.5 <u>Identification of deleted paragraphs</u>, tables, and figures. To avoid renumbering of paragraphs, tables, and figures deleted by a change, the word "Deleted" shall be placed after the paragraph, table, or figure number and title. For example: "4.4.5 <u>Abrasion test</u>. Deleted."
- 5.18.6 <u>Insertion of paragraphs, figures, and tables</u>. When new paragraphs, figures, or tables are added to the standard, they should be numbered in such a way that renumbering of existing paragraphs, figures, and tables is not necessary. For example:

Existing	<u>Added</u>	Existing
Table II	Table II-1	Table III
Figure 2	Figure 2A	Figure 3
Paragraph 4.11	Paragraph 4.11.1	Paragraph 4.12

5.18.7 <u>Page numbering</u>. Since changes are an integrated part of the basic or revised document, pages shall be numbered in a natural sequence of whole Arabic numerals as described in <u>4.13</u>. As pages are added or eliminated as the result of changes, there should not be any inventive numbering schemes to account for these pages. For example, if a change results in a new page between existing pages 8 and 9, do not number the new page as 8a or 8.1. Instead, let word processing automatically renumber the pages.

### 5.19 Notices.

- 5.19.1 <u>Purpose</u>. Notices shall be used to inactivate for new design, cancel, reinstate, reactivate, or to provide or update administrative information. Notices supersede all previous notices.
- 5.19.2 <u>Inactive for new design notice</u>. An inactive for new design notice shall be prepared to indicate that an interface, method, practice, or process is prohibited for use in new design (see <u>figure 10</u>). Superseding documents for new design application shall be referenced in the notice when applicable. When applicable, a precautionary note shall be included as follows: "CAUTION: The superseding information is valid as of the date of this notice and may be superseded by subsequent revisions of the superseding document." Inactive status can also be accomplished in a revision. Standards inactivated for new design may be maintained by revision or change without updating of the existing inactive for new design notice. When an inactive for new design document is revised or a change issued, one of the following notes shall appear in a box beneath the document title, as applicable:

This document is inactive for new design.

This document is inactive for new design. Refer to (fill in document identifier) for new designs.

- 5.19.3 <u>Cancellation notice</u>. A cancellation notice shall be prepared when a standard is no longer required (see figures 11, 12A, and 12B). The cancellation notice may recommend a replacement document and classification cross-references. If the replacement document is technically equivalent or superior to the superseded standard, the cancellation notice may directly refer readers to the replacement document (see <u>figure 12A</u>). If a document is a suggested replacement, the cancellation notice shall include a statement that cautions users before applying the replacement document (see <u>figure 12B</u>). Preparing activities should consider issuing an "Inactive-for-New Design" notice rather than a "Cancellation" notice where a replacement document is only suggested and it is important to maintain configuration lineage for those documents that referenced the standard being replaced.
- 5.19.4 Reinstatement notice. A reinstatement notice shall be prepared to reinstate a canceled standard as an active or inactive for new design. The preparing activity, or with its permission, another activity, may reinstate a canceled standard by a notice of reinstatement (see figure 13). The notice of reinstatement, with a sequentially assigned Arabic numeral, will supersede the previous notice of cancellation. The text for the reinstatement notice shall be as shown on figure 13.
- 5.19.5 <u>Reactivation notice</u>. A reactivation notice shall be prepared to reactivate an inactive for new design document. The preparing activity, or with its permission, another activity, may reactivate an inactive for new design document by a notice of reactivation (see <u>figure 14</u>). The notice of reactivation, with a sequentially assigned Arabic numeral, will supersede the notice of inactive for new design. The text for the reactivation notice shall be as shown on <u>figure 14</u>.
- 5.19.6 Administrative notice. An unclassified administrative notice shall be prepared for classified standards to indicate where to submit release requests and identify information that must be included in the request. Administrative notices may be issued for active and inactive for new design standards to change administrative information not affecting the technical content of the standard, such as a change in point of contact, concluding material, federal supply class, or superseding information, or to provide instructions on how to obtain or view documents that are not in the online ASSIST database because of special circumstances, such as restricted distribution, special graphics, or availability limited to a compact disk. If an administrative notice supersedes an inactive for new design notice, it shall reaffirm the inactive status. Administrative notices shall not be issued for standards that are canceled. Figures 15, 16, and 17 provide examples of administrative notices.
- 5.19.7 <u>Notice format</u>. All notices shall include the format elements specified in 5.19.7.1 through 5.19.7.6.

- 5.19.7.1 <u>Notice identifier</u>. The document identifier of a notice shall be placed in the upper right corner of the first page. The following elements shall be included with the first letters in alignment (block form):
- a. The document identifier of the standard, including the revision letter and the activity code designation of the preparing activity, if applicable.
- b. The word "NOTICE" followed by a sequentially assigned Arabic numeral shall be placed below the standard number.
- c. The date of approval. Drafts shall not show a date. The space shall include the word "DRAFT" until the notice is approved.

Example of sequential actions:

1. Inactive for new design notice:

MIL-STD-123 NOTICE 1 18 October 1995

2. Cancellation notice:

MIL-STD-123 NOTICE 2 16 February 1998 SUPERSEDING NOTICE 1 18 October 1995

3. Reinstatement notice:

MIL-STD-123 NOTICE 3 15 April 2000 SUPERSEDING NOTICE 2 16 February 1998

- 5.19.7.2 <u>Heading and title</u>. A notice shall carry the same heading and title as the standard. The notice of cancellation, inactivation, reinstatement, reactivation, or administrative shall be enclosed in a box in the upper left corner of the first page (see figures 10 through 16).
  - 5.19.7.3 Preamble. A preamble is not required.

- 5.19.7.4 FSC, FSG, or area designation. The FSC, FSG, or area designation shall be the same as for the basic standard and shall be shown in the lower right corner of the first page.
- 5.19.7.5 <u>Concluding material</u>. The concluding material for all notices shall be in accordance with <u>5.13</u>.
  - 5.19.7.6 Project number. Project numbers are not required for administrative notices.

#### 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

- 6.1 <u>Intended use</u>. Standards covered by this standard are intended for use in acquisition to establish requirements for military-unique interfaces, processes, practices, methods, and other engineering or technical criteria. Non-Government standards or commercial item descriptions should be used to describe the requirements for commercial interfaces, processes, practices, and methods.
- 6.2 <u>Acquisition requirements</u>. Acquisition documents should specify the title, number, and date of this standard.
- 6.3 <u>Associated Data Item Descriptions (DIDs)</u>. This standard has been assigned an Acquisition Management Systems Control number authorizing it as the source document for the following DIDs. When it is necessary to obtain the data, the applicable DIDs must be listed on the Contract Data Requirements List (DD Form 1423).

DID Number	DID Title
DI-SDMP-81470	Department of Defense (DoD) Interface Standard Documents
DI-SDMP-81472	Department of Defense (DoD) Design Criteria Standard Documents
DI-SDMP-81474	Department of Defense (DoD) Standard Practice Documents
DI-SDMP-81475	Department of Defense (DoD) Test Method Standard Documents
DI-SDMP-81476	Department of Defense (DoD) Manufacturing Process Standard Documents

The above DIDs were current as of the date of this standard. The ASSIST database should be researched at <a href="http://quicksearch.dla.mil">http://quicksearch.dla.mil</a> to ensure that only current and approved DIDs are cited on the DD Form 1423.

6.4 <u>Tailoring guidance</u>. To ensure proper application of this standard, invitation for bids, request for proposals, and contractual statements of work should tailor the requirements in

sections 4 and 5 of this standard to exclude any unnecessary requirements. For example, if the statement of work requires the development of a revised standard, then all material related to notices should be excluded.

# 6.5 Subject term (key word) listing.

Administrative notices
Cancellation notices
Changes
Data item descriptions
Design criteria standards
Inactive for new design notices
Interface standards
Manufacturing process standards
Notices
Reinstatement notices
Revisions

Standard practices

Standardization

Standardization

Test method standards

6.6 <u>Change notations</u>. The margins of this standard are marked with vertical lines to indicate modifications generated by this change. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

1. SCOPE
1.1 <u>Scope</u> . This standard covers test methods for spring loaded pressure relief valves used in steam service.
1.2 <u>Classification</u> . The following test methods are used for these pressure relief valves, as specified (see 6.2).
Test Method I - Used to test atmospheric outlet relief valves
Test Method II – Used to test pressure tight outlet relief valves
1.3 <u>Applicability</u> . These test methods are applicable for pressure relief valves used for surface ship applications. For submarine applications, see MIL-STD-123.

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.7.)

FIGURE 1. Example of section 1.

#### 2. APPLICABLE DOCUMENTS

2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, or 5 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this standard, whether or not they are listed.

#### 2.2 Government documents.

2.2.1 <u>Specifications, standards, and handbooks</u>. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

#### INTERNATIONAL STANDARDIZATION AGREEMENTS

STANAG 1135 - Interchangeability of Fuels, Lubricants and

Associated Products Used by the Armed Forces of

the North Atlantic Treaty Nations

FEDERAL SPECIFICATIONS

TT-S-735 - Standard Test Fluids; Hydrocarbon

FEDERAL STANDARDS

FED-STD-595/10032 - Brown, Gloss

FED-STD-595/34230 - Green, Flat or Lusterless

FEDERAL INFORMATION PROCESSING STANDARDS

FIPS-PUB-112 - Password Usage

COMMERCIAL ITEM DESCRIPTIONS

A-A-50167 - Wadding, Cotton

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.8.)

FIGURE 2. Example of section 2.

#### DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-5606 - Hydraulic Fluid, Petroleum Base, Aircraft,

Missile, and Ordnance

MIL-DTL-5624 - Turbine Fuel, Aviation, Grades JP-4 and JP-5

MIL-PRF-7808 - Lubricating Oil, Aircraft Turbine Engine,

Synthetic Base

#### DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-2073-1 - DoD Standard Practice for Military Packaging

(Copies of these documents are available online at <a href="http://quicksearch.dla.mil">http://quicksearch.dla.mil</a>.)

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

#### NAVAL AIR SYSTEMS COMMAND

NAVAIR Drawing 14 - Jet Engine Design

(Copies of this document are available from the Naval Air Systems Command, Code 4.1.4, Lakehurst, NJ 08733-5100.)

#### CODE OF FEDERAL REGULATIONS

Title 14, Part 36 - Noise Standards: Aircraft Type

(Copies of this document are available online at http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR.)

FIGURE 2. Example of section 2 – Continued.

2.3 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

### AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME Y14.5M - Dimensioning and Tolerancing ASME Y14.38 - Abbreviations and Acronyms

(Copies of these documents are available from or <a href="www.asme.org">www.asme.org</a>.)

2.4 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the 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.

FIGURE 2. Example of section 2 – Continued.

### MIL-STD-12345

# METHOD 101.6A MOISTURE (GAS CHROMATOGRAPHY METHOD)

- 1. SCOPE
- 1.1 This method may be used for the determination of moisture in single or double base powder.
- 1.2 The moisture is extracted from the propellant with methanol, injected into a column, and then the moisture peak is compared with a standard.
  - 2. SPECIMEN
  - 2.1 The sample shall consist of 3.0 grams of propellant.
  - 3. APPARATUS
- 3.1 Hewlett Packard 3752 with Dual Thermal Conductivity detector or its equivalent interfaced to a PEP-II computer (or other means of peak measurement).
  - 3.2 10mL syringe.
  - 3.3 Magnetic stirrer and stirring bar.
  - 3.4 60 mL bottle and stopper.
  - 3.5 100 mL volumetric flask.
  - 3.6 Calibration loop.
  - 4. REAGENTS AND STANDARDS
  - 4.1 Methanol Anhydrous
  - 4.2 Distilled Water

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN <u>5.11.1</u>.)

FIGURE 3. Example of individual test method.

#### MIL-STD-2345

# REQUIREMENT 32 TEST PROVISIONS

- 1. Purpose. This requirement establishes criteria for test provisions.
- 2. <u>Documents applicable to Requirement 32:</u>

MIL-STD-415 Test Provisions for Electronic Systems and Associated

Equipment, Design Criteria for

MIL-STD-2165 Testability Program for Electronic Systems and

Equipment

- 3. Definitions. Not applicable.
- 4. Requirements
- 4.1 <u>Built-in test devices.</u> Built-in test devices shall maintain their accuracy under all operating conditions required by the equipment under test. These devices shall be provided with connections or access for their operational checkout or calibration.
- 4.2 <u>External test points.</u> Protection shall be provided in the test point circuitry to prevent equipment damage caused by the external grounding of test points.
- 4.3 <u>Failure effect.</u> Provisions for testing shall be so designed that any failure of built-in test devices will not degrade equipment operating or cause equipment shut down.
- 4.4 <u>Test provisions.</u> Test provisions to provide means for monitoring performance, calibration, calibration, and fault isolation shall be in accordance with MIL-STD-415.
- 5. Information for guidance only
- 5.1 <u>Testability program.</u> When specified by the contracting activity, a testability program should be implemented in accordance with MIL-STD-2165.

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.11.1.)

FIGURE 4. Example of individual requirement.

#### 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

- 6.1 <u>Intended use</u>. The test methods covered by this standard are intended to determine the suitability of compressors used in shipboard fire fighting applications. These test methods military unique in that they are used to simulate and measure the high levels of shock and vibration that may be encountered in a battlefield environment.
- 6.2 <u>Acquisition requirements</u>. Acquisition documents should specify the following:
  - a. Title, number, and date of this standard.
  - b. Type of test method (see 1.2).
  - c. Higher shock levels required (see 5.3.2).
- 6.3 <u>Associated Data Item Descriptions (DIDs)</u>. This standard has been assigned an Acquisition Management Systems Control number authorizing it as the source document for the following DIDs. When it is necessary to obtain the data, the applicable DIDs must be listed on the Contract Data Requirements List (DD Form 1423).

<u>DID Number</u> <u>DID Title</u>

DI-NDTI-12345 Compressor Shock Test Report

DI-NDTI-23456 Compressor Vibration Test Report

The above DIDs were current as of the date of this standard. The ASSIST database should be researched at <a href="http://quicksearch.dla.mil">http://quicksearch.dla.mil</a> to ensure that only current and approved DIDs are cited on the DD Form 1423.

- 6.4 <u>Tailoring guidance for contractual application</u>. To ensure proper application of this standard, invitation for bids, request for proposals, and contractual statements should tailor out section 5.5 for submarine applications and section 5.6 for surface ship applications.
  - 6.5 Subject term (key word) listing.

Compressor Firefighting Pump

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.12.)

FIGURE 5. Example of section 6.

6.6 <u>International standardization agreement implementation</u> . This standard implements STANAG 1234, "Compressors for Shipboard Fire Fighting." When changes to, revision, or cancellation of this standard are proposed, the preparing activity must coordinate the action with the U.S. National Point of Contact for the international standardization agreement, as identified in the ASSIST database at <a href="https://assist.dla.mil">https://assist.dla.mil</a> .
6.7 <u>Changes from previous issue</u> . Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

FIGURE 5. Example of section 6 – Continued.

# MIL-DTL-12345 APPENDIX A

#### PROCEDURE FOR ULTRASONIC INSPECTION OF COMPOSITION 13 BAR STOCK

#### A.1 SCOPE

A.1.1 <u>Scope</u>. The appendix details the procedure for ultrasonic inspection of composition 13 bar stock selected for the manufacture of bearing balls. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

#### A.2 PROCEDURE

- A.2.1 <u>Calibration standard</u>. Reference pieces for calibration shall be of the same material, metal travel distance, surface finish, and ultrasonic response as the bar stock being tested.
- A.2.1.1 Reference test piece for bar stock 5/8-inch to 1-1/2-inch diameter. The reference test piece shall be a bar of at least 3 feet in length. For near zone testing, metal travel shall be 4/10 the diameter and 9/10 the diameter of the test piece to flat bottom holes (FBHs) 0.02 inches in diameter. For far zone testing, metal travel shall be 6/10 the diameter and 1/10 the diameter of the test piece to FBHs 0.02 inches in diameter.
- A.2.1.2 <u>Reference test piece for bar stock 1/2-inch to 5/8-inch diameter</u>. The reference test piece shall be a bar of at least 3 feet in length. For near zone testing, metal travel shall be 4/10 the diameter and 9/10 the diameter of the test piece to FBHs 0.02 inches in diameter of 0.062-inch depth. For far zone testing, metal travel shall be 6/10 the diameter and 1/10 the diameter of the test piece with metal travel 0.06 inch to a FBH of 0.02 inch diameter.
- A.2.1.3 <u>Reference test piece for bar stock less than 1/2-inch diameter</u>. For bar stock less than 0.5-inch diameter, only one FBH providing 1/2 diameter travel shall be required.

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN <u>5.14</u>.)

FIGURE 6. Example of appendix.

#### MIL-DTL-12345 APPENDIX A

# A.2.2 Test set-up.

- A.2.2.1 <u>Longitudinal scan</u>. While maintaining correct water path, obtain a 2-inch signal from the highest attenuated 0.02-inch FBH. Adjust sensitivity and distance amplitude control to bring near and far FBHs within 10 percent of a 2-inch amplitude indication. Compatibility between reference block and the material to be tested shall be established by comparing the first unsaturated back reflection from the block with the corresponding back reflection from the material to be tested. Gain shall be set to give an 80 percent of screen signal from the FBH with depth of 6/10 the diameter of the test piece. Compatibility shall be checked in at least three well-separated areas on the material to be tested. The gate width for near zone testing shall be set to include response from FBH with depth of 1/10 and 6/10 test piece diameter. The gate width for far zone testing shall be set to include response from FBH with depth of 4/10 and 9/10 test piece diameter. The alarm sensitivity shall be set to assure 100 percent of a 0.02-inch diameter FBH inspection level.
- A.2.2.2 <u>Loss of backface</u>. Set instrument so the first backface reflection from the full round reference block is 80 percent of screen saturation. The first backface reflection shall be gated and set alarm at 50 percent or less of loss in backface signal. Inspect and evaluate loss of backface areas.
- A.2.2.3 <u>Angle scan test</u>. Position transducer over angle reference notch area for maximum response. Rotate reference standard so center of standard block and notch are on a horizontal plane. Adjust gain to obtain a 2-inch signal and adjust flaw alarm for a 1-inch signal. Gate width shall be set to include the area at which the signal from the reference notch is detected.

#### A.3 Acceptance levels.

- A.3.1 <u>Longitudinal scan</u>. Discontinuities in excess of the response from a 0.2-inch diameter FBH at the estimate discontinuity depth shall not be acceptable.
- A.3.2 <u>Loss of back reflection</u>. Any loss of back reflection in excess of 50 percent of full saturation of the screen shall be considered unacceptable with the instrument set so the first back reflection from the correct test block is at 80 percent of the screen adjusted for nonlinearity.

INCH-POUND

MIL-STD-123B w/CHANGE 2 1 May 2001

SUPERSEDING MIL-STD-123B w/CHANGE 1 12 October 2000

# DEPARTMENT OF DEFENSE TEST METHOD STANDARD

# ULTRASONIC INSPECTION OF BAR STOCK



AMSC N/A AREA NDTI

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.18.)

FIGURE 7. Example of change to standard.

# MIL-STD-123B w/CHANGE 2

#### **FOREWORD**

- 1. This standard is approved for use by all Departments and Agencies of the Department of Defense (DoD).
- 2. This standard covers the procedures for ultrasonic inspection of bar stock selected for the manufacture of bearing balls used in armored vehicles.
- 3. Comments, suggestions, or questions on this document should be addressed to Commander, U.S. Army Tank-Automotive and Armaments Command, ATTN: ABCDEFG, Warren, MI 48397-5000 or emailed to tacom@army.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.

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FIGURE 7. Example of change to standard – Continued.

# MIL-STD-123B w/CHANGE 2

#### 1. SCOPE

1.1. <u>Scope</u>. This standard covers the procedures for ultrasonic inspection of bar stock selected for the manufacture of bearing balls used in armored vehicles.

#### 2. APPLICABLE DOCUMENTS

2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, or 5 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this standard, whether or not they are listed.

### 2.2 Government documents.

2.2.1 <u>Specifications, standards, and handbooks</u>. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

#### DEPARTMENT OF DEFENSE HANDBOOKS

MIL-HDBK-123 - Ultrasonic Inspection Definitions

(Copies of this document are available online at <a href="http://quicksearch.dla.mil">http://quicksearch.dla.mil</a>.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence unless otherwise noted. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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FIGURE 7. Example of change to standard – Continued.

# MIL-STD-123B w/CHANGE 2

#### 3. DEFINITIONS

3.1 General. The definitions used in this standard are in MIL-HDBK-123.

#### 4. GENERAL REQUIREMENTS

- 4.1 <u>Calibration</u>. Reference pieces for calibration shall be of the same material, metal travel distance, surface finish, and ultrasonic response as the bar stock being tested.
- 4.1.1 Reference test piece for bar stock 5/8-inch to 1-1/2-inch diameter. The reference test piece shall be a bar of at least 3 feet in length. For near zone testing, metal travel shall be 4/10 the diameter and 9/10 the diameter of the test piece to flat bottom holes (FBHs) 0.02 inches in diameter. For far zone testing, metal travel shall be 6/10 the diameter and 1/10 the diameter of the test piece to FBHs 0.02 inches in diameter.
- 4.1.2 Reference test piece for bar stock 1/2-inch to 5/8-inch diameter. The reference test piece shall be a bar of at least 3 feet in length. For near zone testing, metal travel shall be 4/10 the diameter and 9/10 the diameter of the test piece to FBHs 0.02 inches in diameter of 0.062-inch depth. For far zone testing, metal travel shall be 6/10 the diameter and 1/10 the diameter of the test piece with metal travel 0.06 inch to a FBH of 0.02 inch diameter.
- 4.1.3 <u>Reference test piece for bar stock less than 1/2-inch diameter</u>. For bar stock less than 0.5-inch diameter, only one FBH providing 1/2 diameter travel shall be required.

(THE EXAMPLE ENDS HERE, BUT THE SAME TYPE OF FORMAT WOULD CONTINUE UNTIL THE END OF THE STANDARD, WITH VERTICAL LINES OR OTHER MARKING DENOTING WHERE CHANGES, DELETIONS, OR ADDITIONS WERE MADE. AS REQUIRED BY 5.18.4, THE FOLLOWING NOTATION WOULD BE INCLUDED AS THE LAST PARAGRAPH IN SECTION 6.)

6.5 <u>Change notations</u>. The margins of this standard are marked with vertical lines to indicate modifications generated by this change. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

# MIL-STD-202G w/CHANGE 1

#### METHOD 112E

#### SEAL

1. PURPOSE. The purpose of this test method is to determine the effectiveness of the seal of a component part which has an internal cavity which is either evacuated or contains air or gas.

# 1.1 Definitions.

- a. <u>Standard leak rate</u>. Standard leak rate is defined as the quantity of dry air at 25°C in atmospheric cubic centimeters flowing through a leak or multiple leak paths per second when the high-pressure side is at 1 atmosphere (760 mm Hg absolute) and the low-pressure side is at a pressure of not greater than 1 mm Hg absolute. Standard leak rate shall be expressed in units of atmospheric cubic centimeters per second (atm cm<sup>3</sup>/s).
- b. Measured leak rate. Measured leak rate (R<sub>1</sub>) is defined as the leak rate of a given package as measured under specified conditions and employing a specified test medium. Measured leak rate shall be expressed in units of atmospheric cubic centimeters per second (atm cm<sup>3</sup>/s). For the purpose of comparison with rates determined by other methods of testing, the measured leak rates must be converted to equivalent standard leak rate.
- c. Equivalent standard leak rate. The equivalent standard leak rate of a given package, with a measured leak rate (R<sub>1</sub>), is defined as the leak rate of the same package with the same leak geometry, which would exist under the standard conditions of 1.1a. The formula (does not apply to procedure IIIb) in 5.4.3.2.3 represents the L/R<sub>1</sub> ratio and gives the equivalent standard leak rate of the package with a measured leak rate (R<sub>1</sub>) where the package volume and leak test conditioning parameters influence the measured value of (R<sub>1</sub>). The equivalent standard leak rate shall be expressed in units of atm cm<sup>3</sup>/s.

Change 1 resulted in revision E of this test method. 29 May 2002

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.18.4.1.)

FIGURE 8. Example of change for standard containing individual tasks, requirements, or test methods.

# MIL-STD-202G w/CHANGE 1

#### METHOD 112E

#### 2. TEST CONDITIONS.

2.1 Selection. There are six test conditions (A, B, C, D, E, and F) in this method. Test conditions A and B utilize oil as a means to detect gross leaks by the observation of bubbles. Both of these tests will detect leaks of a nominal value of 10<sup>-5</sup> atm cm<sup>3</sup>/s. Test condition B is used to test parts which will not withstand the temperature required in test condition A. Test condition C detects fine leaks by using a tracer gas and apparatus to measure a leakage rate (R<sub>1</sub>) to a nominal of 10<sup>-8</sup> atm cm<sup>3</sup>/s. The apparatus can be calibrated for any leakage rate within its range. Test condition D utilizes a fluorocarbon liquid at 125°C ±5°C at ambient pressure and detects gross leaks by the observation of bubbles. This latter test condition provides an alternate gross leak test to test condition A. Test condition E utilizes two fluorocarbon liquids; one under pressure followed by the other at  $125^{\circ}\text{C} \pm 5^{\circ}\text{C}$  at room ambient pressure and detects gross leaks by the observation of bubbles. This test condition provides a measure of leakage rate of a nominal value of 10<sup>-5</sup> atm cm<sup>3</sup>/s. Test condition F utilizes a fluorocarbon liquid and a fluorocarbon vapor detector to detect gross leaks. Test condition F provides a measure of leakage rate of a nominal value of 10<sup>-5</sup> atm cm<sup>3</sup>/s. Both test conditions C and F require more expensive commercial equipment and trained personnel, but the equipment provides automatic and quantitative readings. The selection of a test condition to perform the seal test depends on the state of the art of component part manufacturing, the leakage rate which can be tolerated for the desired reliability, the frequency of testing, range of test conditions, cavity size, and whether the testing is to be on a 100 percent production or on a periodic basis. The individual specification shall specify the test condition letter required. When test condition C is specified, the procedure number (see 5.4) and the degree of leakage rate sensitivity required shall be included. The following is included as a sensitivity and applicability guide:

Test condition A (bubble test - mineral oil or peanut oil at  $125^{\circ}\text{C} \pm 3^{\circ}\text{C}$ ). Use when a nominal sensitivity of  $10^{-5}$  atm cm<sup>3</sup>/s is sufficient.

Test condition B (bubble test - silicone oil at room ambient temperature  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ), with a vacuum resulting in an absolute pressure of not greater than 1.5 inches of mercury (not greater than 38.1 torr). Use to test parts which cannot withstand the temperature of test condition A, and when a nominal sensitivity of  $10^{-5}$  atm cm<sup>3</sup>/s is sufficient.

Test condition C (tracer gas test). Use when a nominal sensitivity of 10<sup>-8</sup> atm cm<sup>3</sup>/s is sufficient.

FIGURE 8. Example of change for standard containing individual tasks, requirements, or test methods – Continued.

# MIL-STD-188-165A w/CHANGE 1

#### SUMMARY OF CHANGE 1 MODIFICATIONS

- 1. The Y-axis and the stated limits on figure 5, modulator and demodulator filter group delay response, was corrected to reflect the fact that the values should be divided and not multiplied by the modulation symbol rate in symbols per second.
- 2. Section 2, paragraph 2.2.1, has been modified to provide instructions on how to obtain standards that are not available for download from the Acquisition Streamlining and Standardization Information System (ASSIST).
- 3. The tailoring guidance in section 6 was changed to clearly identify the optional requirements that a program manager may tailor out for invitation of bids, request for proposals, and contractual statement purposes.
- 4. The superhigh frequency (shf) satellite communications (SATCOM) standards profile on figure 9 was changed to reflect the addition of the Internet Protocol modulator/demodulator (MODEM) and the deletion of MIL-STD-188-166 and MIL-STD-188-170 from the shf SATCOM profile.
- 5. The following modifications to MIL-STD-188-165A have been made:

<u>Paragraph</u>	Modification
1.3	Deleted
2.2.1	Changed
6.3	Changed
Figure 5	Changed
Figure 9	Changed
Index	Added

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN <u>5.18.4.2</u>.)

FIGURE 9. Example of summary of change modifications.

NOTICE OF INACTIVE FOR NEW DESIGN

NOT MEASUREMENT SENSITIVE

MIL-STD-417A NOTICE 1 18 October 2000

# DEPARTMENT OF DEFENSE STANDARD PRACTICE

# CLASSIFICATION SYSTEM FOR SOLID ELASTOMERIC MATERIALS

MIL-STD-417A, dated 8 February 1999, is inactive for new design and shall be no longer used for new designs.

New designs should use ASTM D 2000, entitled "Elastomeric Materials or Automotive Applications." CAUTION: The supersession information is valid as of the date of this notice and may be superseded by subsequent revisions of the superseding document.

(Copies of ASTM publications are available from www.astm.org.)

Custodians:

Army - MR

Navy - SH

Air Force - 11

Preparing activity:

Army - MR

(Project 9320-2000-007)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.

AMSC N/A FSC 9320

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.19.2.)

FIGURE 10. Example of inactive for new design notice.

NOTICE OF CANCELLATION

**METRIC** 

MIL-STD-999C NOTICE 1 25 August 1995

#### MILITARY STANDARD

CHAINS, ROLLER: POWER TRANSMISSION OFFSET SIDEBARS, SINGLE-PITCH (METRIC)

MIL-STD-999C, dated 25 March 1980, is hereby canceled without replacement.

Custodians:

Army - AT

Navy - SH

Air Force - 99

Preparing activity:

Army - AT

(Project 3020-1995-012)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil.

AMSC N/A FSC 3020

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.19.3.)

FIGURE 11. Example of cancellation notice without replacement.

NOTICE OF CANCELLATION

**METRIC** 

MIL-STD-999C NOTICE 1 25 August 1995

#### **MILITARY STANDARD**

CHAINS, ROLLER: POWER TRANSMISSION OFFSET SIDEBARS, SINGLE-PITCH (METRIC)

MIL-STD-999C, dated 25 March 1980, is hereby canceled. SAE 123, "Chains, Roller: Power Transmission," supersedes MIL-STD-999C.

CAUTION: The supersession information is valid as of the date of this notice and may be superseded by subsequent revisions of the superseding document.

(Copies of SAE publications are available from <a href="www.sae.org">www.sae.org</a>.)

Custodians:

Army - AT

Navy - SH

Air Force - 99

Preparing activity:

Army - AT

(Project 3020-1995-011)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.

AMSC N/A FSC 3020

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.19.3.)

FIGURE 12A. Example of cancellation notice with a direct replacement superseding document.

NOTICE OF CANCELLATION

**METRIC** 

MIL-STD-999C NOTICE 1 25 August 1995

#### MILITARY STANDARD

CHAINS, ROLLER: POWER TRANSMISSION OFFSET SIDEBARS, SINGLE-PITCH (METRIC)

MIL-STD-999C, dated 25 March 1980, is hereby canceled. Future acquisitions may refer to SAE 123, "Chains, Roller: Power Transmission."

Users are cautioned to evaluate this document for their particular application before citing it as a replacement document.

(Copies of SAE publications are available from <u>www.sae.org</u>.)

Custodians:

Army - AT

Navy - SH

Air Force - 99

Preparing activity:

Army - AT

(Project 3020-1995-021)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.

AMSC N/A FSC 3020

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN <u>5.19.3</u>.)

FIGURE 12B. Example of cancellation notice with suggested replacement document.

NOTICE OF REINSTATEMENT **METRIC** 

MIL-STD-999C NOTICE 3 25 August 1995 SUPERSEDING NOTICE 2 18 April 1990

# DEPARTMENT OF DEFENSE INTERFACE STANDARD

CHAINS, ROLLER: POWER TRANSMISSION OFFSET SIDEBARS, SINGLE-PITCH (METRIC)

MIL-STD-999C, dated 25 March 1980, is hereby reinstated and may be used for acquisition.

Custodians:

Army - AT

Navy - SH

Air Force - 99

Preparing activity:

Army - AT

(Project 3020-1995-002)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.

AMSC N/A FSC 3020

NOTE: If reinstating a document as inactive for new design, the text would read "MIL-STD-999C, dated 25 March 1980, is hereby reinstated as inactive for new design and may be used for acquisition."

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN <u>5.19.4</u>.)

FIGURE 13. Example of reinstatement notice.

NOTICE OF REACTIVATION

**METRIC** 

MIL-STD-999C NOTICE 3 25 August 1995 SUPERSEDING NOTICE 2 18 April 1990

# DEPARTMENT OF DEFENSE INTERFACE STANDARD

CHAINS, ROLLER: POWER TRANSMISSION OFFSET SIDEBARS, SINGLE-PITCH (METRIC)

MIL-STD-999C, dated 25 March 1980, is hereby reactivated and may be used for new acquisition.

Custodians:

Army - AT

Navy - SH

Air Force - 99

Preparing activity:

Army - AT

(Project 3020-1995-003)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.

AMSC N/A FSC 3020

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN <u>5.19.5</u>.)

FIGURE 14. Example of reactivation notice.

ADMINISTRATIVE NOTICE

**INCH-POUND** 

MIL-STD-123 NOTICE 1 1 May 2001

# DEPARTMENT OF DEFENSE STANDARD PRACTICE

### **SELECTION OF FUZES**

MIL-STD-123 was approved for use by the Department of Defense on 1 May 2001. Due to its length and the need for interactive links, this document is available on CD-ROM only. Requests for a copy of the CD-ROM should be sent to Commander, U.S. Army TACOM-ARDEC, ATTN: AMSTA-AR-QAW-E, Picatinny Arsenal, NJ 07806-5000.

Custodians:

Army - AR

Navy - OS

Air Force – 99

Preparing activity: Army – AR

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.

AMSC N/A FSC 13GP

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.19.6.)

FIGURE 15. Example of administrative notice.

ADMINISTRATIVE NOTICE

**INCH-POUND** 

MIL-STD-123 NOTICE 1 1 May 2001

# DEPARTMENT OF DEFENSE STANDARD PRACTICE

#### SELECTION OF FUZES

The point of contact for MIL-STD-123 has changed. Comments, suggestions, or questions on this document should now be sent to Commander, U.S. Army TACOM-ARDEC, ATTN: AMSTA-ABCDEFG, Picatinny Arsenal, NJ 07806-5000.

Custodians:

Army - AR

Navy – OS

Air Force – 99

Preparing activity: Army – AR

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.

AMSC N/A FSC 13GP

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN 5.19.6.)

FIGURE 16. Example of administrative notice.

ADMINISTRATIVE NOTICE INCH-POUND

MIL-STD-12345B NOTICE 1 12 July 2007

# DEPARTMENT OF DEFENSE TEST METHOD STANDARD

GUIDED MISSLE WARHEAD, TEST METHODS FOR(U)

MIL-STD-12345B, dated 12 July 2007, is a classified document with controlled distribution. Release of this document requires the approval by the Department of Defense approving authority listed below. Written requests supported by a verifiable need-to-know shall be submitted to:

Commander
US Army TACOM-ARDEC
Attn: AMSRD-AAR-AIC-S, Bldg 12
Picatinny, NJ 07806-5000
ardec-stdzn@pica.army.mil

Preparing activity: Army – AR

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.

AMSC N/A FSC 1336

(THIS IS AN EXAMPLE ONLY. THE REQUIREMENT IS IN <u>5.19.6</u>.)

FIGURE 17. Example of administrative notice for a classified standard.

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Army - AR

Navy – SH

Air Force – 11

DLA – DH

Preparing activity:

OSD - SO

(Project STDZ-2013-003)

Review activities:

Army – AT, AV, CE, CR, EA, GL, IH, MD, MI

MR, MT, PT, SM, TE, TM

Navy – AS, CH, EC, MC, NU, OS, SA, YD

Air Force – 16, 19, 22, 68, 70, 71, 84, 85, 99

DLA - CC, CT, DM, DP, GS, IS, PS, SS

DISA – DC1

DTRA - DS

NGA - MP

Civil agency:

GSA - FSS

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.dla.mil">https://assist.dla.mil</a>.