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MIL-HDBK-800(AS)  
30 MAY 1989

# MILITARY HANDBOOK

## DOCUMENTATION STREAMLINING



**MIL-HDBK-800(AS) is a streamlined document.**

AMSC N/A

AREA SDMP

DISTRIBUTION STATEMENT A: Approved for public release, distribution is unlimited.

## FOREWORD

1. This military handbook is approved for use by the Naval Air Systems Command, Department of the Navy and is available for use by all Departments and Agencies of the Department of Defense.

2. The Naval Air Engineering Center developed documentation streamlining methodology to identify the mandatory requirements contained within reference documents which are cited in, and tiered to, standardization documents utilized in Naval Air Systems Command (NAVAIR) acquisitions. The documentation streamlining methodology was developed under the guidance of the Department of Defense (DOD) Directive 5000.43 "Acquisition Streamlining" dated 15 January 1986. This directive establishes the policy for streamlining solicitation and contract requirements by specifying contract requirements in terms of the results desired, precluding premature application of specifications and standards, tailoring contract requirements and limiting the mandatory requirements contained within referenced documents. Documentation streamlining, one aspect of acquisition streamlining, is a direct application of the last element of DOD Directive 5000.43. The process of streamlining a standardization document provides a detailed definition of the established requirements. The methodology ensures that the desired products, processes and quality are maintained.

A streamlined document may contain information which has been extracted from appropriate reference documents. A streamlined document, which contains references, identifies all documents essential to acquisition in an appendix. The appendix is part of the streamlined document. The appendix lists the applicability (pertinent portions) of the referenced documents to the streamlined document.

The return on investment for this program is a significant reduction in acquisition costs through improved definition of product/process requirements, the elimination of unnecessary requirements and document review, and identification of the mandatory requirements contained within referenced documents. This standardized information eliminates the labor intensive process which both the contractor and the procuring activity repeat on each new contract: the re-identification of the applicability of tier references to each procurement specification.

3. Documentation streamlining should not be confused with tailoring a contract. Tailoring contract requirements is a separate aspect of DOD Directive 5000.43. When a streamlined document is invoked in a contract, the streamlined document may still need tailoring. Documentation streamlining adds clarification and visibility to the requirements already cited in the document. When this document is invoked in a contract, it may contain a requirement which is not needed (i.e. Type II material cannot be used). In such a case, the requirement must be tailored out for this contractual application. A streamlined document facilitates tailoring of lower tier documents by listing all required lower tier documents, and the associated applicability, in a streamlining appendix which is a mandatory part of the document.

4. This handbook may be used as a procedural manual to perform documentation streamlining. It should be used by personnel who prepare documents (i.e. military and federal specifications and standards). This handbook should be used to supplement the instructions outlined in MIL-STD-961 "Military Specifications and Associated Documents, Preparation of" and MIL-STD-962 "Military Standards, Handbooks, and Bulletins, Preparation of" when preparing standardization documents.

5. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commanding Officer, Naval Air Engineering Center, Systems Engineering and Standardization Department, Code 53, Lakehurst, NJ 08733-5100 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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1. SCOPE

1.1 Scope. This handbook provides guidance for the implementation of documentation streamlining.

1.2 Purpose. The purpose of documentation streamlining is to reduce acquisition costs through improved definition of product/process requirements; elimination of unnecessary requirements and document review; and identification of the mandatory requirements contained within referenced documents which are cited in, and tiered to, standardization documents utilized in NAVAIR acquisitions.

2. APPLICABLE DOCUMENTS

This section is not applicable to the handbook.

## 3. DEFINITIONS

3.1 Definitions. The words defined below are used extensively throughout this handbook. Some of the definitions are unique to either streamlining or standardization and a thorough understanding of their meaning will facilitate the use of this handbook.

a. Applicability. The applicability is the pertinent portion or portions of a reference document that pertain to the zero tier document. The applicability reflects the tier-to-tier relationships between reference documents.

b. Documentation streamlining. The process of improving standardization documents through improved definition of product/process requirements, elimination of unnecessary requirements and reference document review, and identification of the mandatory requirements contained within reference documents which are cited in, and tiered to, standardization documents utilized in NAVAIR acquisitions.

c. Nth tier. The tier at which streamlining ends. Tiers below the Nth tier will not be examined during documentation streamlining. The term "Nth tier" is used in this handbook because the person performing the streamlining will determine the "cut-off" tier. The examples in this handbook use the fifth tier as the Nth (or cut-off) tier.

d. Procurement specification for a Military Specification(MS) drawing. The document used to buy the item described by an MS drawing. The procurement specification will contain information similar to that on the MS drawing, as well as performance requirements, tests, etc. The acquisition of an item specified through an MS drawing will not be streamlined until both the MS drawing and the procurement specification are streamlined. The procurement specification is not considered a reference document unless specifically cited in the Notes Section on the MS drawing.

e. Reference documents. Those documents cited in Sections 3, 4 or 5 of a document (listed in Section 2 or in an Appendix) or those documents cited on an MS drawing or in the Notes Section. A procurement specification, which is listed in the lower left hand corner of an MS drawing, is not considered a reference unless specifically cited in the Notes Section on the MS drawing.

f. Reference tree. A diagram which illustrates the tier-to-tier sequence of reference documents (i.e., the fact that document A references document B, document B references document C, etc.)(see Figure A-2).

g. Required reference documents. Referenced documents containing requirements which are essential in acquisition to insure that the product/process described by the zero tier document conforms to the specified quality, form, fit and function of the zero tier document.

h. Subsequent tiers. Documents in the second through Nth tiers comprise "subsequent tiers" to the documents in the first tier. Documents in the third through Nth tiers comprise "subsequent tiers" to the documents in the second tier, etc.

i. Tailoring. The process of evaluating individual potential requirements, of both streamlined and non-streamlined documents, to determine their pertinence and cost effectiveness for a specific system or equipment acquisition; and, modifying these requirements to ensure that each contributes to an optimal balance between need and cost. The tailoring of data requirements consists of determining the essentiality of potential CDRL items and shall be limited to the exclusion of information requirement provisions.

j. Tier of referenced documents. For documentation streamlining purposes, specifications and standards which are streamlined in accordance with the procedures of this Handbook are denoted as "zero tier" documents. Reference documents cited in a zero tier document are denoted as "first tier" references. Reference documents cited in a first tier document are denoted as "second tier" references, etc.

k. Valid documents. For documentation streamlining purposes a valid document does not require revision or amendment (for technical or format changes) and there are no documents referenced which have been cancelled without supersession.

l. Zero tier document. The zero tier document is the document undergoing the streamlining process.

## 4. GENERAL INFORMATION

4.1 Documents to streamline. Any standardization document can be streamlined. Any document which does not contain reference documents, and contains the minimum essential technical requirements, may be considered a streamlined document.

4.1.1 Document with an appendix. If a zero tier document contains an appendix which forms a mandatory part of the document and which contains reference documents, the appendix must also be streamlined in order for the zero tier document to be termed a "streamlined" document.

4.1.2 Document with a supplement. If a zero tier document contains a supplement which lists associated detail specifications, the documents in the supplement should be listed in the appendix generated through streamlining of the zero tier document (see Section 5). The applicability for each document listed in the supplement shall be "associated detail specification". There is no need to review the subsequent tiers of the associated detail specifications.

4.2 Considerations. The following criteria should be considered before streamlining:

a. Streamline documents that are valid.(see 3k.)

b. Documents which are scheduled for revision (technical/format) should be streamlined upon completion of the technical/format changes (and before issuance of the document).

4.3 Streamlining amendment/revision. A streamlining amendment or revision to the zero tier document should be prepared for each zero tier document that is streamlined. A streamlining amendment or revision may form a part of a technical amendment or revision (see 5.5).

4.3.1 Streamlined document with references. When the zero tier document contains reference documents, the streamlining amendment or revision will include additional paragraphs for Sections 2 and 6 (see 5.5). A streamlining appendix (see 5.4), which lists required documents and corresponding applicability, shall also form a part of the streamlining amendment or revision.

4.3.2 Streamlined MS drawing. When the zero tier document is an MS drawing, the streamlining amendment or revision (which contains the streamlining appendix (see 5.4.2)), should be issued to the procurement document. A revision to the MS drawing should be issued to identify that the streamlining amendment or revision was issued to the procurement document.

4.3.3 Streamlined document with no references. When the zero tier document contains no reference documents, the streamlining amendment or revision will add a statement to the front cover of the zero tier document to identify that the document has been streamlined (see 5.5.4).

## 5. DETAILED INFORMATION

5.1 First tier documents.

5.1.1 Applicability. Determine the applicability of those first tier reference documents which are required for acquisition. That is, identify for each required first tier document, the part (section, paragraph, method, test or other requirement) or parts which are referenced in the zero tier document. Prepare a general description of the applicable portion(s) of the reference documents. This description may be a paragraph or method title, method number or any other description which will identify the exact applicability of the referenced document. An entire document may be applicable. Using the applicability, determine if it is appropriate to extract information (see 5.1.3) or if a detailed reference (see 5.1.4) should be used. An illustration of how to determine the applicability of a document is presented in Appendix A.

5.1.2 "Not Required" documents. First tier reference documents which are "not required" for acquisition of the product/process specified by the zero tier document, are for use as information and guidance. Once a document has been determined to be for information and guidance only, streamlining stops along that "branch" of the reference tree. Thus, if a first tier reference is "not required", then its subsequent tiers are also "not required".

5.1.3 Information extraction. If appropriate, extract information from a first tier document and incorporate it into the zero tier document. Extraction is appropriate when it does not: change the meaning of the zero tier document, contain information which is subject to revision at a later date, jeopardize the quality of the product or process, or adversely affect the technical essence or readability of the document. Normally, extracted information should not exceed a page in length. If the extracted portion contains reference documents, these documents then become first tier reference documents in the zero tier document and must be streamlined.

5.1.4 Detailed referencing. If information extraction in accordance with 5.1.3 is not appropriate, clarify the extent to which each first tier document pertains to the zero tier document. Use paragraph titles and/or a more detailed explanation of exactly which part(s) of each document (applicability) is being referenced. Avoid vague references.

Example: Paragraph 4.6 of MIL-W-XXXXX reads:

"4.6 Humidity resistance. The coated panel shall be tested for humidity resistance in accordance with MIL-H-XX."

This is a vague reference. A more detailed reference is:

"4.6 Humidity resistance. The coated panel shall be tested for humidity resistance in accordance with Method B, Procedure 1 of MIL-H-XX."

5.2 Second through Nth tier documents. The next step in documentation streamlining is to determine, for each required first tier reference, whether the second through Nth tier reference documents, which the first tier document references, are required or not required for acquisition.

5.2.1 Applicability. An illustration of how to determine the applicability of a document is presented in Appendix A. Begin with one required first tier reference document. Examine only the portion(s) of the first tier document that has been determined to be required (i.e., section, paragraph, method, etc.). Determine if there are any reference documents (second tier) in the applicable portion(s), of the first tier reference, that are required for acquisition. If there are, prepare a description of the applicable information for these second tier documents, in the manner described by 5.1.1. Next, examine the applicable portion of one second tier document (required reference in first tier document). Determine if there are any reference documents (third tier) in the applicable portion(s), of the second tier reference, that are required for acquisition. If there are, prepare a description of the applicable information for these third tier documents. Continue in this manner, if appropriate (see 5.2.2, and 5.3), to streamline the remaining second through Nth tier reference documents. Throughout the review of second through Nth tier reference documents, consideration should always be given to the tier-to-tier relationships between reference documents (see Figure 1) (i.e., the reason why document "A" references document "B", the reason why document "B" references document "C", etc.) These tier-to-tier relationships must be clearly understood in order to properly assess the applicability of a required tier reference document, with respect to the zero tier document.

5.2.2 "Not Required" documents. If a reference document, in any tier, has been determined to be "not required" (i.e., it is for use as information and guidance in the acquisition of the product/process specified by the zero tier document), then there are no required reference documents in subsequent tiers of the "not required" document. Refer to Figure 1, for an illustration of this point.

### 5.3 Special Documents - First through Nth tier.

5.3.1 Required Rules and Classifications. If there are "Rules and Classifications" that are determined to be required, they must be listed in the Appendix (see 5.4). There is no need to review the subsequent tiers to the "Rules and Classifications".

5.3.2 Material specifications. When reviewing a specification in a subsequent tier that is used in a test that the zero tier product undergoes, and the specification is for a basic material (i.e. acetone, alcohol, steel) the material specification is required. However, it is not necessary to review the subsequent tiers to the material specification. (For example, if MIL-A-001 "Acid Test" is a required second tier reference and MIL-H-002 "Hydrochloric Acid" is a third tier reference which appears in the applicable portion of MIL-A-001, then MIL-H-002 would be required. Since MIL-H-002 is a basic material specification that is used to perform a test on the zero tier product, its subsequent tiers do not have to be reviewed.)

5.3.3 Packaging documents. Packaging documents referenced in Section 5 of a zero tier document are required. The "Applicability" of such documents should be stated as follows:

"Due to the extensive number of variables associated with packaging, applicable sections of packaging documents cannot be identified prior to acquisition. All packaging requirements of the zero tier document must be met, unless specified in the contract."

5.3.4 International Standardization Agreements. When an International Standardization Document pertains to a certain requirement(s) in a reference document and these requirements are included in the applicable portion of that reference document, the International Standardization Document must be listed in the appendix with its applicability. The applicability will be the title(s) of the section(s) which correspond to the applicable portion of the reference International Standardization Document. If the specific International Standardization Document requirement can not be determined, but there are International Standardization Documents invoked with the document, the International Standardization Document will be listed in the appendix. The applicability should be listed as "associated document". It is not necessary to review subsequent tiers of the International Standardization Document.

5.3.5 Required documents with qualification. If a required reference document contains qualification, and the applicable portion of the document is the qualified item, then streamlining can be stopped at that tier. There is no need to review the subsequent tiers (see 3h) to determine if the reference documents are required or not required for acquisition of the product/process specified by the zero tier document. The applicability will be "Any Qualified Product List (QPL) item".

5.3.6 Sampling plan documents. Sampling plan documents can only be required when they are first tier reference documents. If they appear in subsequent tiers, they are not required.

5.4 Tabulation of streamlining information. An appendix to the zero tier document will be prepared when there are documents in the first tier. An appendix may contain only first tier documents or first through Nth tier documents depending on the applicability of the reference documents. The appendix should contain information regarding which tier the document is in, which document references it, and the extent of its applicability to the zero tier document. The information specified throughout 5.4 is illustrated by the Example Amendment presented in Figure 2.

5.4.1 Appendix format. The Streamlining Appendix for the zero tier document should contain the following sections: Scope, Application, Documents and a Table titled: Required Documents and Corresponding Applicability Data. Table I, of this handbook, specifies the paragraph numbers which contain the standard information to be included in the streamlining appendix for different document types.

TABLE I. MIL-HDBK-800(AS) Paragraphs for a streamlining appendix.

Document Type	MIL-HDBK-800(AS) Paragraph Numbers		
	Scope	Application	Documents
Military or Federal Specification or Standard	5.4.1.1	5.4.1.2	5.4.1.3
MS Drawing <sup>1</sup>	5.4.2.1	5.4.2.2	5.4.2.3

<sup>1</sup>NOTE: The streamlining appendix for an MS drawing is issued as part of the procurement specification.

5.4.1.1 Scope. The scope of the Appendix should be as follows <sup>2</sup>:

"10.1 Scope. This Appendix is a list of documents referenced in (DOCUMENT #) or tiered to documents referenced in (DOCUMENT #). These documents have the same status as those referenced directly in (DOCUMENT #) (first tier documents). This Appendix is a mandatory part of this specification. The information contained herein is intended for compliance."

5.4.1.2 Application. The Appendix should contain an Application paragraph as follows:

"10.2 Application. This Appendix identifies the applicability of the documents referenced in (DOCUMENT #) or tiered to documents referenced in (DOCUMENT #) through the (NTH) tier. Only that portion(s) of a document, listed in Table I of this Appendix and described in the "Applicability" column, is pertinent in the use of (DOCUMENT #). If (DOCUMENT #) is tailored in acquisition, this Appendix must also be tailored."

5.4.1.3 Documents. The documents paragraph of the Appendix should be as follows:

"20.1 Documents. The documents listed herein and corresponding applicability data have been identified as required. All other documents referenced through tiering are not considered required and may be used for guidance and information."

5.4.2 Appendix format for MS drawings. The Streamlining Appendix for a zero tier document which is an MS drawing (issued to the procurement specification) should contain the following sections.

<sup>2</sup>In all standard paragraphs, the proper information pertaining to the specific document being streamlined shall be inserted for all underlined, parenthetical remarks. (See 6.1.)

5.4.2.1 Scope. The scope of the Appendix should be as follows:

"10.1 Scope. This Appendix is a list of documents referenced in (MS DRAWING #) or tiered to documents referenced in (MS DRAWING #). These documents have the same status as those referenced directly in (MS DRAWING #) (first tier documents). This Appendix is a mandatory part of (MS DRAWING #) and (PROCUREMENT DOCUMENT #) (when used to procure the item described by (MS DRAWING #)). The information contained herein is intended for compliance."

5.4.2.2 Application. The Appendix should contain an Application paragraph as follows:

"10.2 Application. This Appendix identifies the applicability of the documents referenced in (DOCUMENT #) or tiered to documents referenced in (DOCUMENT #), through the (NTH) tier. Only that portion of a document listed in Table I of this Appendix and described in the "Applicability" column, is pertinent in the use of (MS DRAWING #) and (PROCUREMENT DOCUMENT #) (when used to procure the item described by (MS DRAWING #)). If either (MS DRAWING #) or (PROCUREMENT DOCUMENT #) are tailored in acquisition, this Appendix must also be tailored."

5.4.2.3 Documents. The documents paragraph of the Appendix should be as follows:

"20.1 Documents. The documents listed herein, and corresponding applicability data have been identified as required. All other documents referenced through tiering are not considered required and may be used for guidance and information."

5.4.3 Format of streamlining information. The streamlining information should be formatted in a Table as follows:

Table I. Required documents and corresponding applicability data.

DOCUMENT NUMBER:	DOCUMENT TITLE:	APPLICABILITY:	REFERENCED BY:
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5.4.3.1 Format of streamlining information for superseded documents. When a document has been superseded, and the superseding document has been determined to be required, it should be denoted in the Table as follows:

DOCUMENT NUMBER:	DOCUMENT TITLE:	APPLICABILITY:	REFERENCED BY:
ASTM E 290 (Replaces Method 231 of FED-STD-151)	Semi-Guided Bend Test for Ductility of Metallic Materials	Bend Test	QQ-S-766

5.4.3.2 Tier Listing. The streamlining information shall be listed for each first tier reference, followed by the corresponding second through Nth tier references, as follows:

First Tier (# OF # DOCUMENTS) (ex. 2 of 8 Documents)

- Second Tier
- Third Tier
- Fourth Tier
- Fifth Tier
- Nth Tier

5.4.3.2.1 Guidance and Information Only. The following statement (adapted to suit) should be inserted at the end of each tier listings:

"The remaining (# OF TIER) tier references, tiered to (FIRST TIER DOCUMENT #) are for guidance and information."

5.4.3.3 Applicability Column Options. When the applicability (pertinent portion) of a reference document contains several options (two methods, several types, etc.) the applicability should be worded to allow for the selection of an option(s). When either of several reference documents can be used, for the same applicability, all must be listed in the Appendix and each footnoted as follows:

1/ The applicable portion(s) of either of (REFERENCE DOCUMENT #s) may be used.

5.4.3.4 Applicability for supplement documents. The applicability for documents cited in a supplement should be listed as "associated detail specification"

5.5 Streamlining amendment/revision information. The information in 5.5.1 and 5.5.2, in addition to the streamlining Appendix (see 5.4), should be part of a streamlining amendment/revision to the zero tier document. Table II specifies how to incorporate the streamlining information into the zero tier document. Table III specifies the paragraph numbers of the standard information to be included in Sections 2 and 6 of a streamlined document.

TABLE II. Incorporation of streamlining data.

Type of Document	How to Incorporate Streamlining Data
Military or Federal Specification	Issue Amendment or Revision
Military or Federal Standard (Book Form)	Issue Notice or Revision
MS Drawing	Issue Revision (excluding Appendix)
Procurement Document	See applicable type of document

TABLE III. MIL-HDBK-800(AS) paragraphs for Sections 2 and 6 of zero tier document.

Reference Documents listed in Appendix	MIL-HDBK-800(AS) Paragraph Numbers		
	Section 2 Streamlining	Section 6 Streamlining	Section 6 Tailoring
First Tier Documents Only	5.5.1.1	5.5.2	5.5.2
First - Nth Tier Documents	5.5.1.2	5.5.2	5.5.2

5.5.1 Section 2. One of the following Section 2 (Applicable Documents Section) Streamlining paragraphs (5.5.1.1 or 5.5.1.2) should be used in the Streamlining amendment/revision.

5.5.1.1 Streamlining (First Tier). The following Section 2 streamlining paragraph should be used when a streamlined document contains a Streamlining Appendix which lists only first tier reference documents (i.e., documents cited in Section 2 of the streamlined document) as "required for acquisition":

"2.- Streamlining. This document has been streamlined. Appendix (LETTER DESIGNATOR) to (DOCUMENT #) lists those documents required for acquisition and is a mandatory part of (DOCUMENT #). All other documents, referenced through tiering, may be used as guidance and information to supplement (DOCUMENT #)."

5.5.1.2 Streamlining (First through Nth Tiers). The following Section 2 streamlining paragraph (adapted to suit) should be used when a streamlined document contains a Streamlining Appendix which lists first and subsequent tier reference documents as "required for acquisition".

"2.- Streamlining. This document has been streamlined. Appendix (LETTER DESIGNATOR) to (DOCUMENT #) lists those documents required for (DOCUMENT #) acquisition and is a mandatory part of (DOCUMENT #). Those documents listed in Appendix (LETTER DESIGNATOR) have the same status as those referenced directly in (DOCUMENT #) (first tier documents). All other documents, referenced through tiering, may be used as guidance and information to supplement (DOCUMENT #)."

5.5.2 Section 6. The following Section 6 (Notes Section) streamlining paragraphs (adapted to suit) should be used in the streamlining amendment/revision when a document contains a Streamlining Appendix.

"6.- Streamlining. For (DOCUMENT #) acquisitions, the required portions of all (DOCUMENT #) tier reference documents shall be limited to the portion(s) described in the "Applicability" column of Table I in Appendix (LETTER DESIGNATOR)."

"6.- Tailoring. When (DOCUMENT #) is tailored in an acquisition, Appendix (LETTER DESIGNATOR) must be tailored accordingly. In particular, when Appendix (LETTER DESIGNATOR) is tailored, specific attention must be given to the chain of referencing. For example, if a first tier reference document in (DOCUMENT #) is tailored out, all of the reference documents which are tiered to that first tier reference document must also be tailored out."

5.5.3 Streamlining amendment/revision for an MS drawing. If the zero tier document is an MS drawing, the streamlining amendment/revision (which contains the streamlining information) (see 5.4 and 5.5) should be issued to the procurement document. A revision to the MS should be issued to identify that the streamlining amendment/revision was issued to the procurement document. The following statement (adapted to suit) should be added to the MS drawing during the amendment/revision:

"This document has been streamlined. The Streamlining Appendix is contained in the revision/amendment to (PROCUREMENT DOCUMENT #)."

5.5.3.1 Streamlining amendment/revision to a procurement specification. When a Streamlining Appendix for an MS drawing is issued to the procurement specification, the following additional paragraphs to Section 2 and Section 6 should be included (adapted to suit) in the streamlining amendment/revision.

"2.- Streamlining. MS (# AND TITLE), a document used in (PROCUREMENT DOCUMENT #) procurements, has been streamlined. Appendix (LETTER DESIGNATOR) to (PROCUREMENT DOCUMENT #) lists those documents required for procurement of (MS DRAWING #) items using (PROCUREMENT DOCUMENT #) and forms a mandatory part of (PROCUREMENT DOCUMENT #) when procuring (MS DRAWING #) items."

"6.- Streamlining. For (MS DRAWING #) acquisitions, using (PROCUREMENT DOCUMENT #) the required portions of all (MS DRAWING #) tier reference documents shall be limited to the portions described in the Applicability column of Table I in Appendix (LETTER DESIGNATOR) to (PROCUREMENT DOCUMENT #)."

"6.- Tailoring. When (MS DRAWING #) and (PROCUREMENT DOCUMENT #) are tailored in an acquisition, Appendix (LETTER DESIGNATOR) must be tailored accordingly. In particular, when Appendix (LETTER DESIGNATOR) is tailored, specific attention must be given to the chain of referencing. For example, if a first tier reference document in (MS DRAWING #) is tailored out, all of the reference documents which are tiered to that first tier reference document must also be tailored out."

5.5.4 Streamlining amendment/revision for a document with no reference documents. If the zero tier document contains no reference documents, only the minimum essential requirements, and is technically current, then an amendment/revision should be issued to add the following statement to the bottom of the front page of the document.

"(DOCUMENT #) is a streamlined document."

6. NOTES

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

6.1 Standard required paragraphs. When an insertion of a document number, title, etc., into a standard paragraph is necessary, it appears as a capitalized and underlined, parenthetical remark.

Preparing Activity:

Navy - AS

(Project No. SDMP-N004)

Discussion of FIGURE 1: Figure 1 illustrates that MIL-P-555 (second tier reference) has been determined to be a "required" reference of MIL-A-123 (first tier reference), with respect to MIL-P-9876 (zero tier document). MIL-F-1001 (third tier reference) has been determined to be a "not required" reference of MIL-P-555, with respect to MIL-P-9876 (via the tier-to-tier relationships between MIL-P-555, MIL-A-123 and MIL-P-9876). As a result, MIL-M-222 and MIL-P-712 (fourth tier references) and MIL-B-85, MIL-S-196 and MIL-M-24 (fifth tier references) are also "not required" references.

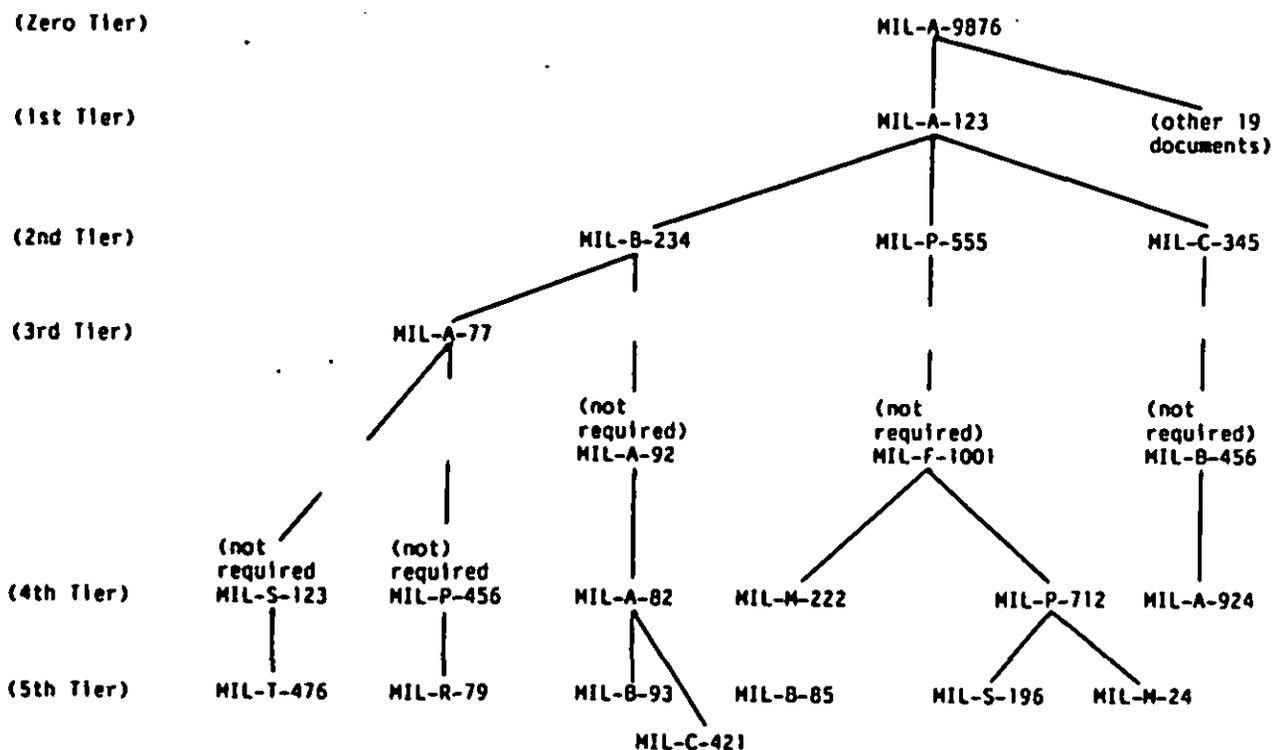


FIGURE 1. REFERENCE TREE FOR MIL-P-9876.

NOTE: This draft, dated April 1988, prepared by the Systems Engineering and Standardization Department, Naval Air Engineering Center, has not been approved and is subject to modification. DO NOT USE FOR ACQUISITION PURPOSES. (Project No. 1680-XXXX)

MIL-P-8651  
AMENDMENT 2  
SUPERSEDING  
AMENDMENT 1  
22 January 1973

### MILITARY SPECIFICATION

#### PLATES: IDENTIFICATION AND MODIFICATION (FOR AIRCRAFT), INSTALLATION OF

This amendment forms a part of Military Specification MIL-P-8651, dated 5 June 1967, and is approved for use by all Departments and Agencies of the Department of Defense.

#### PAGE 1

Add the following paragraph:

2.2 Streamlining. This document has been streamlined. Appendix A to MIL-P-8651 lists those documents required for MIL-P-8651 acquisition and is a mandatory part of MIL-P-8651. Those documents listed in Appendix A have the same status as those referenced directly in MIL-P-8651 (first tier documents). All other documents, referenced through tiering, may be used as guidance and information to supplement MIL-P-8651.

#### PAGE 3

3.4.1.3, after the third sentence, insert:

"If the part number of an assembly is changed as a result of a modification, serialization of the new parts shall begin with number 1. However, if rework of the superseded parts is contemplated, serialization of the new parts shall be consecutive with the superseded part. Alternatively, a letter may be incorporated in the new part serial number, to preclude duplication of serial numbers if superseded parts are worked to the new part configuration."

1 of 9

AMSC N/A

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

FSC 1680

Add the following paragraph:

4.2 Streamlining. For MIL-P-8651 acquisitions, the required portions of all MIL-P-8651 tier reference documents shall be limited to the portion(s) described in the "Applicability" column of Table I in Appendix A.

Add the following paragraph:

4.3 Tailoring. When MIL-P-8651 is tailored in an acquisition, Appendix A must be tailored accordingly. In particular, when Appendix A is tailored, specific attention must be given to the chain of referencing. For example, if a first tier reference document in MIL-P-8651 is tailored out, all of the reference documents which are tiered to that first tier reference document must also be tailored out.

Add Appendix as follows:

## APPENDIX A

### STREAMLINING INFORMATION

#### 10. SCOPE

10.1 Scope. This Appendix is a list of documents referenced in MIL-P-8651 or tiered to documents referenced in MIL-P-8651. These documents have the same status as those referenced directly in MIL-P-8651 (first tier documents). This Appendix is a mandatory part of this specification. The information contained herein is intended for compliance.

10.2 Application. This Appendix identifies the applicability of the documents referenced in MIL-P-8651 or tiered to documents referenced in MIL-P-8651 through the fifth tier. Only that portion(s) of a document listed in Table I of this Appendix and described in the "Applicability" column, is pertinent in the use of MIL-P-8651. If MIL-P-8651 is tailored in acquisition, this Appendix must also be tailored.

#### 20. DOCUMENTS

20.1 Documents. The documents listed herein and corresponding applicability data have been identified as required. All other documents referenced through tiering are not considered required and may be used for guidance and information.

TABLE I. Required documents and corresponding applicability data.

DOCUMENT NUMBER:	DOCUMENT TITLE:	APPLICABILITY:	REFERENCED BY:
<u>First Tier (1 of 1 document)</u>			
MS27253	Plate, Identification	Entire document	MIL-P-8651
<u>Second Tier</u>			
QQ-S-766 <sup>1</sup>	Steel, Plates, Sheets and Corrosion Resisting	Class 321 Requirements	MS27253
AMS 5510 <sup>1</sup> (Replaces Type 321 of MIL-S-6721)	Steel Sheet, Strip and Plate Corrosion and Heat Resistant 18Cr-10.5Ni-0.40Ti (SAE 30321) Solution Heat Treated	Requirements and Quality Assurance of SAE 30321	MS27253
QQ-A-250/1 <sup>1</sup>	Aluminum 1100, Plate and Sheet	Requirements and Quality Assurance of 1100 Series Aluminum	MS27253
MIL-P-6906	Plates, Identification, Aircraft	Procurement	MS27253
The remaining second tier references, tiered to MS27253, are for guidance and information.			
<u>Third Tier</u>			
ASTM A 262	Detecting Susceptibility to Intergranular Attack in Stainless Steels	Practice E	AMS 5510
ASTM A 370	Mechanical Testing of Steel Products	Tensile and bend test	AMS 5510

<sup>1</sup>The applicable portion of either QQ-S-766, AMS 5510, or QQ-A-250/1 may be used.

FIGURE 2. Example Amendment (Continued)

TABLE I. Required documents and corresponding applicability data (continued).

DOCUMENT NUMBER:	DOCUMENT TITLE:	APPLICABILITY:	REFERENCED BY:
ASTM E 8 (Replaces method 2118 of FED-STD-151)	Tension Testing of Metallic Materials	Tension test	QQ-S-766
ASTM E 10 (Replaces method 242 of FED-STD-151)	Brinell Hardness of Metallic Materials	Brinell Hardness	QQ-S-766
ASTM E 18 (Replaces method 243 of FED-STD-151)	Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials	Rockwell Hardness	QQ-S-766
ASTM E 290 (Replaces method 231 of FED-STD-151)	Semi-Guided Bend Test for Ductility of Metallic Materials	Bend test	QQ-S-766
ASTM E 353	Chemical Analysis of Stainless, Heat Resisting, Maraging, and Other Similar Chromium-Nickel- Iron Alloys	Analysis of Carbon, Manganese, Silicon, Phosphorous, Sulfur, Chromium, Nickel, Molybdenum, Copper, and Nitrogen	AMS 5510
AMS 2248	Chemical Check Analysis Limits, Wrought Corrosion and Heat Resistant Steels and Alloys, Maraging and Other Highly Alloyed Steels and Iron Alloys	Composition Variation limits for Carbon, Manganese, Silicon, Phosphorous, Sulfur, Chromium, Nickel, Titanium, Molybdenum, Copper, and Nitrogen	AMS 5510

FIGURE 2. Example Amendment (Continued)

TABLE I. Required documents and corresponding applicability data (continued).

DOCUMENT NUMBER:	DOCUMENT TITLE:	APPLICABILITY:	REFERENCED BY:
AMS 2350	Standards and Test Methods	Applicable issues of other documents	AMS 5510
FED-STD-151	Metals, Test Method	Method 112	AMS 5510
QQ-A-250	Aluminum and Aluminum Alloy, Plate and Sheet, General Specification For	Heat treatment, Chemical analysis and Mechanical tests (tensile, bend)	QQ-A-250/1

The remaining third tier references, tiered to MS27253, are for guidance and information.

#### Fourth Tier

ASTM B 557	Tension Testing Wrought and Cast Aluminum and Magnesium Alloy Products	Tension testing of Aluminum Alloy Products	QQ-A-250
ASTM E 4	Practice for Load Verification for Testing Machines	Part A or C	ASTM E 10, ASTM E 18
ASTM E 8	Methods of Tension Testing of Metallic Materials	Tension test	ASTM A 370
ASTM E 50	Practices for Apparatus, Reagents, and Safety Precautions for Chemical Analysis of Metals	Safety precautions, purification of oxygen; Reagent No.: 5, 8A, 8B, 10, 13, 102, 104, 117, 121, 122, 133, 137 and Apparatus 3A, 3B, 8.	ASTM E 353

FIGURE 2. Example Amendment (Continued)

TABLE I. Required documents and corresponding applicability data (continued).

DOCUMENT NUMBER:	DOCUMENT TITLE:	APPLICABILITY:	REFERENCED BY:
ASTM E 60	Practice for Photometric Methods for Chemical Analysis of Metals	Photometers and photometric practice	ASTM E 353
ASTM E 83	Practice for Verification and Classification of Extensometers	Class B2 and C	ASTM E 8, ASTM A 370
ASTM E 290	Semi Guided Bend Test for Ductility of Metallic Materials	Bend test	QQ-A-250
ASTM E 350	Methods for Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicone Electrical Steel, Ingot Iron and Wrought Iron	Analysis of Manganese (Periodate Photometric Method), Phosphorous (Molybdenum Blue Photometric Method), Sulfur (Gravimetric or Combustion-Iodate Titration Method), Silicon (Gravimetric Method), Copper (Sulfide-Precipitation Electro-Deposition Gravimetric or Neocuprine Photometric Method), and Total Carbon (Combustion-Gravimetric or Combustion Thermal Conductivity Method)	ASTM E 353
ASTM E 351	Method for Chemical Analysis of Cast Iron All Types	Analysis of Total Carbon (Gravimetric Method) and Copper (Neocuprine Method)	ASTM E 353

FIGURE 2. Example Amendment (Continued)

TABLE I. Required documents and corresponding applicability data (continued).

DOCUMENT NUMBER:	DOCUMENT TITLE:	APPLICABILITY:	REFERENCED BY:
ASTM E 352	Methods for Chemical Analysis of Tool Steels and Other Similar Medium and High-Alloy Steels	Analysis of Manganese, Phosphorous, Sulfur (Gravimetric Method) and Copper (Neocuprine Method)	ASTM E 353
FED-STD-151	Metals, Test Methods	Methods 111, 112.	QQ-A-250
MIL-H-6088	Heat Treatment of Aluminum Alloys	Heat Treatment of 1100 Series Aluminum	QQ-A-250

The remaining fourth tier references, tiered to MS27253, are for guidance and information.

Fifth Tier

ASTM B 557	Tension Testing Wrought and Cast Aluminum and Magnesium-Alloy Products	Tensile Test (for response to heat treatment)	MIL-H-6088
ASTM E 4	Methods of Verification of Testing Machines	Testing machines and loading range and Part A or C	ASTM B 557
ASTM E 10	Brinell Hardness of Metallic Materials	Hardness Test (for response to heat treatment)	MIL-H-6088
ASTM E 18	Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials	Hardness Test (for response to heat treatment)	MIL-H-6088

FIGURE 2. Example Amendment (Continued)

TABLE I. Required documents and corresponding applicability data (continued).

DOCUMENT NUMBER:	DOCUMENT TITLE:	APPLICABILITY:	REFERENCED BY:
ASTM E 50	Practices for Apparatus, Reagents and Safety Precautions for Chemical Analysis of Metals	Safety precautions, purification of oxygen, Reagent No.: 104, 129, 131, 132, 135 and Apparatus No.: 1, 3A and 13	ASTM E 350
ASTM E 60	Practice for Photometric Methods for Chemical Analysis of Metals	Photometers and Photometric practices	ASTM E 350, . ASTM E 351, and ASTM E 352
ASTM E 83	Methods of Verification and Classification of Extensometers	Class B2	ASTM B 557
ASTM E 350	Methods for Chemical Analysis of Carbon Steel, Low Alloy Steel, Silicone Electrical Steel, Ingot Iron and Wrought Iron	Analysis of Total Carbon (Combustion Gravimetric Method) and Copper (Neocuprine Photometric Method)	ASTM E 351
MIL-STD-1537	Electrical Conductivity Test for Measurement of Heat Treatment of Aluminum Alloys, Eddy Current Method	Calibration of Eddy Current Equipment	MIL-H-6088
MIL-S-10699	Salts, Heat Treating (for Metals)	Class of Salt Bath (if salt bath is used)	MIL-H-6088

The remaining fifth tier references, tiered to MS27253, are for guidance and information.

FIGURE 2. Example Amendment (Continued)

MIL-P-8651  
AMENDMENT 2

Custodians:

Army - AV  
Air Force - 26

Preparing activity:

Navy - AS  
(Project No. 1680-XXXX)

Review activities:

Air Force - 84

Figure 2. Example Amendment

## APPENDIX A

## APPLICABILITY DETERMINATION

10. SCOPE.

10.1 Scope. This Appendix illustrates the process of determining the applicability of reference documents; the "how-to" of streamlining. This Appendix is not a mandatory part of this specification. The information contained herein is intended for guidance.

20. PROCEDURE

20.1 Example. The process of determining the applicability of reference documents will be illustrated using MIL-C-8779 "Color, Interior, Aircraft, Requirements for," as the zero tier document. The format for the illustration will be excerpts from actual reference documents in conjunction with a narrative. Reference will be made to Figure A-1, the Streamlining Check-Off Sheet. Figure A-2, a partial reference tree for MIL-C-8779 should be examined frequently, to understand the tier-to-tier relationship being discussed.

20.2 Procedure.

- a. Review a zero tier document by completing Steps 1-4 of the Streamlining Check-Off Sheet.
- b. Step 5 of the Check-Off Sheet (Figure A-2). Choose a first tier reference to start the streamlining process. For this example MIL-P-7788 "Panels, Information, Integrally Illuminated" was chosen. To determine "How is the first tier document referenced?" an examination of the zero tier document is necessary.

Excerpt from MIL-C-8779 (zero tier document) which references MIL-P-7788:

"3.5.1.3.1 Control Panels. The exposed surfaces and edges of control panels mounted in consoles, pedestals or elsewhere shall be per scheme selected from Table II and finished as follows:

- a. Integrally illuminated lighting plates in accordance with MIL-P-7788.

NOTE: When a control panel color other than black or gray is selected, the contrast ratios specified in MIL-P-7788 shall be adjusted by the acquiring activity to compensate for the reduced contrast of the other colors."

- c. Concurrently with the examination of the zero tier document, Step 6 of Figure A-2, the determination of the applicability, can be performed.

## APPENDIX A

Applicability for first tier document MIL-P-7788:

"Finish Requirements: Including Surface Coating, Colors, Marking, Contrast of Finishes and Gloss"

d. Steps 7-10 of Figure A-2 can be performed now. In this streamlining effort it was determined that incorporation of the pertinent portions of MIL-P-7788 into the zero tier document was not feasible. MIL-P-7788 was referenced accurately and clearly, therefore detailed referencing was not necessary.

e. Step 11 of Figure A-2. "Are there any documents referenced in the applicable portion of the first tier reference?"

Portion of MIL-P-7788 (first tier document) described by the applicability:

" 3.4.3 Finish.

3.4.3.1 Surface coating. Except for the markings, those areas required for lighting functions, and the circuit board in Type V panels; all surfaces of each panel shall be coated with the same opaque material of the color specified in 3.4.3.2 for the background of the front of the panel.

3.4.3.2 Colors. The background of the front side of each black panel shall be finished with black. The background of the front side of each gray panel shall be finished with gray. The markings on each panel shall be finished with white, except prominence stripes, which shall be finished with yellow. The external finish of any lampholder and attaching hardware shall correspond to the background color of the panel excluding circuit board.

3.4.3.3 Marking. The markings on the panel shall conform to MIL-M-18012. The marking shall not be deeper than 0.005 inch. All markings shall be sharply defined and readable when viewed at any angle up to and including 60 degrees from the normal to the plane of the front face of the panel.

3.4.3.4 Contrast of finishes. The daylight contrast between markings and background on the panel shall be determined with the panel lighting system inoperative. Contrast (C) is defined as:

$$C = \frac{B_2 - B_1}{B_1}$$

where  $B_1$  is the average brightness of the background immediately surrounding the marking and  $B_2$  is the average brightness of the marking. The contrast value determined shall be at least 9 for black panels and 2.5 for gray panels.

APPENDIX A

3.4.3.5 Gloss. The gloss of the background of the panel shall not exceed 5 units when measured by the American Society for Testing Materials Standard Method D523 (60°).<sup>11</sup>

There are two reference documents in the applicable portion of MIL-P-7788 (MIL-M-18012 and ASTM D 523) which may be required documents. No other documents tiered to MIL-P-7788 need to be examined (See Figure A-1) since they do not appear in the applicable portion.

f. Steps 12-15 of Figure A-2 should be carried out for both MIL-M-18012 and ASTM D 523 similar to the methods outlined in parts b-e of Appendix A.

## Streamlining Review should include:

1. \_\_\_\_\_ Check all first tier references. Have any been cancelled without replacement? If yes, stop streamlining.
2. \_\_\_\_\_ Identify the technical plans for the document. If it is to be revised within the year, put streamlining action on hold until coordination draft is complete.
3. \_\_\_\_\_ Check through the document to see if Section 2 is accurate (all documents referenced in Sections 3, 4 and 5 only are listed). Eliminate those documents that don't belong. Add those documents that do belong.
4. \_\_\_\_\_ Become familiar with your document. Read it!

Applicability determination (to be done for each and every first tier document).

5. \_\_\_\_\_ How is the first tier document referenced?
6. \_\_\_\_\_ Is there any particular part of the document referenced? If so, this is the applicability (pertinent portion). Determine this by examining both the zero tier document and the first tier reference.
7. \_\_\_\_\_ Check all instances where the document is referenced.
8. \_\_\_\_\_ If there isn't a particular part referenced, identify the pertinent portions.
9. \_\_\_\_\_ Can the pertinent portions be incorporated into the zero tier document? (Remember--do not incorporate information which will be subject to revision at a later date.)
10. \_\_\_\_\_ Can detailed referencing be used to clarify applicability?

Applicability determination (to be done for each and every 2nd through 5th tier document).

11. \_\_\_\_\_ Are there any documents referenced in the applicable portion of the first tier reference?
12. \_\_\_\_\_ How is the document referenced?
13. \_\_\_\_\_ Is there any particular part of the document referenced? If so, this is the applicability (pertinent portion).

Figure A-1. Streamlining Check-Off Sheet.

14. \_\_\_\_\_ Check all instances where the document is referenced.
15. \_\_\_\_\_ If there isn't a particular part referenced, identify the pertinent portions.

## Amendment/Revision information.

16. \_\_\_\_\_ Section 2 paragraph (adapted to suit)
17. \_\_\_\_\_ Section 6 paragraphs (adapted to suit)
18. \_\_\_\_\_ Include detailed referencing changes.
19. \_\_\_\_\_ Appendix: Scope, Application and Documents paragraphs (adapted to suit).
20. \_\_\_\_\_ Appendix information using the following sequence to compile the appendix information.

Table I. Required Documents and Corresponding Applicability Data.

Document No.:	Document Title:	Applicability:	Referenced By:
First tier (1st document)			
Second tier	(all documents for first "1st tier" document)		
Third tier			
Fourth tier			
Fifth tier			
First tier (2nd document)			
Second tier	(all documents for second "1st tier" document)		
Third tier			
Fourth tier			
Fifth tier			
First tier (3rd document)			
Second tier			
Third tier			
Fourth tier			
Fifth tier			
Continue for all 1st tier documents			

Figure A-1. Streamlining Check-Off Sheet (cont.).

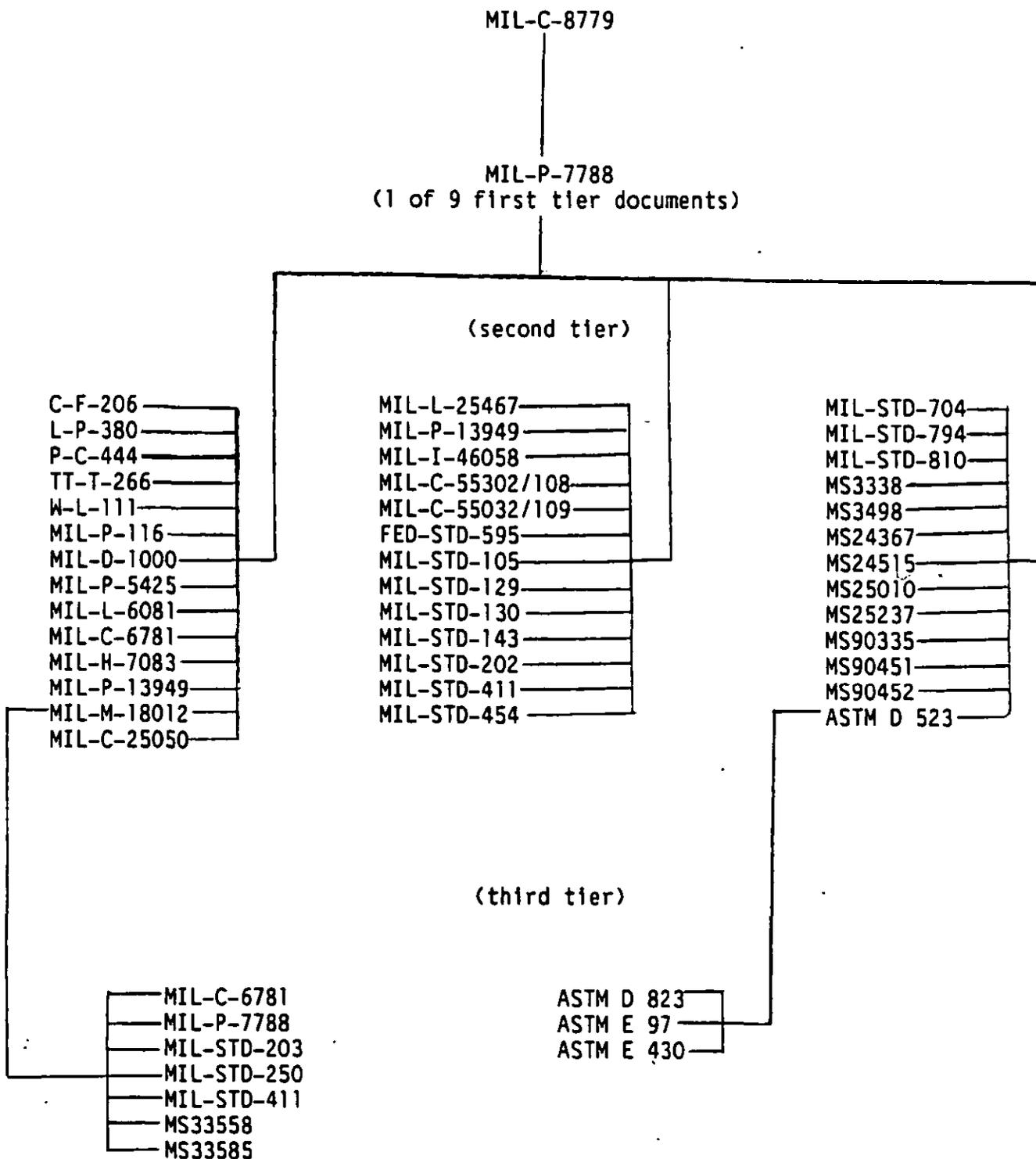


Figure A-2. Partial Reference Tree for MIL-C-8779.

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER

MIL-HDEK-800

2. DOCUMENT TITLE

DOCUMENTATION STREAMLINING

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION (Mark one)

VENDOR

USER

MANUFACTURER

OTHER (Specify): \_\_\_\_\_

3b. ADDRESS (Street, City, State, ZIP Code)

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER (Last, First, MI) - Optional

7b. WORK TELEPHONE NUMBER (Include Area Code) - Optional

8. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional

9. DATE OF SUBMISSION (YYMMDD)