

**NOT MEASUREMENT
SENSITIVE**

**MIL-STD-804C
30 APRIL 1990**

**SUPERSEDING
MIL-STD-804B
15 AUGUST 1966**

MILITARY STANDARD

**FORMATS AND CODING OF APERTURE, CAMERA,
COPY, AND TABULATING CARDS**



AMSC N/A

AREA EDRS

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FOREWORD

1. This standard is approved for use by all Departments and Agencies of the Department of Defense.
2. User comments (recommendations, corrections, additions, deletions, etc.) for improving this standard are invited. Mail the comments to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-ED-T0, Fort Monmouth NJ 07703-5000. The preferred medium for providing comments is utilization of a Standardization Document Improvement Proposal, DD Form 1426. A sample, with the Preparing Activity (PA) information entered, is located at the end of this standard. If a DD Form 1426 is not available, a letter will suffice.
3. Contractors (potential bidders and engineering data providers), DoD users, and other Government agencies are cautioned that some requirements and the relationship to the previous issue are located throughout the standard. It is necessary to read the entire standard (text, tables, and examples). The tables and examples are for clarification or expansion of some text paragraphs. The relevancy of any text paragraph or table depends on the engineering data being addressed. The figures are representative and may or may not be the actual size in use.
4. The user communities must understand this standard or any standard can only reflect the practices and procedures that are in use in today's market place. MIL-STD-804C does this for the official DoD medium for engineering data. Today's digital image world (i.e., evolving and emerging technologies), as addressed, within the DoD Computer-Aided Acquisition and Logistics Support (CALs) community cannot be driven by the requirements of this standard. When the DoD officially adopts a CALS medium or any other new medium for engineering data, only then can MIL-STD-804C or some other standard (new/revised) address the requirements of the new medium. Until then, do not intermingle today's official engineering data medium (i.e., microfilm - image card combination) with any future medium. To do so will only confuse and create controversy within today's engineering data operational functions.
5. MIL-STD-804C is one in a series of documents or publications (Government and non-Government) associated with the microfilming of engineering data. MIL-STD-804C addresses the tabulation (keypunching) of selected engineering data elements. MIL-STD-804C is included in the EDRS (formerly EDMS) Standardization Area. Relevant publications in related areas (e.g., CMAN, DRPR, GDRQ, IPSC, ILSS, QCIC, etc.) should not be overlooked.
6. Significant changes have been made to this standard. These changes reflect current DoD cost cutting measures.

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1. SCOPE

1.1 Purpose. This standard addresses the official DoD formats, tabulating cards, hollerith codifications, and data field tabulations related to engineering data.

1.2 Application. The tabulated data (cards) are used to store, reproduce, distribute, and interchange official engineering data. The selected format is at the option of each services' procuring activity.

1.3 Card identification. The identification of the cards that are addressed in this standard are:

DD Form 1309 - Model or Type Designation Card. An example is provided at Figure 1.

DD Form 1310 - Part and Drawing Number Card. An example is provided at Figure 2.

DD Form 1562 - Dual Purpose Engineering Document Card. An example is provided at Figure 3. The DD Form 1562 is a series of 15 unique unprocessed cards. The cards are referred to as camera, aperture, and copy. The individual card identities are:

Camera Card - DD Form 1562A

Aperture Cards - DD Form 1562B, C, D, E, F, and G

Copy Cards - DD Form 1562H, H(O), H(P), I, I(O), I(P), J, and K

The D, E, F, J, and K cards are associated with classified engineering data. Camera and aperture cards are buff in color. Copy cards are salmon, except the H(P) and I(P) cards which are blue.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this standard to the extent specified herein. The issues are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto. Unless otherwise specified, additional specifications, standards, and handbooks are those cited in the solicitation.

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DD FORM 1309 1 APRIL 60		DRAWING NUMBER		MODEL OR TYPE DESIGNATION		CODE IDENT. NR.	445
<div style="text-align: center;">  <p>MODEL OR TYPE DESIGNATION CARD (CARD CODE-D)</p> </div>							
DRAWING NUMBER		CODE IDENT. NUMBER		MODEL OR TYPE DESIGNATION		CODE IDENT. NR.	445
0	1	2	3	4	5	6	7
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
01011111	01011111	01011111	01011111	01011111	01011111	01011111	01011111
02022222	02022222	02022222	02022222	02022222	02022222	02022222	02022222
03033333	03033333	03033333	03033333	03033333	03033333	03033333	03033333
04044444	04044444	04044444	04044444	04044444	04044444	04044444	04044444
05055555	05055555	05055555	05055555	05055555	05055555	05055555	05055555
06066666	06066666	06066666	06066666	06066666	06066666	06066666	06066666
DRAWING NUMBER				MODEL OR TYPE DESIGNATION			
CODE IDENT. NUMBER				MODEL OR TYPE DESIGNATION			
DRAWING NUMBER				MODEL OR TYPE DESIGNATION			
CODE IDENT. NUMBER				MODEL OR TYPE DESIGNATION			
DRAWING NUMBER				MODEL OR TYPE DESIGNATION			
CODE IDENT. NUMBER				MODEL OR TYPE DESIGNATION			
DRAWING NUMBER				MODEL OR TYPE DESIGNATION			
CODE IDENT. NUMBER				MODEL OR TYPE DESIGNATION			

FIGURE 1. Example of a DD Form 1309

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DD FORM 1562-B

FILE NUMBER	TYPE OF DOC	DOCUMENT NUMBER	SERIAL LETTER	REV. SHEET	NO. OF SHEETS	NO. OF CARDS	CARD NR	NR OF CARDS	SIZE	CON. ACTV	CODE NUMBER	SEC. CLASS
000000000000000000	00	000000000000000000	00	00	00	00	00	00	00	00	000	000
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	11	111111111111111111	11	11	11	11	11	11	11	11	111	111
22 23 24 25 26 27 28 29 30 31 32 33 34 35 36	22	222222222222222222	22	22	22	22	22	22	22	22	222	222
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	33	333333333333333333	33	33	33	33	33	33	33	33	333	333
53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68	44	444444444444444444	44	44	44	44	44	44	44	44	444	444
69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84	55	555555555555555555	55	55	55	55	55	55	55	55	555	555
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00	66	666666666666666666	66	66	66	66	66	66	66	66	666	666



**DUAL PURPOSE
ENGINEERING DOCUMENT
CARD**

CARD CODE-H UPPER LEGENDS
CARD CODE-T LOWER LEGENDS

REVISOR

REVISIONS

NO. OF SHEETS

NO. OF CARDS

SIZE

CON. ACTV

CODE NUMBER

SEC. CLASS

IMAGE PLANE-BACK

IMAGE PLANE-FACE

U.S. PAT. NOS. 2,512,106; 2,587,022 PRINTED IN U.S.A.

FIGURE 3. Example of a DD Form 1562

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SPECIFICATIONS

MILITARY

- MIL-M-9868D - Microfilming of Engineering Documents, 35mm Requirements For
- MIL-M-38761A - Microfilming and Photographing Engineering Data, Preparation Of

STANDARDS

MILITARY

- MIL-STD-1806 - Marking Technical Data Prepared by or for the Department of Defense

HANDBOOKS

MILITARY

- MIL-HDBK-331D - Directory of DoD Engineering Data Repositories

2.1.2 Other Government publications. The following publication forms a part of this standard to the extent specified herein. Unless otherwise specified, other Government publications are those cited in the solicitation.

- DoD Cataloging Handbook H4/H8 - Commercial and Government Entity (CAGE) Codes

2.2 Non-Government publications. The following publications form a part of this standard to the extent specified herein. The publications have been adopted and are listed in the DoDISS. Unless otherwise specified, non-Government publications not listed in the DoDISS are those cited in the solicitation.

ASSOCIATION FOR INFORMATION AND IMAGE MANAGEMENT (AIIM)

- AIIM TR2 - Glossary of Micrographics
- ANSI/AIIM MS32 - Microrecording of Engineering Source Documents on 35mm Microfilm

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- ANSI X3.11-1969 - Specification for General Purpose Paper Cards for Information Processing

2.3 Order of precedence. In the event of a conflict between the text of this standard and the references cited herein, the text of this standard takes precedent. Nothing in this standard, however, supersedes applicable laws and regulations unless a written waiver has been obtained.

(The referenced military specifications, standards, and handbooks, and the non-Government publications can be ordered from: STANDARDIZATION DOCUMENTS ORDER DESK, Bldg 4D, 700 Robbins Avenue, Philadelphia PA 19111-5094. The referenced DoD cataloging handbook can be ordered from: DLSC-JCC, Federal Center, Battle Creek MI 49017-3084.)

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3. DEFINITIONS

3.1 Terms. Definitions for terms used in this standard can be found in Section 6 of Military Specification, MIL-M-38761A and a non-Government Technical Report, AIIM TR2. Terms that require additional clarification or are not listed in MIL-M-38761A and AIIM TR2 are explained here.

WARNING: The term "aperture card(s)" is used generically to mean all cards identified within this standard, whether processed or unprocessed. Do not confuse or improperly intermingle the generic term with the following tabulating, aperture, camera, copy, and image card definitions.

Tabulating card. A card on which engineering data elements are entered by utilizing punched holes that can be sensed by a machine for sorting, collating, listing, or totaling purposes.

Aperture card. An unprocessed tabulating card that contains an aperture (rectangular hole) specifically designed for the subsequent insertion of a developed frame of silver halide camera microfilm.

Camera card. An unprocessed tabulating card whose aperture contains undeveloped silver halide camera microfilm.

Copy card. An unprocessed tabulating card whose aperture contains undeveloped sensitized diazo microfilm, not camera microfilm.

Image card. A completely processed aperture, camera, or copy card. A completely processed card must have eye readable header information, be keypunched, and its aperture must contain a microimage. So, an image card is created when: (1) a frame of developed silver halide camera microfilm is inserted in the aperture of an unprocessed aperture card; (2) exposing and developing the camera microfilm in an unprocessed camera card; or (3) using an unprocessed copy card to reproduce an existing image card (i.e., a processed camera, copy, or aperture card).

Microimage. An image located within a developed frame of microfilm too small to be read without magnification. The image usually depicts textual or drawing sheet information. Military Specification MIL-M-9868D(2) and ANSI/AIIM Standard MS-32 provide detailed microimage information.

Aperture. The rectangular hole portion of an aperture, camera, copy, or image card. (See Paragraph 5.6.20)

Engineering data. Those data, regardless of form or characteristic, required to define a design or process that can be used to produce, support, operate, test, or inspect a product or a service. Examples of the kinds of engineering data that may be microfilmed are: logic diagrams, tooling data, parts list,

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electrical circuits, wiring board patterns, test methods, engineering drawings, computer printouts, performance characteristics, manufacturer processes, blueprints, and so forth.

WARNING: The above engineering data definition may be commonly referred to as data, technical data, drawing, level 3, product data, and other similar terms. The identified examples are not all inclusive.

3.2 Acronyms. Acronyms used in this standard are spelled out here. These acronyms may or may not be spelled out in the applicable text paragraph.

ADPE - Automated Data Processing Equipment

AIIM - Association for Information and Image Management

AMSC - Acquisition Management Systems Control

AMSDL - Acquisition Management Systems and Data Requirements Control List

ANSI - American National Standards Institute

CAGE - Commercial and Government Entity

NOTE: The CAGE code acronym has replaced former acronym FSCM (Federal Supply Code for Manufacturers). FSCM may be referenced in some relevant publications.

CALS - Computer-Aided Acquisition and Logistics Support

CMAN - Configuration Management

DIA - Defense Intelligence Agency

DID - Data Item Description

DLA - Defense Logistics Agency

DMA - Defense Mapping Agency

DNA - Defense Nuclear Agency

DoD - Department of Defense

DoDISS - Department of Defense Index of Specifications and Standards

DRPR - Drawing Practices

ECO - Engineering Change Order

ECP - Engineering Change Proposal

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EDRS - Engineering Data Reproduction Systems

NOTE: The EDRS acronym has replaced former acronym EDMS (Engineering Data Micro-Reproduction Systems). EDMS may be referenced in some relevant publications.

et seq - and the following

FAR - Federal Acquisition Regulation

FMS - Foreign Military Sale

FOI - Freedom of Information

GDRQ - General Design Requirements

GPLR - Government Purpose License Rights

ILSS - Integrated Logistics Support Standards

IPSC - Information Processing Standards for Computer

NASA - National Aeronautics and Space Administration

PA - Preparing Activity

QCIC - Quality Control/Assurance and Inspection

TR - Technical Report

USC - United States Code

4. GENERAL REQUIREMENTS

4.1 Scope. Paragraphs (4.2 through 4.5) address card stock, card construction, card striping, overprint markings, hollerith coding, commonly used terms, and keypunch entries.

4.2 Card stock. The paper quality and card size for all cards addressed within this standard shall be in accordance with ANSI Standard X3.11-1969.

4.2.1 Card construction. All cards that contain unclassified information shall have their upper left corner diagonally cut. All DD Form 1562 cards (camera, aperture, and copy) shall also have their other three corners rounded. DD Form 1309 and DD Form 1310 cards shall not have their corners rounded. All DD Form 1562 cards that contain classified information shall not have their upper left corner diagonally cut nor have their other three corners rounded.

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4.3 Card striping. Camera master cards (i.e., cards used as the record copy of data) must contain processed Type I, Class 1, camera microfilm as defined within Military Specification, MIL-M-9868D. To help a user recognize an unclassified camera master card (DD Form 1562A or G), these cards shall have horizontally across the entire length of their face above the 12 row, a nominal 0.250 inch yellow stripe. The yellow dye must also adhere to the card's top edge (i.e., after striping the final color of the top edge must also be yellow). To help a user recognize a classified camera master card (DD Form 1562F), in addition to the yellow stripe, this card shall also have horizontally across the entire length of its face and back between the 0 and 1 row, a nominal 0.250 inch red stripe. Copy cards (DD Form 1562J or K) used to make reproductions of cards containing classified information shall have the red stripe but not the yellow stripe. Copy cards (DD Form 1562H or I) used to make reproductions of cards containing unclassified information are not striped.

4.3.1 Special card use. When applicable, unclassified cards (DD Form 1562B and C) and classified cards (DD Form 1562D and E) are used as a duplicate camera master card (dup negative). The B and C cards are not striped. The D and E cards have the red stripe but not the yellow stripe.

4.3.2 Overprint markings. Copy cards (DD Form 1562H(0) or I(0)) are only used for engineering data reproductions associated with a Foreign Military Sale (FMS). Columns 1-21 between rows 0-6 on the face of these H(0) and I(0) cards shall have the following overprinted in boldface: "This information is furnished upon the condition that it will not be released to another nation without specific authority of the Department of the (enter Air Force, Army, or Navy) of the United States, that it will be used for military purposes only, that individual or corporate rights originating in the information be provided substantially the same degree of security afforded it by the Department of Defense of the United States." Copy cards (DD Form 1562H(P) or I(P)) are only used for engineering data reproductions associated with a public law (e.g., FOI (Freedom of Information)). Columns 1-21 between rows 0-6 on the face of these H(P) and I(P) cards shall have the following overprinted in boldface: "WARNING - This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C. Section 2751 et seq) or Executive Order 12470. Violators of these export control laws are subject to severe criminal penalties. Dissemination of this document is controlled under DoDD 5230.25."

4.3.3 Other markings. As directed by each service's procuring activity or by individual repository operational procedures, the following markings may or may not be necessary:

a. A card that contains classified information requires its security classification (Confidential, Secret, Top Secret) to be hand stamped on its face above the 0 row and below the 8 row between column location 54 through 76 (i.e., above and below the microfilm); the top and bottom of the card's back must also be hand stamped.

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b. When an unclassified card contains information that the DoD only has limited rights to, hand stamping the term "Limited Rights" only on the card's face may be necessary as described above in Paragraph 4.3.3a.

c. A classified card's associated security information (e.g., downgrading, control number, dissemination limitation, etc.) may require that this type of information be machine or hand printed on the card's back side.

d. When machine printed manufacturer identification information is located at the bottom of a card's front side, it may also include a maximum of eight additional characters in the right edge space.

4.4 Hollerith codes. Applicable hollerith codes are listed in Table I and shall be accordingly keypunched.

TABLE I. APPLICABLE HOLLERITH CODES

CHARACTER	NOUN	KEYPUNCH	CHARACTER	NOUN	KEYPUNCH
&	Ampersand	12	D	Letter D	12-4
.	Period or Decimal Point	12-3-8	E	Letter E	12-5
(Left (Opening) Parentheses	12-5-8	F	Letter F	12-6
-	Dash or Hyphen	11	G	Letter G	12-7
\$	Dollar Sign	11-3-8	H	Letter H	12-8
*	Asterisk	11-4-8	I	Letter I	12-9
)	Right (Closing) Parentheses	11-5-8	J	Letter J	11-1
/	Slant or Virgule	0-1	K	Letter K	11-2
,	Comma	0-3-8	L	Letter L	11-3
#	Number Symbol	3-8	M	Letter M	11-4
@	At Sign	4-8	N	Letter N	11-5
0	Zero	0	O	Letter O	11-6
1	One	1	P	Letter P	11-7
2	Two	2	Q	Letter Q	11-8
3	Three	3	R	Letter R	11-9
4	Four	4	S	Letter S	0-2
5	Five	5	T	Letter T	0-3
6	Six	6	U	Letter U	0-4
7	Seven	7	V	Letter V	0-5
8	Eight	8	W	Letter W	0-6
9	Nine	9	X	Letter X	0-7
A	Letter A	12-1	Y	Letter Y	0-8
B	Letter B	12-2	Z	Letter Z	0-9
C	Letter C	12-3			

4.4.1 Commonly used graphic characters. Commonly used graphic characters shall be keypunched as shown in Table II.

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TABLE II. COMMONLY USED GRAPHIC CHARACTERS

CHARACTER	NOUN	KEYPUNCH
%	Percent	PCT
"	Inch or Inches	IN
'	Foot or Feet	FT
o	Degree	DEG
-	Minus	M
+	Plus	P
±	Plus or Minus	PORM

4.4.2 Commonly used terms. Commonly used terms shall be keypunched as shown in Table III.

TABLE III. COMMONLY USED TERMS

TERM	KEYPUNCH	TERM	KEYPUNCH
Alteration	ALT	Ounce (ounces)	OZ
Amendment	AMEND	Paragraph	PARA
Assembly	ASSY	Part	PT
Class	CL	Parts List	PL
Data List	DL	Pattern	PATT
Degree	DEG	Percent	PCT
Design	DSGN	Piece	PC
Detail	DET	Pound (pounds)	LB
Figure	FIG	Revision	REV
Foot (feet)	FT	Section	SECT
Grade	GD	Series	SER
Group	GR	Sheet	SH
Inch (inches)	IN	Size	SZ
Index List	IL	Sketch	SK
Mark	MK	Style	STY
Materiel List	ML	Sub-Assembly	SUBASSY
Model	MD	Through	THRU
Modification	MOD	Type	TY

4.5 Keypunch entries. Keypunch entries shall be as follows:

a. Entries shall not have any open spaces (e.g., 6190 Assembly 29 would be keypunched as 6190ASSY29).

b. Roman numerals must be converted to an arabic (e.g., Mark VII or Type III would be keypunched as MK7 or TY3).

c. Entries shall be left justified and the unused spaces shall be blank unless specified otherwise within Paragraphs 5.6.1 through 5.6.28.

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5. DETAILED REQUIREMENTS

5.1 Scope. The following paragraphs (5.2 through 5.6.28) will address card formats (D, E, H and T), print interpretations (eye readable header), and individual data fields.

5.2 DD Form 1309 (Card Format D). When appropriate, the DD Form 1309 is used as a supplemental card. Specifically, to identify equipment type or model designations that may be associated with a camera master card (i.e., a record copy of data). Key punch DD Form 1309 cards per the following:

- a. Prefix letters (columns 1 and 2) see 5.6.23.
- b. Drawing number (columns 3-17) see 5.6.2f.
- c. Code identification number (columns 18-22) see 5.6.3.
- d. Model or type designation (columns 23-49) see 5.6.24.
- e. Distribution statement letter (column 50) see 5.6.8.
- f. Card code (column 51) see 5.6.15.
- g. Security classification (column 52) see 5.6.16.
- h. Open (columns 53-77) see WARNING at end of 5.6.20.
- i. Open (columns 78-80) see 5.6.9.

5.3 DD Form 1310 (Card Format E). When appropriate, the DD Form 1310 is used as a supplemental card. Specifically, to identify and cross-reference part (dash) numbers or part (whole) numbers that may be associated with a camera master card (i.e., a record copy of data). Key punch DD Form 1310 cards per the following:

- a. Prefix letters (columns 1 and 2) see 5.6.23.
- b. Part number (columns 3-17) see 5.6.25.
- c. Code identification number (columns 18-22) see 5.6.3.
- d. Drawing number (columns 23-48) see 5.6.2d and 5.6.2e.
- e. Beginning or end code (column 49) see 5.6.26.
- f. Distribution statement letter (column 50) see 5.6.8.
- g. Card code (column 51) see 5.6.15.
- h. Security classification (column 52) see 5.6.16.

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- i. Open (columns 53-77) see WARNING at end of 5.6.20.
- j. Open (columns 78-80) see 5.6.9.

5.4 DD Form 1562 (Card Format H/T). DD Form 1562 cards are used to store or reproduce microimages of any kind of engineering data. The intent of the lower legends is to carry only microimages of engineering drawings. Whether upper or lower legends are used is at the option of the procuring activity. The upper legends are in effect for "H" formatted cards and the lower legends are in effect for "T" formatted cards.

- a. Key punch "H" formatted cards (upper legends) per the following:
 - (1) Type of document (columns 1 and 2) see 5.6.1.
 - (2) Document number (columns 3-17) see 5.6.2.
 - (3) Code identification number (columns 18-22) see 5.6.3.
 - (4) Revision letters (columns 23 and 24) see 5.6.4.
 - (5) Kind of accompanying document (columns 25 and 26) see 5.6.5.
 - (6) Accompanying document number (columns 27-33) see 5.6.6.
 - (7) Accompanying document revision letter (column 34) see 5.6.7.
 - (8) Distribution statement letter (column 35) see 5.6.8.
 - (9) Open (columns 36-38) see 5.6.9.
 - (10) Card number (columns 39-42) see 5.6.10.
 - (11) Number of cards (columns 43-46) see 5.6.11.
 - (12) Rights (column 47) see 5.6.12.
 - (13) EDRS control activity code (columns 48 and 49) see 5.6.13.
 - (14) Drawing size (column 50) see 5.6.14.
 - (15) Card code (column 51) see 5.6.15.
 - (16) Security classification (column 52) see 5.6.16.
 - (17) Revised code (column 53) see 5.6.17.
 - (18) Image Plane-Back (column 53) see 5.6.18.
 - (19) Image Plane-Face (column 53) see 5.6.19.

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- (20) Aperture location (columns 54-76) see 5.6.20.
- (21) Camera microfilm (column 77) see 5.6.21.
- (22) Rejected card (column 77) see 5.6.22.
- (23) Sheet/Page number (columns 78-80) see 5.6.27.

WARNING: When purchasing official engineering data (H format) in the image card medium, all Air Force procuring activities must include a copy of a 30 Apr 89 contractual document titled "Product Medium and Delivery Requirements" with the contractual documentation. The 30 Apr 89 document, Paragraph 4, defines the Air Force exceptions to MIL-STD-804B, Paragraph 5.1.9a. A copy of the 30 Apr 89 document is at Appendix A. Because MIL-STD-804C, Paragraph 5.4a updates former MIL-STD-804B, Paragraph 5.1.9a, after formal printing and distribution of 804C, the 30 Apr 89 document will be accordingly updated.

b. Key punch "T" formatted cards (lower legends) per the following:

- (1) Type of document (columns 1 and 2) see 5.6.1.
- (2) Document number (columns 3-17) see 5.6.2.
- (3) Code identification number (columns 18-22) see 5.6.3.
- (4) Sheet number (columns 23-25) see 5.6.27.
- (5) Revision letters (columns 26 and 27) see 5.6.4.
- (6) Number of sheets (columns 28-30) see 5.6.28.
- (7) Open (columns 31-34) see 5.6.9.
- (8) Distribution statement letter (column 35) see 5.6.8.
- (9) Open (columns 36-46) see 5.6.9.
- (10) Rights (column 47) see 5.6.10.
- (11) EDRS control activity code (columns 48 and 49) see 5.6.13.
- (12) Drawing size (column 50) see 5.6.14.
- (13) Card code (column 51) see 5.6.15.
- (14) Security classification (column 52) see 5.6.16.
- (15) Revised code (column 53) see 5.6.17.

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- (16) Image Plane-Back (column 53) see 5.6.18.
- (17) Image Plane-Face (column 53) see 5.6.19.
- (18) Aperture location (columns 54-76) see 5.6.20.
- (19) Camera microfilm (column 77) see 5.6.21.
- (20) Rejected card (column 77) see 5.6.22.
- (21) Open (columns 78-80) see 5.6.9.

5.5 Print interpretation. The keypunch columns shall be interpreted and printed in the eye readable header (print row) on the card's face. The print row contains 60 interpreter locations. The various print locations for D, E, H, and T formatted cards are identified in Tables IV, V, VI, and VII.

TABLE IV. D CARD PRINT LOCATIONS

KEYPUNCH COLUMN	DATA FIELD	PRINT LOCATION
1-2	Prefix Letters	1-2
3-17	Drawing Number	4-18
18-22	Code Identification Number	54-58
23-49	Model or Type Designation	23-49
50	Distribution Statement Letter	52
51	Card Code	Does Not Print
52	Security Classification	60
78-80	Open	20-22

TABLE V. E CARD PRINT LOCATIONS

KEYPUNCH COLUMN	DATA FIELD	PRINT LOCATION
1-2	Prefix Letters	1-2
3-17	Part Number	4-18
18-22	Code Identification Number	54-58
23-48	Drawing Number	23-48
49	Beginning or End Code	51
50	Distribution Statement Letter	52
51	Card Code	Does Not Print
52	Security Classification	60
78-80	Open	20-22

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TABLE VI. H CARD PRINT LOCATIONS

KEYPUNCH COLUMN	DATA FIELD	PRINT LOCATION
1-2	Type of Document	1-2
3-17	Document Number	4-18
18-22	Code Identification Number	54-58
23-24	Revision Letter(s)	19-20
25-26	Kind of Accompanying Document	22-23
27-33	Accompanying Document Number	25-31
34	Accompanying Document Revision Letter	32
35	Distribution Statement Letter	43
36-38	Open	44-46
39-42	Card Number	34-37
43-46	Number of Cards	38-41
47	Rights	50
48-49	EDRS Control Activity Code	51-52
50	Drawing Size	42
51	Card Code	Does Not Print
52	Security Classification	60
53	Image Plane-Back or Face	Does Not Print
77	Camera Microfilm or Rejected	Does Not Print
78-80	Sheet or Page Number	47-49

TABLE VII. T CARD PRINT LOCATIONS

KEYPUNCH COLUMN	DATA FIELD	PRINT LOCATION
1-2	Type of Document	1-2
3-17	Document Number	4-18
18-22	Code Identification Number	54-58
23-25	Sheet Number	22-24
26-27	Revision Letter(s)	19-20
28-30	Number of Sheets	25-27
31-34	Open	28-31
35	Distribution Statement Letter	43
36-46	Open	32-42
47	Rights	50
48-49	EDRS Control Activity Code	51-52
50	Drawing Size	46
51	Card Code	Does Not Print
52	Security Classification	60
53	Image Plane-Back or Face	Does Not Print
77	Camera Microfilm or Rejected	Does Not Print
78-80	Open	47-49

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5.6 Data fields. A detailed explanation for each data field is provided in Paragraphs 5.6.1 through 5.6.28. A data field may be applicable on one or more of the cards.

5.6.1 Type of document. When applicable, the following codes listed in Table VIII may be punched in this field, otherwise leave blank. Additional codes may be used when directed by the procuring activity.

TABLE VIII. TYPE OF DOCUMENT CODES

Keypunch	Document
DL	Data List (Drawing Sheets or Textual Documents)
EL	Equipment List
GL	Gauge List
IL	Index List
ML	Material List
PL	Parts List
RL	Running List
WL	Wiring List
1N <u>1/</u>	Revision Notice

1/ Only keypunch Code 1N when the notice is filmed as an accompanying document (i.e., Code NT is punched in columns 25-26) or the notice will drive a future revision to a basic document. (See Paragraph 5.6.5.)

5.6.2 Document number. The document number reference shall be punched in this field. Typical examples of a document number are:

a. When a document number reference is associated with a drawing's size or revision designator (e.g., an A size drawing, Revision C that is identified as 12-1234). The correct keypunch entry would be 12-1234. If the size designator is an integral character of the drawing number (e.g., A12-1234), the correct keypunch entry would be A12-1234. If a revision designator is an integral character of the drawing number (e.g., 12-1234C), the correct keypunch entry would be 12-1234C.

b. When a document number reference is associated with a drawing that has a multiple part number designation (e.g., Series 40, Part Number NAS-4-8), the correct keypunch entry would be SER40NAS-4-8.

c. When a document number reference is associated with an engineering data listing (i.e., Data List (DL), Index List (IL), or Parts List (PL)) and the designator (DL, IL, or PL) is an integral character of the list's identity (e.g., PL1234), the correct keypunch entry would be PL1234.

d. When a document number reference is associated with a drawing that has a series of whole number designations (e.g., 123456 through 123490), the correct keypunch entry would be the first number 123456. NOTE: DD Form 1310 (E cards) may also be necessary. (See Paragraph 5.3.)

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e. When a document number reference is a part number (e.g., 679543) that also lists additional details as dash numbers (e.g., 679543-1 through -50), the correct keypunch entry would be the part number 679543. NOTE: DD Form 1310 (E cards) may also be necessary. (See Paragraph 5.3.)

f. When a document number reference is an equipment type or model designation (e.g., Model 12) that also lists additional details as a series of alpha configurations (e.g., Model 12A, 12B, etc.), the correct keypunch entry would be M012. NOTE: DD Form 1309 (D cards) may also be necessary. (See Paragraph 5.2.)

g. When a document number reference is associated with a military sheet form specification (e.g., MS948A) or with a commercial specification (e.g., D-6953), the correct keypunch entries would be MS948A or D-6953.

h. When a document number reference contains more than 15 characters, punch an asterisk (*) in column 17. This asterisk means the document number is incomplete. Continuation of the remaining characters may require machine or hand printing in the 11 row. The remaining characters usually begin below the eye readable asterisk and must end prior to column location 52. NOTE: This procedure is also used, when applicable, for the accompanying document number (i.e., H format, columns 27-33).

5.6.3 Code identification number. The CAGE (formerly FSCM) code of the original design activity of the document identified in columns 3-17 shall be punched in this field. CAGE codes are listed in DoD Cataloging Handbook, H4/H8.

5.6.4 Revision letter. When applicable, the revision letter(s) of the document identified in columns 3-17 shall be punched in this field, otherwise leave blank. When the revision is a single letter: (1) if "H" format is used, the letter shall be punched in column 24 and column 23 shall be blank; and (2) if "T" format is used, the letter shall be punched in column 27 and column 26 shall be blank.

5.6.5 Kind of accompanying document. When applicable, the following codes listed in Table IX shall be punched in this field. These codes are only applicable when an accompanying document is microfilmed, otherwise leave blank. An accompanying document is only microfilmed when directed by the procuring activity.

5.6.6 Accompanying document number. When applicable, the accompanying document number reference shall be punched in this field, otherwise leave blank. (See note at end of Paragraph 5.6.2h.)

CAUTION: When the procuring activity requires an ECO or ECP to be microfilmed, an accompanying document number must be punched in columns 27-33. If the ECO or ECP does not have a specific title identity (i.e., an accompanying document number), for keypunching purposes, a number must be established. The preferred number is ECO-1, ECO-2, and so forth.

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Table IX. KIND OF ACCOMPANYING DOCUMENT CODES

Keypunch	Document
AD	Addendum
AM	Amendment
AN	Annex
AP	Appendix
AR	Article
AT	Attachment
NT <u>1/</u>	Notice (safety, engineering, ECPs, ECOs, etc.)
SP	Specification (slash sheet or other similar types of associated specifications)
SU	Supplement

1/ When the notice is of a nature that will drive a future revision to a basic document, Code 1N must also be punched in columns 1-2.

5.6.7 Accompanying document revision letter. When applicable, the accompanying document revision letter shall be punched in this field, otherwise leave blank.

5.6.8 Distribution statement letter. The distribution statement letter, (A, B, C, D, E, F, or X) of the document identified in columns 3-17 shall be punched in this field. Detailed guidance for a distribution statement is addressed in Military Standard, MIL-STD-1806.

5.6.9 Open. When directed by the procuring activity, an open field may be used to punch an additional need. An open field may also be used by an individual service for an internal operational need (e.g., when the Air Force processes copy cards to make reproductions (bid sets) of master data, 01 through 99 is punched in columns 37-38. The numbers 01 through 99 identify how many bid sets were made and which bid set was mailed to a potential bidder).

5.6.10 Card number. The card number is a sequential number associated with the document identified in columns 3-17. The sequential number shall be punched in this field and, it must always be right justified with zero padding (e.g., if the card number is 20, the correct keypunch entry is 0020).

5.6.11 Number of cards. The total number of cards (frames) associated with the document identified in columns 3-17 shall be punched in this field and, it must always be right justified with zero padding.

5.6.12 Rights. The Government's rights-in-data shall be punched in this field. For keypunching purposes, this entry shall either be a U (Unlimited) or a L (Limited). A "L" must be punched when the card's microimage is associated with proprietary ownership, a GPLR (Government Purpose License Rights) agreement, or some other applicable contractual restriction. A "U" must always be punched when "L" is not applicable.

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5.6.13 EDRS control activity code. The EDRS control activity code identifies the primary repository that controls the official record copies of engineering data (i.e., stores the master cards and issues copies). The primary repository EDRS control activity code shall be punched in this field. EDRS control activity codes are listed in Military Handbook, MIL-HDBK-331D.

5.6.14 Drawing size. When applicable, the drawing size associated with the document identified in columns 3-17 shall be punched in this field.

5.6.15 Card code. As applicable, the card code (format D, E, H, or T) shall be punched in this field.

5.6.16 Security classification. The security classification of the card's microimage shall be punched in this field. The codes are listed in Table X.

TABLE X. SECURITY CLASSIFICATION CODES 1/

Keypunch	Type of Information
N	Unclassified
C	Confidential
E	Confidential - Restricted Data
H	Confidential - Formerly Restricted Data
M	Confidential - Modified Handling Authorized
S	Secret
F	Secret - Restricted Data
J	Secret - Formerly Restricted Data
T	Top Secret
G	Top Secret - Restricted Data
K	Top Secret - Formerly Restricted Data

1/ Codes N, C, S, and T should only be used on new engineering data purchases. Because Codes E, H, M, F, J, G, and K may have been used on some current master cards, they are listed here for reference purposes.

5.6.17 Revised code. When the procuring activity purchases a portion or an early version of the document identified in columns 3-17, an "11" shall be punched in this field.

5.6.18 Image plane-back. When the microfilm's emulsion layer (image plane) is located on the card's back (tape face), an "8" shall be punched in this field.

5.6.19 Image plane-face. When the microfilm's emulsion layer (image plane) is located on the card's face (tape back), a "9" shall be punched in this field.

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5.6.20 Aperture location. Horizontally between the 0 and 6 row and vertically between columns 54-76, an aperture (rectangular hole) shall be located. This hole is where unprocessed microfilm is premounted (bonded to the card) or processed microfilm is to be mounted.
WARNING: There shall be no keypunch entries in this location.

5.6.21 Camera microfilm code. All master cards (i.e., cards that contain processed Type I Class 1 film per Military Specification, MIL-M-9868D) shall have an "8" punched in this field.

5.6.22 Rejected card. When the microimage of a master card is not acceptable, an "11" shall be punched in this field.

5.6.23 Prefix letters. When applicable, the prefix letters DL (Data List), IL (Index List), or PL (Parts List) shall be punched in this field, otherwise leave blank. These prefix letters identify the applicable list; however, these lists may or may not be purchased by the procuring activity.

5.6.24 Model or type designation. The equipment type or model designation shall be punched in this field.

5.6.25 Part number. The part number (i.e., dash or whole) shall be punched in this field as follows:

a. When the dash or whole numbers associated with the document identified in columns 3-17 are assigned in a sequential order, only two "E" cards need to be processed. On the first card, punch the complete beginning part number (e.g., 679543-1) and, also punch a "B" in column 49 (see Paragraph 5.6.26). On the second card, punch the complete ending part number (e.g., 679543-50) and, also punch an "E" in column 49.

b. When the dash or whole numbers associated with the document identified in columns 3-17 are not assigned in a sequential order, as necessary, a group of separate "E" cards need to be processed. Within this group of cards, in column 49 punch a "B" on the first card, an "E" on the last card, and leave column 49 blank on the remaining cards.

5.6.26 Beginning or end code. When appropriate, the Beginning Code (B) or the End Code (E) shall be punched in this field, otherwise leave blank.

5.6.27 Sheet/page number. The sheet/page number of the document identified in columns 3-17 shall be punched in this field and, it must always be right justified with zero padding. Additionally: (1) when the document identified in columns 3-17 requires multiframe filming, the sheet/page number must be punched on all cards, not just the card that contains the first frame; and (2) when the document identified in columns 3-17 is a book form standard (i.e., 4 up filming), the sheet/page number punched on the first card shall be 001 and the remaining cards (frames) shall have the lowest sheet/page number punched (e.g., 005, 009, etc.).

5.6.28 Number of sheets. The total number of drawing sheets associated with the document number identified in columns 3-17 shall be punched in this field and, it must always be right justified with zero padding.

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6. NOTES

(This section contains information of a general or explanatory nature)

6.1 Intended use. This standard is written expressly to standardize keypunch instructions for engineering data purchased in the image card medium and for secondary distribution (copy card duplicates) of the purchased data.

6.2 Issue of DoDISS. When this standard is used in acquisition, the applicable issue of the DoDISS must be cited in the solicitation.

6.3 DID requirements. When applicable, the following Data Item Description (DD Form 1664) which is sourced to this standard must be listed on the Contract Data Requirements List (DD Form 1423), except where DoD FAR Supplement 27.475-1 exempts the DD Form 1423 requirement.

<u>Reference Paragraph</u>	<u>DID Number</u>	<u>DID Title</u>
5.4b	DI-E-5424B	Aperture/Tabulation Cards

The above DID was cleared as of the date of this standard. The current issue of DoD 5010.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL), must always be researched to make sure that only cleared DIDs are cited on a DD Form 1423.

6.4 Tailoring guidance. The DI-E-5424B DID referenced in Paragraph 6.3 is applicable only when purchasing "T" formatted engineering data. Former DID, DI-E-30143, which was applicable only for purchasing "H" formatted engineering data, has been cancelled. However, when purchasing "H" formatted engineering data, the 30 Apr 89 document at Appendix A can be used (i.e., made a part of the DD Form 1423 contractual documentation).

The following DIDs which are not sourced to this standard, when applicable, reference and use the instructions provided in this standard.

DI-DRPR-81000	DI-DRPR-81011
DI-DRPR-81001	DI-CMAN-81012
DI-DRPR-81002	DI-QCIC-81005
DI-DRPR-81003	DI-QCIC-81006
DI-DRPR-81004	DI-QCIC-81007
DI-DRPR-81008	DI-QCIC-81009
DI-DRPR-81010	DI-QCIC-81013

6.5 Changes from previous issue. Marginal notations (vertical lines or asterisks) are not used to identify changes with respect to the previous issue due to the extensiveness of the changes.

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1. The product medium shall be processed camera cards (DD Form 1562A) or aperture cards (DD Form 1562G). If classified, use aperture card DD Form 1562F. Additionally, per MIL-C-9877 paragraph 1.2, the classification of the card's microfilm carrier (tape) shall be Type 1, Class 1 (Cold Seal, Pressure Sensitive, Face mounted).
2. The requirements of MIL-M-9868, MIL-C-9877, MIL-M-38761, and MIL-STD-804 apply unless directed otherwise by the procuring activity.
3. Per MIL-M-9868, paragraph 1.2.1, the card's microfilm shall be Type I, Class 1 (Silver Halide Camera microfilm).
4. The cards shall be keypunched per MIL-STD-804 with the following changes to Paragraph 5.1.9(a). When a requirement of this paragraph is not changed, the guidance depicted applies.
 - a. Subparagraph (1) "Type of Document" (card columns 1 and 2). As appropriate, see TABLE I and punch the best code, otherwise leave blank.
 - b. Subparagraph (4) "Revision Letter(s)" (card columns 23 and 24). Punch the appropriate letter(s) per the following:
 - (1) When a document page or drawing sheet is contained in a single frame of microfilm, and this page or sheet has a revision, punch this revision letter(s).
 - (2) When a document page or drawing sheet is contained in multiple frames of microfilm, and this page or sheet has a revision, punch its revision letter(s) on each card (frame). CAUTION: Right to left filming sequence must be used unless prevented by physical limitations.
 - (3) When a multi-page document or multi-sheet drawing has each individual page/sheet contained in a single frame of microfilm, and this page/sheet has a revision, punch this revision letter(s). Each individual page/sheet may have the same, different, or no revision.
 - (4) When a multi-page document or multi-sheet drawing has two, three, or four pages/sheets contained in a single frame of microfilm, as applicable, punch the highest revision letter(s) contained in each frame (card). CAUTION. Microfilming more than one page/sheet of a multi-page document or a multi-sheet drawing in a single frame of microfilm shall not be done unless directed otherwise by the procuring activity.
 - (5) When a revision is identified with a numeric, see TABLE II and convert to an alpha.
 - c. Subparagraph (5) "Kind of Accompanying Document" (card columns 25 and 26). Add Codes "AR" (Article), "AT" (Attachment), and "1N" (Revision Notice to a Basic Document). When the accompanying document is a notice (Code NT) and, this notice will drive a future revision to a basic document, punch NT in columns 25 and 26 and 1N in columns 1 and 2. This is the only condition when Code 1N is to be used.

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d. Subparagraph (7) "Accompanying Document Revision Letter" (card column 34). When applicable, the revision letter of an accompanying document only shall be punched, otherwise leave blank.

(1) When the accompanying document revision is identified with a numeric, see TABLE II and convert to an alpha.

e. Subparagraph (8) "Open" (card column 35). Punch the appropriate distribution statement letter (A, B, C, D, E, F, or X). Additionally, print out this letter at header location 44. CAUTION: Prior to microfilming, engineering drawing sheets or document text pages must be marked with the appropriate distribution statement. For drawings, locate the marking above the title block; if not possible, locate anywhere within the drawing's borders; if not possible, locate in the lower and upper right corners of the border. For text pages, locate in upper and lower border.

f. Subparagraphs (9), (10), and (21) "Card Number" (columns 39-42), "Number of Cards" (columns 43-46), and "Page/Sheet number" (columns 78-80). The key-punching requirements for these columns are interrelated. See TABLE III, Parts 1 and 2, for the relationship.

g. Subparagraph (12) "Control Activity" (columns 48 and 49). As appropriate, punch the correct code:

<u>ACTIVITY</u>	<u>CODE</u>
OC-ALC	MF
OO-ALC	ME
SA-ALC	MB
SM-ALC	MC
WR-ALC	MG
SA-ALC (Special Weapons)	MA

h. Subparagraph (13) "Drawing Size" and "Card Code" (columns 50 and 51).

(1) Punch the appropriate "Scanning Position Code" per TABLE IV in column 50.

(2) Punch an "H" in column 51.

i. Subparagraph (15). "Revised Code" (column 53). This paragraph is not applicable.

j. Subparagraph (17) "Image Plane-Face Code" (column 53). This paragraph is not applicable.

k. Subparagraph (19). "Rejected Code" (column 77). When an individual card (frame) is a reject, gangpunch an 11 in columns 53 and 77.

l. Paragraph 5.1.9(b) "Lower Legends." This paragraph and its subparagraphs are not applicable.

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TABLE I. Document (Prefix) Codes

Code	Explanation	Code	Explanation
AL	Application/Auxiliary List	QL	Qualified Product List
AW	Art Work	RD	Redistribution List
CB	Circuit Board	RL	Running List
CC	Classification Characteristics	SD	Schematic Diagram
CP	Company Specification	SL	Specification List
CS	Company Standard	SS	System Schematic
DL	Document/Drawing List	TB	Test Bullentin
D7	Undimensioned Drawing	TD	Tool Drawing or List
EL	Equipment List	TL	Tabulating List
FL	Functional List	TP	Test Procedures
GL	Gauge List	TR	Test Requirement
IL	Index List	TS	Test Specifications
KD	Kit Drawings	UL	Usage List
LD	Logic Diagram	WB	Wiring Board or Wire Print Board
MI	Master Index List	WD	Wiring Diagram
ML	Material List	WH	Wiring Harness
MP	Master Pattern	WL	Wiring List
NC	Numerical Control Data	WT	Wire Table
NO	Nuclear Ordnance Data	1L	Acquisition Data Only
PB	Program Bulletin	2L	Maintenance Data Only
PD	Program Document	3L	Acquisition and Maintenance Data
PL	Parts List	4L	Acquisition Data Package List
QA	Quality Assurance Data		

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TABLE II. Numeric (N) to Alpha (A) Conversion Listing

N	A ^{1/}	N	A ^{1/}	N	A ^{1/}	N	A ^{1/}	N	A ^{1/}
1	A	45	BE	89	DJ	133	FN	177	HU
2	B	46	BF	90	DK	134	FP	178	HV
3	C	47	BG	91	DL	135	FR	179	HW
4	D	48	BH	92	DM	136	FT	180	HY
5	E	49	BJ	93	DN	137	FU	181	JA
6	F	50	BK	94	DP	138	FV	182	JB
7	G	51	BL	95	DR	139	FW	183	JC
8	H	52	BM	96	DT	140	FY	184	JD
9	J	53	BN	97	DU	141	GA	185	JE
10	K	54	BP	98	DV	142	GB	186	JF
11	L	55	BR	99	DW	143	GC	187	JG
12	M	56	BT	100	DY	144	GD	188	JH
13	N	57	BU	101	EA	145	GE	189	JJ
14	P	58	BV	102	EB	146	GF	190	JK
15	R	59	BW	103	EC	147	GG	191	JL
16	T	60	BY	104	ED	148	GH	192	JM
17	U	61	CA	105	EE	149	GJ	193	JN
18	V	62	CB	106	EF	150	GK	194	JP
19	W	63	CC	107	EG	151	GL	195	JR
20	Y	64	CD	108	EH	152	GM	196	JT
21	AA	65	CE	109	EJ	153	GN	197	JU
22	AB	66	CF	110	EK	154	GP	198	JV
23	AC	67	CG	111	EL	155	GR	199	JW
24	AD	68	CH	112	EM	156	GT	200	JY
25	AE	69	CJ	113	EN	157	GU	201	KA
26	AF	70	CK	114	EP	158	GV	202	KB
27	AG	71	CL	115	ER	159	GW	203	KC
28	AH	72	CM	116	ET	160	GY	204	KD
29	AJ	73	CN	117	EU	161	HA	205	KE
30	AK	74	CP	118	EV	162	HB	206	KF
31	AL	75	CR	119	EW	163	HC	207	KG
32	AM	76	CT	120	EY	164	HD	208	KH
33	AN	77	CU	121	FA	165	HE	209	KJ
34	AP	78	CV	122	FB	166	HF	210	KK
35	AR	79	CW	123	FC	167	HG	211	KL
36	AT	80	CY	124	FD	168	HH	212	KM
37	AU	81	DA	125	FE	169	HJ	213	KN
38	AV	82	DB	126	FF	170	HK	214	KP
39	AW	83	DC	127	FG	171	HL	215	KR
40	AY	84	DD	128	FH	172	HM	216	KT
41	BA	85	DE	129	FJ	173	HN	217	KU
42	BB	86	DF	130	FK	174	HP	218	KV
43	BC	87	DG	131	FL	175	HR	219	KW
44	BD	88	DH	132	FM	176	HT	220	KY

^{1/} Letters I, O, Q, S, X, and Z are not to be used.

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TABLE III. (PART 1) KEYPUNCH RELATIONSHIPS 1/

CONDITION	COLUMNS 39-42 2/ (CARD NUMBER)	COLUMNS 43-46 3/ (NUMBER OF CARDS)	COLUMNS 78-80 4/ (PAGE/SHEET NUMBER)
1 When an engineering document card is used to microfilm one text page/drawing sheet and that page/sheet is contained in a single frame of microfilm	Punch 0001	Punch 0001	Punch 001
2 When a group of engineering document cards is used to microfilm multi-page documents or multi-sheet drawings and these pages/sheets are identified as Page 1, 2, 3, 4, or Sheet A, B, C, D, and so forth and each page/sheet is contained in a single frame of microfilm	Punch 0001 for Page 1 or Sheet A Punch 0001 for Page 2 or Sheet B Punch 0001 for Page 3 or Sheet C Punch 0001 for Page 4 or Sheet D	Punch 0001 for Page 1 or Sheet A Punch 0001 for Page 2 or Sheet B Punch 0001 for Page 3 or Sheet C Punch 0001 for Page 4 or Sheet D	Punch 001 for Page 1 or Sheet A Punch 002 for Page 2 or Sheet B Punch 003 for Page 3 or Sheet C Punch 004 for Page 4 or Sheet D
3 When a group of engineering document cards is used to microfilm two or more text pages and these pages are not sequentially identified, e.g., the pages are identified as Title Page, Page i, ii, 1-1, 1.A, 1.B, 2, 2.1, 2.2, 3 and so forth and each page is contained in a single frame of microfilm	Punch 0001 for Title Page Punch 0002 for Page i Punch 0003 for Page ii Punch 0004 for Page 1-1 Punch 0005 for Page 1.A Punch 0006 for Page 1.B Punch 0001 for Page 2 Punch 0002 for Page 2.1 Punch 0003 for Page 2.2 Punch 0001 for Page 3	Punch 0006 for Title Page Punch 0006 for Page i Punch 0006 for Page ii Punch 0006 for Page 1-1 Punch 0006 for Page 1.A Punch 0006 for Page 1.B Punch 0003 for Page 2 Punch 0003 for Page 2.1 Punch 0003 for Page 2.2 Punch 0001 for Page 3	Punch 001 for Title Page Punch 001 for Page i Punch 001 for Page ii Punch 001 for Page 1-1 Punch 001 for Page 1.A Punch 001 for Page 1.B Punch 002 for Page 2 Punch 002 for Page 2.1 Punch 002 for Page 2.2 Punch 003 for Page 3

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TABLE III. (PART 1) KEYPUNCH RELATIONSHIPS (Continued) 1/

CONDITION	COLUMNS 39-42 <u>2/</u> (CARD NUMBER)	COLUMNS 43-46 <u>3/</u> (NUMBER OF CARDS)	COLUMNS 78-80 <u>4/</u> (PAGE/SHEET NUMBER)
4 When a group of engineering document cards is used to microfilm two, three, or four text pages/drawing sheets and these pages/sheets are contained in a single frame of microfilm	Punch 0001 on each card	Punch 0001 on each card	Punch 001 on the first card and punch the lowest page/sheet number contained on the next card and so forth
5 When a group of engineering document cards is used to microfilm a condition where some text pages or drawing sheets are contained in multiple frames of microfilm, e.g., sheet 1 is contained in a single frame of microfilm and sheet 2 is contained in three frames of microfilm	Punch 0001 on first card Punch 0001 on second card Punch 0002 on third card Punch 0003 on fourth card	Punch 0001 on first card Punch 0003 on second card Punch 0003 on third card Punch 0003 on fourth card	Punch 001 for the first page/sheet and Punch 002 for the second page/sheet on the second, third, and fourth cards

1/ Part 2 provides examples (graphic illustrations).

2/ As appropriate, punch the card number associated with each condition.

3/ As appropriate, punch the number of cards (microfilm frames) associated with each condition.

4/ As appropriate, punch the page/sheet number associated with each condition.







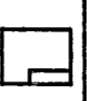




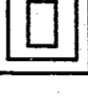





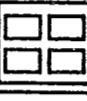





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TABLE III. (Part 2) Keypunch Relationships

<p>CONDITION 1</p> <p>Total Sheets 1</p> <p>SH A</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 SH. NO. 001</p>  </div>	<p>CONDITION 3</p> <p>Total Pages 10</p> <p>Title Page</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0006 PG. NO. 001</p>  </div> <p>PG. 1</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0002 NO. OF CARDS 0006 PG. NO. 001</p>  </div> <p>PG. II</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0003 NO. OF CARDS 0006 PG. NO. 001</p>  </div> <p>PG. 1-1</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0004 NO. OF CARDS 0006 PG. NO. 001</p>  </div>
<p>CONDITION 2</p> <p>Total Sheets 4</p> <p>SH A</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 SH NO. 001</p>  </div> <p>SH B</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 SH NO. 002</p>  </div> <p>SH C</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 SH NO. 003</p>  </div> <p>SH D</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 SH NO. 004</p>  </div>	<p>PG. 1.A</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0005 NO. OF CARDS 0006 PG. NO. 001</p>  </div> <p>PG. 1.B</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0006 NO. OF CARDS 0006 PG. NO. 001</p>  </div> <p>PG. 2</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0003 PG. NO. 002</p>  </div> <p>PG. 2.1</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0002 NO. OF CARDS 0003 PG. NO. 002</p>  </div> <p>PG. 2.2</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0003 NO. OF CARDS 0003 PG. NO. 002</p>  </div> <p>PG. 3</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 PG. NO. 003</p>  </div>
<p>CONDITION 4</p> <p>Total Pages 16</p> <p>PGs. 1, 2, 3, 4</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 PG. NO. 001</p>  </div> <p>PGs. 5, 6, 7, 8</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 PG. NO. 005</p>  </div> <p>PGs. 9, 10, 11, 12</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 PG. NO. 009</p>  </div> <p>PGs. 13, 14, 15, 16</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 PG. NO. 013</p>  </div>	<p>CONDITION 5</p> <p>Total Sheets 2 (SHEET B MULTI-FRAME)</p> <p>SH A</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0001 SH NO. 001</p>  </div> <p>SH B, FRAME 1</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0001 NO. OF CARDS 0003 SH NO. 002</p>  </div> <p>SH B, FRAME 2</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0002 NO. OF CARDS 0003 SH NO. 002</p>  </div> <p>SH B, FRAME 3</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>CARD NO. 0003 NO. OF CARDS 0003 SH NO. 002</p>  </div>

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TABLE IV. Scanning Position Codes

Code ^{1/}	Explanation ^{2/}
A	A document/drawing, size A, 11 x 8 ^{1/2} inches ^{3/} .
B	A drawing, size B, 11 x 17 inches ^{3/} .
B	Two each, size A, documents/drawings ^{3/} .
B	Automated Data Processing Equipment (ADPE) document, size 11 x 15 inches ^{3/} .
C	A document/drawing, size A, 11 x 8 ^{1/2} inches ^{4/} .
C	A drawing, size C, 17 x 22 inches ^{3/} .
C	A drawing, size B, 11 x 17 inches ^{4/} .
C	ADPE document, size 11 x 15 inches ^{4/} .
C	Any combination of one to three size A documents/drawings ^{4/} .
C	Four each size A documents/drawings ^{3/} .
D	A drawing, size D, 22 x 34 inches ^{3/} .
E	A drawing, size E, 34 x 44 inches ^{3/} or a drawing, size F, 28 x 40 inches ^{3/} .
E	A drawing, sizes G, H, J, or K. Widths (11, 28, 34, and 40 inches) with variable lengths (22 ^{1/2} to 176 inches) ^{5/} . Additionally, include any other drawing larger than size D ^{5/} not specified above.

^{1/} Scanning position codes are associated with positioning requirements and reduction ratios (per MIL-M-9868) when the document/drawing is microfilmed.

^{2/} Document/drawing sizes and their metric equivalents (per ANSI Y14.1) have no direct relationship to the scanning position codes.

^{3/} Document/drawing centered on its X-Y axis when microfilmed.

^{4/} Document/drawing not centered on its X-Y axis when microfilmed.

^{5/} Drawing centered (using format zones) on its X-Y axis when microfilmed.

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CONCLUDING MATERIAL

Custodians:

Air Force - 16
Army - CR
Navy - AS

Preparing activity:
Army - CR

(Project EDRS0133)

Review activities:

Air Force - 11
Army - AR, MI, SC
Navy - SA, SH
DLA - GS

User/Interest activities:

Air Force - 13, 14, 18, 19, 24, 30, 70, 71, 79, 80, 82, 84, 85, 91, 99
Army - AL, AT, AV, EA, ER, GL, IE, ME
Navy - CG, EC, MC, OM, OS, TD, YD
DIA - DI
DLA - CS, ES, IS
DMA - MP
DNA - DS
NASA - NA

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL		
INSTRUCTIONS		
1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given. 2. The submitter of this form must complete blocks 4, 5, 6, and 7. 3. The preparing activity must provide a reply within 30 days from receipt of the form. NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.		
RECOMMEND A CHANGE	1. DOCUMENT NUMBER MIL-STD-804C	2. DOCUMENT DATE (YYMMDD) 900430
3. DOCUMENT TITLE Formats and Coding of Aperture, Camera, Copy, and Tabulating Cards		
4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)		
SAMPLE		
5. REASON FOR RECOMMENDATION		
6. SUBMITTER		
a. NAME (Last, First, Middle Initial)	b. ORGANIZATION	
c. ADDRESS (Include Zip Code)	d. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (if applicable)	e. DATE SUBMITTED (YYMMDD)
8. PREPARING ACTIVITY		
a. NAME Commander US Army Communications-Electronics Command	b. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (201) 532-5851 992-5851	
c. ADDRESS (Include Zip Code) ATTN: AMSEL-ED-TO Fort Monmouth NJ 07703-5000	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340	

DD Form 1426, OCT 89

Previous editions are obsolete.

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