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### MILITARY STANDARD

PACKAGING DATA FORMS
INSTRUCTIONS FOR PREPARATION AND USE OF



Packaging Data Forms, Instructions for Preparation and Use of

#### MIL-STD-834C

- 1. Recommended corrections, additions, or deletions should be addressed to Headquarters, Air Force Logistics Command, Directorate of Packaging (DSP), Wright-Patterson Air Force Base Ohio 45433.
- 2. Forms prepared in accordance with this standard should be forwarded to Aviation Supply Office (ASO) (TEP) or Item Manager (IM), Air Material Area (AMA) (DSPC).

#### FOREWORD

This standard provides general requirements and procedures to be followed for the preparation, approval and submission of the packaging data forms for parts and equipment. The data contained herein supersedes previous editions of MIL-STD-834.

### MIL-STD-8340

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# PACKAGING DATA FORMS INSTRUCTIONS FOR PREPARATION AND USE OF

#### 1. SCOPE

- 1.1 Purpose. This standard outlines procedures and provides necessary guidance and instructions which shall be used in preparation, approval, use and transmittal of packaging data utilizing codes established by MIL-STD-726.
- 1.2 Application. It is mandatory for compliance by contractors when specified in procurement documents, and will be used by military activities engaged in packaging. MIL-STD-726 and instructions contained herein shall be used for proper interpretation of coded data from which physical packaging is to be accomplished.

#### 2. REFERENCED DOCUMENTS

2.1 The issues of the following documents, in effect on the date of invitation for bids or request for proposal, form a part of this standard to the extent specified herein.

#### Governmental:

#### Specifications

#### Military

MIL-P-116	Preservation, Method of
MIL-D-1000	Drawings, Engineering and Associated Lists
MIL-P-9024	Packaging Materials Handling and Transportability System and System Segments, General Specification
	For
MTI-P-26514	Polyurethane Foam, Rigid or Flexible, For Packaging

#### Standards

#### Military

MIL-STD-100	Engineering, Drawings Practices
MIL-STD-129	Marking for Shipment and Storage
MIL-STD-490	Specification Practices
MIL-STD-726	Packaging Requirements Code
MIL-STD-794	Parts and Equipment, Procedure for Packaging and
	Packing of
MIL-STD-804	Formats and Coding of Tabulating and Aperture Cards
	for EDMS

(Application for copies should be addressed to the Superintendent of Documents, Government Printing Office, Washington, DC 20402.)

(Copies of specifications, standards, drawings and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other Publications. The following documents form a part of this standard to the extent specified herein. Unless otherwise indicated, the issues in effect on the date of invitation for bid or request for proposal shall apply.

#### Joint Military

Packaging and Handling of Dangerous Materials for Transportation by Military Aircraft (AFM 71-4, DSAM 4145.3, TM 38-250, NAVSUP PUB 505, and MCO P4030.19)

(Application for copies should be addressed to the Superintendent of Documents, Government Printing Office, Washington, DC 20402.)

#### Code of Federal Regulations

Title 14, Aeronautics and Space, Part 103

Title 46, Shipping, Parts 146-149

Title 49, Transportation, Parts 100-199

(Application for copies should be addressed to the Superintendent of Documents, Government Printing Office, Washington, DC 20402.)

#### 3. GENERAL REQUIREMENTS

#### 3.1 Development of Data

3.1.1 Selection of method of Packaging. Data submitted by contractors under this standard shall reflect level A packaging and will be selected in accordance with the requirements of MIL-STD-794. The resultant data shall be coded in accordance with MIL-STD-726. Each element of the code shall be completed, indicating the type, kind of material, or processes used. These data and codes shall be supplemented as outlined herein.

#### 3.2 Recording of Data

3.2.1 Manual Recording. Figure 1, "Preservation, Packaging and Transportation Support Data," is the manual form on which initial entry or revision to previously established and approved elements of packaging

data shall be annotated. Data shall be recorded in coded or uncoded form, or by reference to spacification(s), or transportation packaging order(s) (TPO). The contractor may, at his option, furnish the data on forms he uses for his internal operation provided there is no change in the sequence and format of figure 1.

- 3.2.2 <u>Punch Card Accounting Machine (PCAM) Recording of Data</u>. The data on the PCAM formats shall be interpreted across the top of the card. The following figures provide for PCAM application of figure 1 data.
- a. Figure 2, Interpreted Preservation and Packaging Data PCAM card.
  - b. Figure 3, Interpreted Supplemental Data PCAM Card.
- c. Figure 4, Interpreted Packaging Data for Transportation Support PCAM Card (applies to Aviation Supply Office (ASO) only).
- 3.2.3 <u>Coded Data</u>. Coded data shall be as specified in paragraph 4. If additional codes are needed to indicate another requirement, requests for approval with substantiating data, shall be forwarded to Air Force Logistics Command (DSPX) or Naval Air Systems Command (AIR-5203), Washington, DC 20306. Until the new requirement is represented by a code symbol in MIL-STD-726, Code Z or ZZ shall be used and details shown as supplemental data.
- 3.2.4 <u>Kits (Parts and Modification)</u>. Data for kits shall be prepared in the same manner as for other items. The more complex kits that require specialized treatment shall be coded Z or ZZ and details shown as supplemental data. The requirements of MIL-STD-794 shall be used in preparing and recording the "Kit Contents List." A copy of the list shall be appended to the appropriate packaging data form(s).
- 3.2.5 <u>Transportation Packaging Orders</u>. Data shall be prepared in accordance with Appendix I.
- 3.2.6 Optional Procedure Indicator. This indicator is used to provide the packager with degrees of compliance to preservation and packaging data. It will indicate whether the requirements are mandatory, stipulated for guidance based on preferred material (where suitable substitute material is equally effective) or whether there is an additional governing specification or TPO. In addition, the optional procedure indicator may be used to provide special options with respect to the use of polyurethane foam-in-place packaging (see Column 75, Table II).

- 3.2.7 Subcontractors and Vendors. The prime contractor is responsible for assuring that requirements set forth herein are complied with by his subcontractors and vendors when shipments of material are made direct to Government activities.
- 3.2.8 Intermediate Container Quantity. The intermediate container quantity shall conform to the requirements of MIL-STD-794. When the quantity specified is not compatible with the delivery schedule or quantity on order, it is permissible for the contractor to package in a lower intermediate quantity. In such instances, a revised figure 1 format need not be submitted. In no instance shall the intermediate container quantity be increased for the quantity specified without prior approval of the ASO (TEP) or IM AMA (SPC).

#### 4. DETAILED REQUIREMENTS

4.1 Preparation of preservation, packaging, and transportation support and bare items data. The detailed guidance below prescribe the procedures for inserting data on figure 1. Figure 1 is a manual multiple use form designed to reduce the amount of work necessary in compiling data relative to packaging of any given item. The form has provisions for:

Manufacturer's code and manufacturer's part number Approval stamp (reference paragraph 4.2.1.3) Configuration Item Specification Reference Item Identification Data Preservation and Packaging Data Supplemental Data Packaging Data for Transportation Support Bare Item Data

In the detailed guidance below, column numbers in the figure 1 format correspond to column numbers on the figures 2, 3, and 4 PCAM formats, and establish the sequence and position in which data shall be assembled on these formats.

- 4.1.1 Manufacturer's code and part number. Show manufacturer's code and part number for the item in the designated block on the figure 1 format.
- 4.1.2 <u>Configuration Item (reference MIL-STD-490)</u>. Show configuration item specification number for the item in the designated block on the figure 1 format when the contract requires development of a CI specification for the item.
- 4.1.3 Item identification data. The following elements of data are applicable to the identification and physical characteristics of the items and shall appear on manual and PCAM forms as indicated below.

### TABLE I - Item identification data

Column Number	Element of Data	Description	Appear on Figures 1 2 3 4 5 6
1-5	Reserved for syidentification	stem document control and numbers.	•
6-7	Aviation Supply Office (ASO) Prefix	Show assigned ASO prefix to FSN, e.g., RH, RG, RM, etc., as applicable	X X X X
8-22	Federal Stock Number	Show the identification number assigned to the item of supply (8-11 Federal Supply Class; 12-13 NATO; 14-20 Federal Item Identification Number; 21-22 Materiel Management Code or ASO Technical Supply Management Code as applicable).	<b>X X X</b>
23-28	Bare Item Net Weight	Show actual net weight of the item to the nearest one hundredth of a pound up to 9999.99 pounds. For items in excess of 9999.99 pounds, show "X" in column 23 and indicate weight in whole pounds in Columns 24-28.	х х
29-37	Item Net Dimensions	Show net dimensions of the item to the nearest inch in order by length, width, and depth. The largest diameter shall be used to indicate width/depth of cylindical items. Dimensions less than one inch show "OOL." Use zeros to fill voids, e.g., "O24," "OO1," etc.	X X
<b>38-</b> 39	Item Material and Finish	Show the appropriate group number from Tables VI, VII, VIII, IX or X of MIL-STD-794.	<b>x x</b>

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TABLE I - Item identification data (continued)

Column Number	Element of Data	Description	Appear on Figures 1 2 3 4 5 6
40	Dangerous Material	When the item is regulated by one or more of the following regulations a Code "D" will be annotated in this column: Title 14, Code of Federal Regulations, Part 103; Title 46, Code of Federal Regulations, Parts 146-149; Title 49, Code of Federal Regulations, Parts 100-199; Joint Manual AFM 71-4/ DSAM 4145.3/TM 38-250/ NAVSUP PUB 505/MCO P4030.19. DD Form 1813, Material Safety Data Sheet, will be completed if "D" is annotated in this column. When the item is not regulated by the above regulations, a Code "O" will be annotated in this column.  The following are examples	
		of material coded "D":	

Methyl Acetate - FL Sodium Bromate - Oxy M Ethyl Benzene - Comb L

#### Not Used 41-43

4.1.4 Preservation and Packaging Data. Following are the minimum elements of data which shall be developed. These data shall appear on manual and PCAM forms as indicated below.

TABLE II - Preservation and Packaging Data

Column Number	Element of Data	Descript	ion	Appear on Figures 1 2 3 4 5 6
44-45	Special Marking	Table	; MIL-STD-726	X X
46	Not Used			

TABLE II - Preservation and Packaging Data (continued)

Column Number	Element of Data	Description	Appear on Figures 1 2 3 4 5 6
47–48	Method of preservation	Select appropriate code from Tables II, IIa, IIb, and IIc respectively, of MIL-STD-726. Determination of method of preservation shall be based on one of the following:	<b>. x x</b>
	•	(a) When level A packaging conforming to MIL-P-116 is specified, the method of preservation shall be determined in accordance with Tables VI, VII, VIII, IX and X of MIL-STD-794 (Appendix D). Identify the appropriate submethod applicable to the item in accordance with MIL-P-116.	
		(b) When packaging level A in accordance with a commodity specification, or transportation packaging order, originator shall show the appropriate submethod applicable to the item according to the specification or order.	
49	Quantity per unit package	Select appropriate code from Table III of MIL-STD-726.	X X
50	Cleaning and drying procedure	Select appropriate code from Table IV of MIL-STD-726.	X X
51-52	Preservative material	Select appropriate code from Table V of MIL-STD-726.	X X
53-54	Wrap	Select appropriate code from Table VI of MIL-STD-726.	x x
55 <b>-</b> 56	Cushioning and dunnage	Select appropriate code from Table VIa of MIL-STD-726.	х х

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TABLE II - Preservation and packaging data (continued)

		Total and beginners asset (court	ilded)
Column Number	Element of Data	Description	Appear on Figures 1 2 3 4 5 6
57	Cushioning thickness	Select appropriate code from Table VIb of MIL-STD-726.	X X
<b>58-</b> 59	Unit container	Select appropriate code from Table VII of MIL-STD-726.	x x
60	Intermediate container quantity	The number of unit packages to be included in the intermediate container. Select appropriate code from Table VIII of MIL-STD-726.	<b>X</b> X
61 <b>-</b> 62	Intermediate container	Select appropriate code from Table VII of MIL-STD-726.	хх
63	Level of protection	Select appropriate code from Table IX, IXa, or IXb of MIL-STD-726. Use only level A codes. (For Navy (ASO) indicate "A".)	хх
64-65	Maximum unit package weight	Using the weight of the unit package, select the appropriate code from Table XI of MIL-STD-726. Do not use code OO. When weight falls between increments, use the code for the larger.	x x
66-67	Maximum unit package cube	Using the cube of the unit package, select the appropriate code from Table XII of MIL-STD-726. Do not use code OO. When cube falls between increments, use the code for the larger.	х х
<b>68-</b> 73	Unit container outside dimensions	Select appropriate codes from Table X, Xa, and Xb of MIL-STD-726. Do not use code OO. (Applies to Air Force only.)	x x
74	Container level	(a) Enter code "0" to denote the unit container is not an acceptable shipping container.	X X

#### TABLE II - Preservation and packaging data (continued)

Column Element Number of Data

#### Description

Appear on Figures 1 2 3 4 5 6

(b) When the unit container is an acceptable shipping container, enter highest level of protection afforded by the container from the following:

Enter "A" unit container provides level A protection.

Enter "B" unit container provides level B protection.

Enter "C" unit container provides level C protection.

Enter "Z" when container affords, or is limited to special consideration (air only, inside storage only, etc.).

75 Optional procedure indicator

Enter one of the following:

X X

- (a) Enter "A" if packaging is governed by a specific commodity specification other than that required by the method code column (47-48), or by a transportation packaging order (reference Appendix I). Show the appropriate specification or order number in the supplemental data area. The options, if any, in the specification or order, shall apply to subsequent users.
- (b) Enter "M" if all packaging data are mandatory for compliance and no substitution is permitted. Deviation from any of these elements shall have prior approval of the procuring activity.

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TABLE II - Preservation and Packaging data (continued)

Column Element Number of Data

#### Description

Appear on Figures 1 2 3 4 5 6

- (c) Enter "O" if an option can be exercised as to the submethod and packaging materials to be used. However, the basic preservation method shall be retained, requirements as indicated in supplemental data shall be complied with and unit package dimensions shall not be increased. There shall be no increased cost to the Government and equal or better protection shall be given the item. Prior approval of the procuring activity is not required under these conditions.
- (d) Optional procedures codes F, S, or R - These codes provide for special options as they apply to use of polyurethane foam-in-place for other than TPO items and will supplement the coded data. The codes relate to MIL-P-26514 and are defined as: "F" for flexible, (Type II, Class 2, Grade C), "S" for semirigid (Type II, Class 2, Grade B), and "R" for rigid foam-in-place (Type II, Class 1). These codes will sometimes require stipulation of supplemental data. If foamin-place requires a larger container than other normally acceptable packaging, (conventional) the foam-inplace container requirements will be coded in place of the conventional data. Limitations and freedoms indicated by Optional Procedure Code "O" also apply to these codes, except that two maximum

TABLE II - Preservation and packaging data (continued)

Column Number	Element of Data	Description	Appear on Figures 1 2 3 4 5 6
		container sizes may be specified; one for foam-in-place and one for other options. The second container sizes will be expressed as supplemental data.)	
76	Supplemental card indicator	Enter number of lines of supplemental data required. Enter one of the following, as appropriate:	X X
		(a) If the preservation and packaging data area contains all necessary requirements, enter code "O".	
		(b) If supplemental data are required, enter the total number of lines used, i.e., "1," "2," "3," etc. (For Navy (ASO) use only one line.)	

77-80 Not Used

#### 4.1.5 Supplemental Data

- 4.1.5.1 Air Force. These supplemental data are pertinent to the packaging process and are required in addition to that shown in the preservation and packaging data area. Supplemental data shall be recorded in concise narrative form as described below. Narrative shall show only explanatory or instructional type information which directly supplements the elements of the packaging requirements code in the preservation and packaging data area. A TPO will be developed when supplemental data does not include sufficient detail to reproduce the complete package without additional information.
- 4.1.5.1.1 A maximum of seven lines of supplemental data is permitted for any one item. If necessary supplemental data would exceed seven lines, a TPO shall be prepared in accordance with instructions in Appendix I.
- 4.1.5.2 Navy. When the preservation and packaging data area does not contain all necessary requirements, a TPO shall be prepared in accordance with instructions in Appendix I.

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### TABLE III - Supplemental

Column Number	Element of Data	Description	Ap 1	pea 2	r o 3	n Figures 4 5 6
1-4	Reserved for sy identification	estem document control and numbers.				
5	Sequence	Show alpha symbol for each line used, A, B, C, D, E, F, or G.	X		X	
6-7	Aviation Supply Office (ASO) Prefix	Show assigned ASO prefix to FSN, e.g., RH, RG, RM, etc., as applicable.	X	X	X	x
8-22	Federal Stock Number	Show the identification number assigned to the item of supply (8-11 Federal Supply Class; 12-13 NATO; 14-20 Federal Item Identification Number; 21-22 Materiel Management Code or ASO Technical Supply Management Code as applicable	x	X	X	X
23-46	Not Used					
<b>47–7</b> 5	Supplemental data	(Applies to Air Force only.) Enter data in accordance with the following: Show a maximum of 29 digits including spaces. Leave two spaces (columns) between unrelated notes and one space between words in a note. When practicable, two or more notes may appear on any one line. Following are examples of data.	X		х	
		(a) APPLY PRESERV 02 ON BARE AREA. (Note that code for appropriate preservative is selected from Table V of MIL-STD-726.)				
		(b) CUSHION ENDS WITH BD. (Note that code for appropriate material is selected from Table VIa of MIL-STD-726.)				

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#### TABLE III - Supplemental (continued)

Column Element Number of Data

#### Description

Appear on Figures 1 2 3 4 5 6

X

X

- (c) PIACE DIPSTICK IN HE BAG AND SECURE TO VALVE. (This instruction requires more than one line of supplemental data. The code for appropriate bag was selected from Table VII of MIL-STD-726.)
- (d) MIL-B-6428. (Code "A" in column 75 of essential data (see Table II) requires that applicable specification be shown in supplemental data area.)
- (e) TPO2322278. (For items packed in accordance with a TPO, phrase "TPO" shall appear in columns 47-49 of the first supplemental card ("A" card), with the TPO number following. Do not use spaces or dashes. (Code "A" in column 75 of essential data Table II herein).)
- (f) TPOMMAG5. (For items packed in accordance with a Fast Pack TPO, the phrase "TPO" shall appear in columns 47-49, "MM" in columns 50-52, and the applicable four position alpha/numeric Fast Pack identification number in columns 53-56 of the first supplemental card ("A" card) Code "A" in column 75 of essential data, see Table II herein.)

76-80 Not Used

47-65 Supplemental data

(Applies to Navy (ASO) only). Show the ASO number on the figure 5, 6, or 7 format. Do not exceed 19 digits including spaces.

#### TABLE III - Supplemental (continued)

	Column Element Jumber of Data	Description	Appear on Figures 1 2 3 4 5 6
<b>66-8</b> 0	Not Used		

4.1.6 Packaging data for transportation support. The data developed under this requirement are pertinent to the Navy logistical requirements. It is utilized to compute the weight and cube requirements for Navy shipboard aviation material allowances.

TABLE IV - Packaging data for Transportation Support
(Applies to Aviation Supply Office only)

Column Number	Element of Data	Description	Appear o	n Figures
47-55	Unit package dimensions	Show actual dimensions of unit package to nearest inch in order by length, width and depth. Dimensions less than one inch show "OOL;" cylindrical packages show as rectangular. Use zeros to fill voids, e.g., "OOL," "OOL," etc.	X	X
56-62	Unit package weight	Show actual weight of unit package to nearest one hundredth of a pound, as per Table XI, MIL-STD-726. Use zeros to fill voids, e.g., 0000188.	x	X
63-69	Unit package cube	Show actual cube of unit package to the nearest one hundredth of a cubic foot as per Table XII, MIL-STD-726. Use zeros to fill woids, e.g., 0016400.	x	x

## 4.1.7 <u>Compatibility with Requirements for Configuration Item</u> Specifications.

- 4.1.7.1 When the contract requires development of a CI specification, the packaging data developed and submitted in accordance with this document shall reflect the packaging requirements incorporated into Section 5 of the approved, applicable CI specification. It is anticipated that the data furnished in accordance with this standard will provide more detailed packaging information than that included in the CI specification.
- 4.1.7.2 When TPO's are required and packaging drawings for the same item have been developed and approved in accordance with the requirements and procedures outlined in MIL-P-9024(USAF) for special

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study items, the drawings shall be submitted in lieu of the TPO. This does not negate the requirement for submission of the related figure 1 format or PCAM card as applicable, in accordance with requirements of paragraph 4.2.

4.1.7.3 In no instance shall data be submitted which deviates from or conflicts with the level A packaging requirements of the approved CI specification. The prime contractor shall insure that all packaging data submitted (including those from lower tier contractors) are compatible, prior to those data being submitted to Air Force agencies.

#### 4.2 Approval of contractor developed packaging data.

- 4.2.1 The contractor shall submit for approval the packaging data prepared for each item in accordance with paragraph 4 and Appendix 1. Approval shall be obtained prior to production packaging except for deviations which are in compliance with paragraphs 4.2.1.1 and 4.2.1.2 below. Forms shall not be held over 20 days nor submitted in groups of more than 100.
- 4.2.1.1 Forms shall not be submitted for approval of packaging data without a Federal Stock Number (FSN) unless emergency type shipments are required prior to assignment of a FSN. When PCAM cards (Figures 2, 3 and 4) are furnished for approval without FSN identification, the manufacturer's code, manufacturer's part number, and CI specification number, when applicable, shall be legibly handscribed across the top of the cards. The Federal Supply Class (FSC) and when applicable the materiel management code (MMC) or ASO technical supply management code shall be key punched in the appropriate spaces of the PCAM formats. Upon receipt of the complete FSN(s) or Navy number(s) the contractor shall enter these on the packaging data form and forward one copy to ASO (TEP) or the IM AMA (DSPC).
- 4.2.1.2 When packaging data approval cannot be obtained prior to initial shipment of material which is directed by an emergency situation, the packaging data may, upon approval of the administrating contracting officer, be submitted to the appropriate office simultaneously with shipment of the materiel. In no case shall additional shipments of remaining identical items not required for emergency shipments be allowed prior to data submittal without approval of the ASO (TEP) or IM ANA (DSPC) as applicable.
- 4.2.1.3 Upon approval, the ASO (TEP) or IM AMA (DSPC) shall return one copy of the approved data to the contractor for file. Approval shall be indicated by application of the approval stamp on the applicable forms. ASO (TEP) or IM AMA (DSPC) will advise the contractor of approval or requirements for changes within twenty days after receipt of data.

- 4.2.2 All packaging data which are of sole interest to Navy or Air Force shall be submitted as applicable to ASO (TEP) or the IM AMA (DSPC) having item management responsibility for review and approval.
- 4.2.2.1 All packaging data which are of joint interest to Navy and Air Force shall be submitted to each department in accordance with paragraph 4.2.2. When IM AMA (DSPC) and ASO (TEP) do not agree on the contractor developed packaging data, the contractor shall notify each department. The disagreement will be resolved by ASO (TEP) and IM AMA (DSPC).
- 4.2.3 The contractor shall make available, when requested by the responsible IM AMA (DSPC) or ASO (TEP), sufficient background data (test reports, drawings or engineering details) to permit the reviewing activity to determine adequacy of the contractor prepared packaging data.
- 4.2.4 Approval of data shall be based on conformance with military publications or results of tests. When mutually agreed upon between the procuring activity and contractor, certified laboratory test reports are acceptable. When certified laboratory test reports are used as justification for approval, copies of the reports shall be furnished the responsible IM AMA (DSPC) or ASO (TEP) as appropriate.

#### 4.3 Transmittal of data.

- 4.3.1 The contractor is responsible for furnishing all data formats, i.e., Figures 1, 2, 3, 4, 5, 6, 7, and 8. Unless otherwise specified in the contract, the contractor has the option of submitting either manual or PCAM forms for approval as outlined below.
- 4.3.1.1 Two (2) copies of either Figure 1 or Figures 2, 3, 4 and/or 7 for ASO (TEP) and two (2) copies of either Figure 1 or 2 and 3 for IN AMA (DSPC), shall be forwarded along with a DD Form 250, Materiel Inspection and Receiving Report, directly to the ASO (TEP) or IM AMA (DSPC). The DD Form 250 shall specify the contract and order number and shall list the items for which forms are submitted. The ASO (TEP) and IM AMA (DSPC) shall sign and return the DD Form 250 with approved copies of the data.
- 4.3.1.1.2 When PCAM cards are submitted, the DD Form 250 shall also list, by FSN, those items for which CI specifications are also required by the contract.
- 4.3.1.2 When transportation packaging orders are submitted, one copy of the full size master reproducible and one reproduced copy of the Figure 5-6/8 format shall be forwarded to the ASO (TEP) or IM AMA (DSPC) as applicable, suitably protected. Folding of the master copies is not permitted. The ASO or IM AMA (DSPC) shall retain the full size master reproducible and return the approved reproduced copy to the contractor.

In event the contractor requires an approved reproducible master he shall submit two instead of one.

4.3.1.2.1 When Figure 7, microfilm aperture card, is prepared for ASO it shall conform to Figure 2, DD Form 1306 or MIL-STD-804. Microfilm aperture cards are used for Navy only.

4.3.2 Unless otherwise specified, the method of transmission of forms shall be routine mail.

#### Custodians:

Air Force - 69 Army - AV Navy - AS

Review Activities

Army - MI EL Preparing activity:

Air Force - 69

Project No. PACK-0328

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FIGURE 2. INTERPRETED PRESERVATION AND FACKAGING DATA PCAM CARD

*A S O	FEDER	al sto	ck num	BER	IT NI WEI	ET		ite ens:		ITEM	P E		りません		N	R E		s	C I		1	E	M A X	A	UNIT ONTAIN MENSIC					
P R E F I X	FSC	NATO	FIIN	A D D T L	W H O L E L B S	l Ø Ø T H	L E N G T H	W I D T H	D E P T H	M DA M	1 _	I N	м	N I T	& D R Y	M A T	M A	บ บ <b>ท</b>	T H K	C O N	F	PROT	T		W I D T H	D P T H	L E V	1 1	SCJ	

\*Spaces 1-5 must be reserved for system document control and identification numbers.

### PCAM CARD FORMATS FOR PRESERVATION, PACKAGING AND TRANSPORTATION SUPPORT DATA

FIGURE 3. INTERPRETED SUPPLEMENTAL DATA PCAM CARD

*A S O	FEDER FSC	CAL STO	CK NUM	BER A	SUPPL	EMENTAL DAT
P R E F I X		NA 10		D D T L		

\*Spaces 1-5 must be reserved for system document control and identification numbers.

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## PCAM CARD FORMATS FOR PRESERVATION, PACKAGING AND TRANSPORTATION SUPPORT DATA

FIGURE 4. INTERPRETED PACKAGING DATA FOR TRANSPORTATION SUPPORT PCAM CARD

*A S O	स्ट्रास्ट्र <del>ा</del>	AL STO	CK NUM	RICR			it Kag Nsi		UNIT PACKAGE WEIGHT		UNIT PACKA CUBE	GE
P R E F I	FSC	NATO	FIIN	A D D T L		L B N G T H	W I D T H	D E P T H	WHOLE POUNDS	1 8 8 T H	WHOLE CUBIC FEET	1 Ø Ø T

\*Spaces 1-5 must be reserved for system document control and identification numbers.

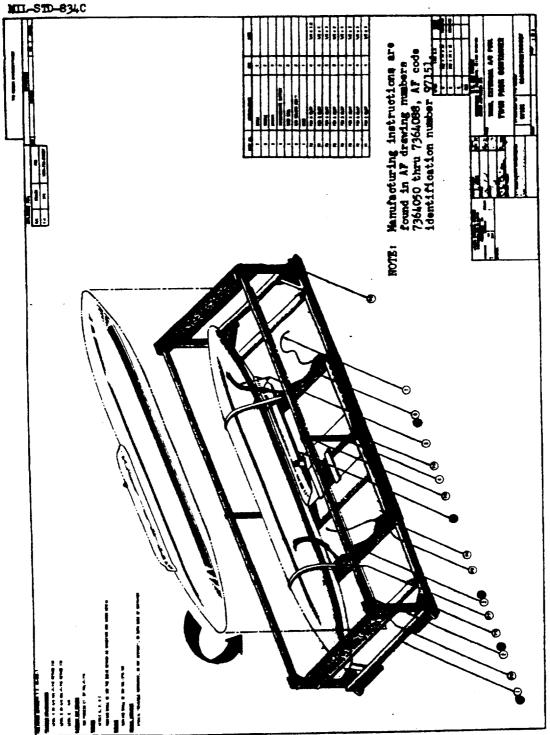
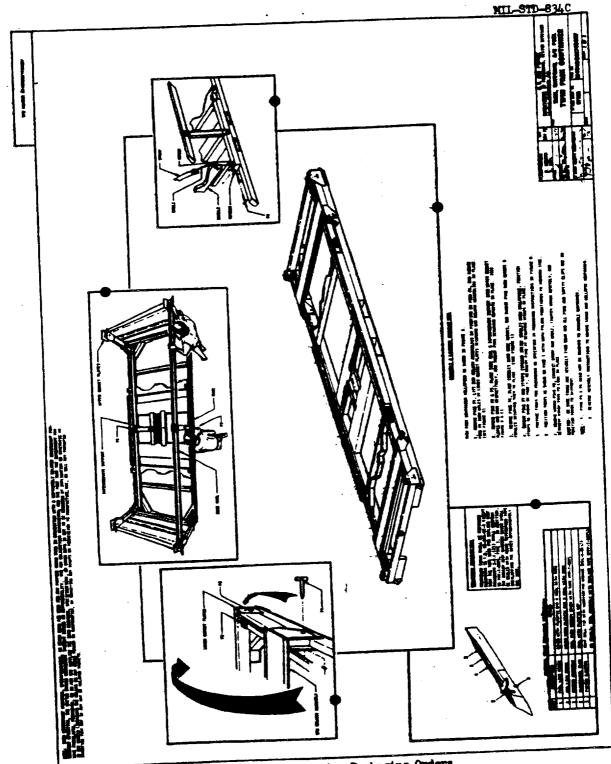


Figure 5, Transportation Packaging Orders 22



Pigure 6, Transportation Packaging Orders 23

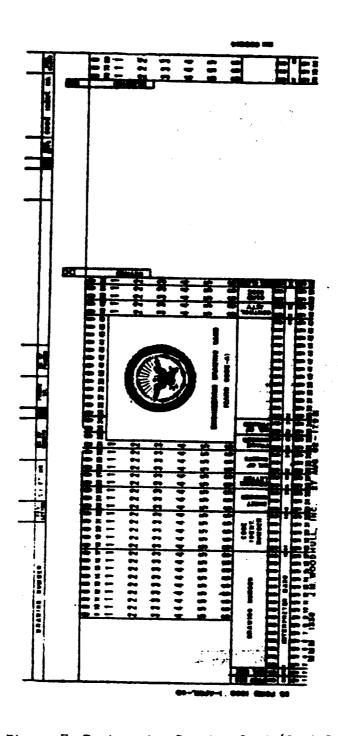
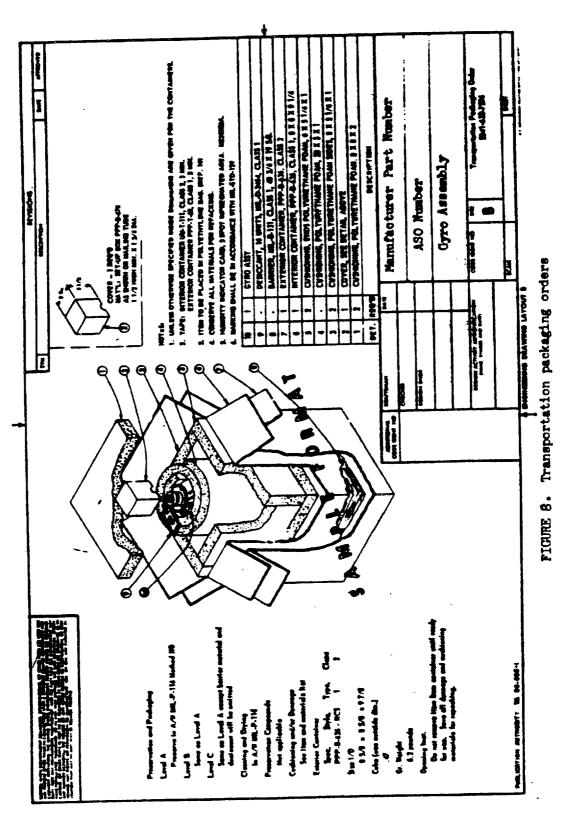


Figure 7, Engineering Drawing Card (Card Code A)



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#### APPENDIX I

#### TRANSPORTATION PACKAGING ORDERS (TPO)

- 10. The material in this appendix is a mandatory part of this standard.
- 20. Scope. This appendix specifies the manner of preparing Transportation Packaging Orders (TPOs).
- 30. Requirements. TPOs shall be prepared for Air Force or ASO items of supply when the following conditions exist:
- 30.1 For ASO when the preservation and packaging data area of the figure 1 format does not contain all necessary packaging requirements.
- 30.2 For Air Force when all necessary packaging requirements to allow complete fabrication and assembly of the pack by either Air Force or contractor facilities cannot be contained in seven lines of supplemental data.
- 40. TPOs will be prepared in reproducible form. A variation in style and format can be used provided that the information specified below is included as applicable during preparation of the TPO.
- 40.1 Reproduction. Original TPOs prepared for reproduction shall be in accordance with figures 5, 6, or 8 as reproducible mosters or in accordance with figure 7 for aperture cards, as specified (see DD Form 1423). Aperture cards shall be in a form from which enlarged nonreproducible prints can be made. In instances where more than one sheet is required to describe the packaging, an aperture card shall be prepared for each sheet. Reproduction of engineering drawings shall be accomplished using standard drawing sheet sizes A (AF Form 1651 or 1652), B (AF Form 1653), C (AF Form 1654), or D (AF Form 1655).
- 40.2 Styles. TPOs shall be developed using any one or a combination of the following: (a) short narrative, (b) axonometric drawings (oblique, cabinet, isometric, dimetric, trimetric), (c) perspective drawings (developed by projection from orthographic drawings, by commercially available scaled grids, or by other methods where a scalable rendering results), (d) photo-drawings (high contrast photographs in which all background and nonpertinent information has been removed), (e) computer graphics, or (f) orthographic drawings (prepared in accordance with MIL-STD-100). Part of the TPOs may be out of scale and/or include people figures when their primary function is to describe a means to accomplish or expand narrative descriptions (see figure 6).
- 40.3 Format. The standard engineering sheet format should be used with a multiple ratio of the  $8\frac{1}{2}$  x ll inch size. Individual TPO sheets may be reproduced on paper no smaller than the standard Government  $8 \times 10\frac{1}{2}$  inch size.

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- 40.4 <u>Identification</u>. Each TPO shall be identified with the Federal Item Identification Number (FIIN) assigned to the item concerned and with the CI specification number, if applicable. Inclusion of manufacturer's part number shall be optional. TPO identification numbers shall be as located in figures 5, 6, and 8.
- 40.5 <u>Information</u>. The data given shall be in sufficient detail to enable the package to be duplicated. Information contained on Air Force engineering drawings need not be duplicated on a TPO (Figure 5). Air Force source codes and drawing numbers must appear on all TPOs that do not contain such sufficient information to be duplicated and on preconstructed manufactured containers where the TPO shows assembly methods only. When details are required for shipping containers, packing data shall be shown for levels A and B. Requirements for air packs shall also be shown when air packs are specified in the contract or order.
- 40.5.1 Additional Information. The following additional information shall be included in each TPO:
  - (a) Preservation (levels and method).
  - (b) Special cleaning and drying requirements.
  - (c) Preservation compound (when applicable).
  - (d) Cushioning or dunnage, or both (when applicable)?
- (e) Inside dimensions of container or completed package. Indicate the specification, style, type, and class of the container or completed package.
  - (f) Cube of completed package.
  - (g) Gross weight of completed package.
- (h) Special marking (includes opening and closing instructions which must be in detail when special type containers or securing media are used. Also includes instructions to mark the TPO number on the exterior container).
  - (i) Bill of materials.
  - (j) Air Force codes and drawing numbers (when applicable).
- 40.5.2 <u>Details</u>. All details required for fabrication of the package, including internal blocking, bracing, or contour supports shall be shown in their relationships to the item being packaged. When the instruction covers blocking and bracing of unpacked items, all details necessary to indicate handling and storage shall be provided, including instructions

for cribbing, hoisting, tie down and supports. Axonometric, scaled prospective, photo drawing or orthographic drawing may be used to show the various components of the package in relation to each other and the contained item. Relation of the component parts of the package may be shown by exploded or partial exploded views. In some instances clarity is best affected by showing the item in phantom lines.

#### 40.5.3 Materials.

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- 40.5.3.1 <u>Lumber and plywood</u>. Grades or types of lumber and plywood used shall be specified. Direction of surface grain of plywood shall be shown when it is a pertinent factor. Unless so specified, dimensions listed will be nominal dimensions rather than actual.
- 40.5.3.2 <u>Fiberboard</u>. Fiberboard specified on TPOs shall be identified as to type, class, variety, and grade. Flute size and direction will also be reflected when required for design of the pack.
- 40.5.3.3 <u>Isolation System</u>. Specification, type, grade, class, thickness and density with load relationship of cushioning materials shall be specified. When shear mounts, vibration isolators, or other shock mitigation devices are used, they shall be identified and described.
- 40.5.3.4 <u>Hardware</u>. Unless otherwise specified, bolts, lag screws, etc., shall be of standard commercial grade with MS equivalency indicated, if available. Types of bolts such as "carriage" and "machine" shall be indicated. Angle iron, strapping and rod used as a securing media, shall be clearly identified in accordance with applicable specification.
- 40.5.4 Specification-type containers. Construction details of military specification-type containers need not be illustrated, except as necessary to clarify details of the package. The specification number and type of container shall be shown. All pertinent details shall be indicated when containers, modified, into special containers, are used. Details for specialized shock mounts, preformed dunnage, etc., that will duplicate information on drawings prepared in accordance with MIL-D-100 shall not be shown. However, the engineering drawing numbers shall be indicated.
- 40.5.5 Trade Names. All items listed on the bill of materials shall be identified, whenever possible, to applicable federal or military specifications including types, grades, classes, styles, etc. Such items will not be identified by trade name, commercial source or commercial specification. When an item is proposed for use that is not covered by any federal or military specification, the contractor shall provide sufficient background data to demonstrate the benefits to be derived from its use. When trade names, commercial sources, specifications, or part numbers are used, the phrase "or equal" shall be added to the item identification.

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