

AUTOMATIC IDENTIFICATION TECHNOLOGY (AIT) GUIDE for the MILITARY SHIPPING LABEL (MSL)

TCN SW81238350D001XXX				
From SW8123 In-the-clear Address 3 Lines Max, 35 Characters Per Line XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		TAC / Type Service / Postage SZZZ Frt LTL		
Piece 1 Of 1	Weight (lb.) 7760	Date Shipped 1090	RDD 999	
	Cube (ft.) 385	Project 9BU	Priority 1	
Ship To / POE DOV	In-the-clear Address 5 Lines Max, 35 Characters Per Line Abcdefg Hgiklmno Pqrstuv Wxyz XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
POD RMS	MSL / Supply & TCMD Data			
FMS Case CKM				
				
Ultimate Consignee / Mark For Consignee W55XGJ Ultimate / Mark For Consignee Address 5 Lines Max, 35 Characters Per Line Abcdefg Hgiklmno Pqrstuv Wxyz XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				

Generic Cargo MSL

TCN AWS1EAA\$0D00340XX				
Equipment Description HELICPR CARGO MH-60K				
Model 1234ASDFG		Bumper Nm HQ-123	Serial Number / Package ID 1234567890123	
From AWA2UC In-the-clear Address 3 Lines Max, 35 Characters Per Line XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		ULI 123	UIC WS1EAA	NSN 1234567890123
Piece 1 Of 1	Weight (lb.) 14000	Length (in.) 1239	TAC YZZZ	Project 9BU
	Cube (ft.) 1200	Width (in.) 123	Height (in.) 135	RDD 123
Ship To / POE DOV	In-the-clear Address 5 Lines Max, 35 Characters Per Line Abcdefg Hgiklmno Pqrstuv Wxyz XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
POD RMS	MSL / TCMD / Unit Move Information			
Commodity/SH VD				
				
Ultimate Consignee / Mark For Consignee W44TYH Ultimate / Mark For Consignee Address 5 Lines Max, 35 Characters Per Line Abcdefg Hgiklmno Pqrstuv Wxyz XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				

Unit Move Cargo MSL

TCN F1096305469621JXX				
From FB4407 In-the-clear Address 3 Lines Max, 35 Characters Per Line XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		TAC / PPGBL / Carrier FZZZ JP-112233 XYZ Carrier Worldwide		
Piece 1 Of 4	Weight (lb.) 350	Date Shipped 1099	RDD 118	
	Cube (ft.) 36	Project 9BU	Priority 2	
Ship To / POE DOV	In-the-clear Address 5 Lines Max, 35 Characters Per Line Abcdefg Hgiklmno Pqrstuv Wxyz XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
POD RMS	MSL / TCMD Information			
Type Service TGBL UB				
Gross Weight (lb.) 40				
Net Weight (lb.) 310				
For JB Smith				
				
Ultimate Consignee / Mark For Consignee FB5612 Free Text Address 5 Lines Max, 35 Characters Per Line Abcdefg Hgiklmno Pqrstuv Wxyz XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				

Personal Property MSL

IAW

**DTR 4500.9-R, DEFENSE TRANSPORTATION REGULATION, PART II
AND / OR
MIL-STD-129, MILITARY MARKING FOR SHIPMENT AND STORAGE**

Version 1.4 April 2013

Prepared by
USTRANSCOM J4-T
(618) 220-4633

This is not a coordinated US Government publication

FOREWORD

This guide was prepared to assist users with generating the information required to print the military shipping label (MSL) mandated by DTR 4500.9-R (Defense Transportation Regulation) using standard processes and data formats also identified in MIL-STD-129 to encode the PDF417 2-dimensional (2D) and Code 39 linear bar code information based on applicable transportation scenarios. This guide is not intended to be a stand-alone document. Detailed instructions for printing the MSL and formatting the bar codes are contained in cited references.

Contact Emmet Lung, USTRANSCOM J4-T, (618) 220-4633 for questions or comments.

CONTENTS

GLOSSARY	5
OVERVIEW.....	9
General Information.....	9
References.....	9
Definitions.....	10
SECTION 1 MSL Data Entry Rules.....	11
MSL Data Overview.....	11
MSL Text Data Elements.....	12
Piece, Weight, and Cube Data Values.....	13
Supply Line Item Data Elements.....	15
Supply Line Item Data Values.....	15
Address Data Elements.....	15
TCMD Data Elements.....	16
TCMD Data Values.....	16
Consolidated Shipment Unit Data Elements.....	16
Unit Move Data Elements.....	16
MSL Data Encode for TCMD Formatted Data.....	17
PDF417 2D Bar Code Semantics and Syntax.....	18
Encode Source Priority.....	19
TCMD Data Without Assigned DIs or DEIs.....	20
MSL Text Data Without Assigned DIs or DEIs.....	21
MSL Text Data Not Part of TCMD.....	22
SECTION 2 Shipment Scenario Tables.....	23
Using the Tables.....	23
Shipment Scenarios.....	23
Shipment Scenario Table Data.....	23
Scenario Examples.....	24
Quick Reference Scenario Decision Table	25
Table 1-A Single Shipment Unit (TCMD T_0/1 and MSL Data).....	26
Table 1-B Loaded RORO Trailer / Vehicle (TCMD T_2 and MSL Data).....	29
Table 1-C Loaded SEAVAN (TCMD T_2 and MSL Data).....	31
Table 1-D 463L Air Pallet Shipment Unit (Loaded Channel Air) (TCMD T_2 and MSL Data)	34
Table 1-E Other Consolidated Shipment Unit (TCMD T_3 and MSL Data).....	36
Table 2 Generic Cargo with Supply Line Item Information	39
Table 3 Generic Cargo MSL without Supply Line Item Information.....	41
Table 4 All Shipments.....	42
Table 5 SEAVAN Miscellaneous Information	47
Table 6 Air Eligible Cargo (TP-1, TP-2, TP-4) or Unit Move Air Cargo.....	49
Table 7 Routine Cargo (TP-3), Non-air Eligible Cargo, or Unit Move Surface Cargo ..	50

Table 8	Nonhazardous Cargo	51
Table 9	Hazardous Cargo, Explosives, and Ammunition	52
Table 10	Government Vehicles, Wheeled/Tracked Guns, Aircraft, Outsize Cargo, Prepositioned Cargo, and Unit Move Cargo	55
Table 11	Personal Property Cargo	58
Index of Decision Table Elements		61
SECTION 3 MSL and Bar Code Formats.....		63
Overview		63
MSL Format		63
Linear Bar Codes.....		64
PDF417 2D Symbol		64
SECTION 4 MSL Examples		67

GLOSSARY

The following acronyms are used in this document:

2D	2-dimensional
AFB	Air Force base
AIT	automatic identification technology
an..	alpha-numeric format for data
ANSI	American National Standards Institute
APOD	Aerial Port of Debarkation (offload)
APOE	Aerial Port of Embarkation (upload)
App	appendix
ASCII	American Standard Code for Information Interchange
ATCMD	Advanced Transportation Control Movement Document
BII	basic issue item
Bldg	building
CAGE	Commercial and Government Entity
CCP	consolidation and containerization point
CFR	Code of Federal Regulations
chap	chapter
CDIST	Consignee Distribution Code
CMOS	Cargo Movement Operations System
CONUS	continental United States
DD	Department of Defense
DD/MM/YY	format day/month/year (2 digits)
DD/MM/YYYY	format day/month/year (4 digits)
DDD	three digit Julian date format for days
DEI	data element identifier
DI	data identifier
DIC	Document Identifier Code
DODAAC	Department of Defense Address Activity Code
DODIC	Department of Defense Identification Code
DPM	direct procurement method
DTR	Defense Transportation Regulation (DTR 4500.9-R)
DTS	Defense Transportation System
EA	each
E _O T	single ASCII character for end of message
FMS	Foreign Military Sales
FRT LTL	freight less-than-truck-load
ETA	Estimated Time of Arrival
GATES	Global Air Transportation Execution System
G _S	single ASCII character for data element separation
HAZMAT	hazardous material
HHG	household goods
HRI	human-readable interpretation
IAW	in accordance with
ID	identification

IMO	International Maritime Organization
in	inch
ISO/IEC	International Organization for Standardization / International Electrotechnical Commission
ITGBL	International Through Government Bill of Lading
JCS	Joint Chiefs of Staff or Joint Staff
JOPES	Joint Operation Planning and Execution System
LRU	less than release unit
MAPAC	Military Assistance Program Agency Code
MH10	an ANSI standard series
MIL-STD	military standard
mils	1/1000 of an inch
mm	millimeter
MRO	Movement Release Order
MSL	military shipping label
n..	numeric character for data
NA	North American
NATO	North Atlantic Treaty Organization
NEW	Net Explosive Weight
NMCS	not mission capable - supply
NNSN	no National Stock Number
NOS	not otherwise specified
NSN	National/NATO Stock Number
OCONUS	outside continental United States
PDF417	a 2D bar code portable data file format
POD	Port of Debarkation (offload)
POE	Port of Embarkation (upload)
POV	privately owned vehicle
PPGBL	Personal Property Government Bill of Lading
Pt	part
RDD	Required Delivery Date
RIC	Routing Identifier Code
RORO	roll on – roll off
R _s	single ASCII character for the end of format message
rp	record position
RU	release unit
SCAC	Standard Carrier Alpha Code
SEAVAN	a multi-modal ISO container
Sq	squadron
TAC	Transportation Account Code
TC-AIMS II	Transportation Coordinator's Automated Information for Movements System II
TCMD	Transportation Control Movement Document
TCN	Transportation Control Number
TGBL	Through Government Bill of Lading
TP	Transportation Priority
TPFDD	Time Phased Force Deployment Document
Trans	transportation
TTN	Transportation Tracking Number

TX	Texas
USAF	United States Air Force
UI	Unit of Issue
UIC	Unit Identification Code
UID	unique identification
UII	Unique Item Identifier
ULN	Unit Line Number
UN	United Nations
USD	US dollar
VIN	Vehicle Identification Number
WPAFB	Wright Patterson Air Force Base
YDDD	Julian date format of four digits for the year and day

Note: Data elements and document formats are identified as proper nouns to highlight their context of use.

Intentionally Blank

OVERVIEW

1. General Information.

- a. The guide is divided into four sections:

Section 1: MSL Data Entry Rules page 11

Section 2: Shipment Scenario Data Tables page 23

Section 3: MSL and Bar Code Formats page 63

Section 4: MSL Examples page 67

b. Section 1 provides an overview of the MSL data entry guidance extracted from the Defense Transportation Regulation (DTR), Part II, and applicable commercial and military standards.

c. Section 2 uses transportation scenarios to integrate all Section 1 format rules with the DD Form 1384 (Transportation Control Movement Document (TCMD)) and MSL format data requirements prescribed by the DTR.

d. Section 3 describes the MSL layout rules and bar code message formats.

e. Section 4 integrates all the information into MSL examples.

2. References.

a. DTR Part II references are noted throughout the following instructions. The MSL text and the bar code encoded content and the data descriptions are in DTR Part II, Chapter 208, and Appendix X – the entries are summarized in MIL-STD-129.

b. Most MSL data is based on shipment planning and TCMD information as described in DTR Part II, Chapter 203, Appendix L, and Appendix M. For shipments that enter the DTS, a TCMD is prepared in one of several formats (data transaction set, electronic message, or hard copy) for every shipment except unaccompanied baggage. If a vendor is required to mark a shipment with an MSL, most of the information will come from the contract and the vendor's shipment planning and packaging processes; the TCMD unique information will come from the contract office or contract administration office.

c. DTR 4500.9-R Part II, Defense Transportation Regulation (DTR) is available at: <http://www.transcom.mil/dtr/part-ii/>

d. Applicable reference data codes for DTR use are available at: <http://www.transcom.mil/dteb/>

e. MIL-STD-129 is available from at: <http://quicksearch.dla.mil/>

3. **Definitions.** The following common terms are derived from the DTR and are used in this guide. Most other terms used in the guide are defined either in the DTR or in MIL-STD-129.

- 1) **Supply Line item.** An identifiable item with defined characteristics, usually identified by a National/NATO Stock Number (NSN).
- 2) **Shipment.** A shipment unit or shipment unit increment with a Transportation Control Number (TCN) and marked with an MSL for movement. Shipments entering the Defense Transportation System (DTS) will also be documented with TCMD information.
- 3) **Shipment unit.** A shipment unit is documented with a TCN, labeled with an MSL and is one of the following:
 - a) **Single shipment unit.** A shipment unit that may contain one or more supply line items but contains no other shipment units (no internal TCNs). A single shipment unit may have multiple pieces (e.g., 1 of 2, 2 of 2) with the same TCN. A single shipment unit contains:
 - (i) A single line item of supply (one Material Release Order or DD Form 1348-1A) destined to one consignee.
 - (ii) Two or more compatible supply line items having the same consignee, DTR commodity, and Transportation Account Code (within Service guidelines).
 - b) **Consolidated shipment unit.** A shipment unit that contains other shipment units. The consolidated shipment unit is marked with a unique intermediate TCN or a conveyance TCN. A consolidated shipment unit never has multiple pieces (the "Piece of Total Pieces" is always "1 of 1").
- 4) **Shipment unit increment.** A single shipment unit or consolidated shipment unit that has been separated for movement on more than one conveyance or that is a shipment unit of detached component vehicle parts moving with a vehicle. The increments are described as "partial" and "split" (see Section 1, paragraph 4.d.1). A shipment unit increment may have multiple pieces.
- 5) **Transportation Control Number (TCN).** A 17-position alphanumeric character set assigned to control a shipment throughout the transportation cycle. As per the DTR, a new TCN will be created each time a shipment enters the transportation pipeline.
 - a) **Shipment TCN.** The TCN assigned to a single shipment unit.
 - b) **Intermediate TCN.** The TCN assigned to a consolidated shipment unit that is unitized within another consolidated shipment unit for movement (derived from DoD 4140.1-R or as replaced by DoDM 4140.01).
 - c) **Conveyance TCN.** The TCN assigned to a single shipment unit or to consolidated shipment unit for manifesting on a carrier (derived from DoD 4140.1-R or as replaced by DoDM 4140.01).

SECTION 1

MSL Data Entry Rules from MIL-STD-129 or DTR 4500.9-R Part II

1. **MSL Purpose.** The purpose of the MSL is to carry information which will serve three different requirements:

- a. Clear text addressing and cargo identification for movement processing.
- b. Encoded supply line item commodity information for line item receipt processing and contents visibility (not required for unit move cargo or personal property cargo).
- c. Encoded shipment movement and handling information for automated cargo clearance and manifest in-check processing.

2. **MSL Data Overview.** There are many ways to begin generating MSL data. The tables and processes outlined in the DTR and MIL-STD-129 were structured to use TCMD data. However, there are also instances where an MSL will need to be printed and a TCMD has not been generated. This guide provides transportation-based scenarios to assist users in generating applicable MSL data when a TCMD is not available for automated processing.

- a. The MSL data tables in the DTR and MIL-STD-129 are designed primarily for generating an MSL from the TCMD transaction data developed during shipment planning and processing. In this situation, by the time an MSL is needed, the TCMD data has already been generated, and is of the correct format and length to match the TCMD requirements. The user software simply converts the TCMD information to MSL information and prints the MSL in accordance with applicable standards, formats, and guidance.
- b. However, another way to generate an MSL is to generate the information from scratch without the benefit of using TCMD generation software. In this case, the user must control all the input data to achieve the correct formats. This is the method that will probably be used by commercial vendors, using commercial bar code generation software because they may not have access to Government shipping software (i.e., CMOS, GATES, TC-AIMS II, etc.) to generate an electronic TCMD data set or the advance TCMD (ATCMD) required for cargo clearance into the DTS. In this situation, the shipper needs a transportation scenario-based input structure to assist with data identification and generation. Section 2 of this guide provides a scenario-based process to generate an MSL.
- c. For contractor/vendor shipments, the following information, if applicable, will probably have to be provided by the cognizant Government contract administration office in accordance with Federal Acquisition Regulation 47.301-3.

1) Transportation Control Number (TCN) for the shipment. If a TCN is not provided in the contract documents and cannot be obtained from the contract office or contract administration office identified in the contract, generate a unique TCN for each shipment unit using the procedure in DTR Part II, Appendix L, paragraph H or paragraph O. It is critically important that the TCN assigned to the shipment be unique within the DTS for that shipment. The TCN will either begin with a shipper's DODAAC or a vendor's Commercial and Government Entity (CAGE) Code could be used in lieu of a DODAAC

by beginning the TCN with an “X” followed by the CAGE Code (e.g., X1A4T4). Note: DODAACs never begin with X. Using any other method to create a TCN may cause the TCN to be a duplicate of another vendor's TCN or of another DOD generated TCN.

- 2) Transportation Priority (TP) for the shipment.
- 3) DOD Activity Address Code (DODAAC) for the consignee.
- 4) Clear text addresses for the Ship To location and consignee.
- 5) Project Code for the material in the shipment.
- 6) Required Delivery Date (RDD) Code for the shipment.
- 7) Transportation Account Code (TAC) for outside CONUS (OCONUS) shipments.
- 8) Port of Embarkation (POE) and Port of Debarkation (POD) Codes for OCONUS shipments.
- 9) Foreign Military Sales (FMS) case number.
- 10) SEAVAN booking and carrier information.
- 11) Supply line item information for each National Stock Numbered (NSN) requisition or line item.

Requisition Document Number
National Stock Number
Quantity and Unit of Issue (e.g., 2 EA)
Routing Identifier Code of the Inventory Control Point
Condition Code of the material
Distribution Code for the requisition/item
Unit Price for the item

3. MSL Text Data Elements.

a. For the Generic Cargo MSL, the following listed entries must be printed on the label and must be encoded in the applicable linear bar codes and/or the PDF417 2D bar code as text or text converted to a code, unless an exemption applies (based on if the shipment is consolidated or not and the quantity of supply line item types in the shipment – see paragraph 6 in this section). All other clear text entries on the Generic Cargo MSL are conditional as described in the references and Section 2 decision tables.

Transportation Control Number (TCN)
Consignor's From Address and CAGE Code, or DODAAC, or MAPAC (see App E)
Ship To Address
Ultimate Consignee's Address and DODAAC or MAPAC (see App E)
Transportation Priority
Date Shipped
Type Service (free-form text shipper's description of the shipment method)
Piece Number (for the external shipment piece)
Total Pieces (for the entire shipment unit covered by the unique TCN)
Weight for the shipment piece
Cube for the shipment piece

b. For the Unit Move Cargo MSL and Personal Property MSL, the printed text and data requirements which contain additional elements and many exceptions, are as described in the references and the Section 2 scenario tables.

4. Piece, Weight, and Cube Data Values. There are subtle and sometimes ambiguous marking distinctions made between the data values for pieces of a shipment and the total value for all the pieces in a shipment. The distinctions become even more complex when a multi-piece shipment is moved as a partial shipment or a split shipment. It is important for programmers and system managers to understand that a shipment unit, identified with a TCN, can contain one or more nested shipment units (with a shipment TCN or intermediate TCN); it can be packaged for movement as one or more pieces (e.g., 1 of 2, 2 of 2); and a shipper or transshipper may also partial or split shipments, respectively, into multiple shipment increments with multiple pieces. All of these activities and marking conventions are documented in the DTR Part II Appendix L and Appendix X and are summarized here.

a. The actual Weight of the shipment piece and the actual Cube of the shipment piece are printed as clear text on the MSL and encoded in the PDF417 2D bar code MSL data (DTR Table 208-2, Block 10/12). For movement and handling information, most text and bar code data are applicable to the shipment piece rather than the shipment unit. This provision specifically affects Piece Number, Piece Weight, Piece Cube, Piece Net Weight, and Piece Tare Weight. The TCMD Shipment Total Weight and the TCMD Shipment Total Cube are not specifically identified in the MSL PDF417 2D bar code.

Note: As currently programmed, GATES defaults to total shipment information but accommodates piece information when a shipment is split at an aerial port. The USAF WPAFB web site ATCMD/MSL generator only records total shipment information.

b. The Tare Weight (piece) of a personal property Through Government Bill of Lading (TGBL) shipment or a direct procurement method (DPM) shipment is printed as clear text on the MSL and encoded in the PDF417 2D bar code. The TCMD does not contain any tare weight data.

c. The Actual Net Weight (piece) of a personal property TGBL or DPM shipment is both printed as clear text on the MSL and encoded in the PDF417 2D bar code MSL data. The Total Net Weight of the entire shipment unit (all pieces) is not specifically identified in the PDF417 2D bar code.

d. The MSL instructions in the DTR require the shipper to mark the Piece Number of the cargo for the shipment unit and the Total Pieces for the shipment unit. Unfortunately, this marking requirement is somewhat ambiguous. The ambiguity is introduced when a shipment unit is separated into “partial” increments at an origin point or separated into “split” increments at a transship point. The concept of a shipment unit increment is not well defined in the DTR; thus, piece numbering of the increments is not always consistent within DOD. However, a business practice has evolved, which most shippers follow, to keep hazardous cargo documentation and shipment packing lists synchronized with the piece marking on multi-piece shipments. The business practice is described as follows:

1) Partial and split shipments occur when moving increments of a shipment unit on a separate conveyance. The Partial and Split Shipment Codes are required to ensure the 17 character TCN is not duplicated on the manifest for each conveyance (duplication causes tracking and billing issues). Partial shipments are documented by origin shippers putting an alpha character in the 16th position of the TCN (I and O are omitted, X indicates no partial). Split shipments are documented by transshippers putting an alpha character in the 17th position of the TCN. Origin shippers will also document the movement of

detached component vehicle parts moving with the vehicle by using the split shipment indicator. Note: Cargo identified by TCMD DI TU_, as sets or assemblies, which must move together in a shipment unit must not be divided into partial or split shipments.

2) The partial and split shipment marking requirements for surface shipment increments and air shipment increments are very similar (see DTR Part II, Appendix L), but the determination of increment size for surface and air are different.

a) For surface shipments, the number of pieces in a shipment unit, a partial increment, or a split increment can range from one to an unlimited number.

b) For air shipments, the number of pieces in each shipment unit or each partial increment can range from 1 to 23 pieces. The air split shipment may only be one piece. Limiting each shipment unit or partial increment to 23 pieces allows the transshipper to assign a Split Shipment Code to each piece (using 23 alpha characters).

c) If a shipment unit must be divided into more than 23 partial or split shipments follow the instructions in the applicable note for DTR Part II, Appendix L.

3) The origin shipper should mark each complete shipment unit or each partial shipment unit increment moved on a single conveyance with unique movement characteristics (e.g., Piece Numbers, Total Pieces, Total Weight, Total Cube). The process followed by most origin shippers is to consider each partial shipment unit increment to be complete in terms of containing all the pieces

a. Each partial shipment unit increment will begin with Piece Number one.

b. The Total Piece count is the number of pieces in the partial shipment.

4) Split increments are not considered to be complete and therefore should retain the original Piece and Total Piece Number markings applied when the shipment departed its origin station. Retaining the original Piece Number information enhances ITV tracking, and receiving stations will know how many pieces were shipped from the origin station.

a) When a shipment is split at a transship point, the MSL has to be re-printed to capture the modified TCN in the clear text entry and in the bar codes.

b) The “Total Pieces” value on the ATCMD and the conveyance manifest will probably be different from the “Total Pieces” value on the MSL. The “Total Pieces” value on the ATCMD and the conveyance manifest is for the actual number of pieces in the shipment increment being moved on the single conveyance. Whereas, the “Total Pieces” value on the MSL is for the complete shipment as marked by the origin shipper.

c) If a transshipper elects to renumber the split shipment increment pieces, the Piece Number values on the MSL must change and the supply line item information should be deleted from the PDF417 2D bar code because the commodity information is no longer relevant to the Total Shipment Pieces described on the MSL – see paragraph 6 below.

d) When a shipment unit is split, all the documentation in the packing list envelope should be copied, edited as appropriate (the hazardous cargo shipper's declaration must show the correct number of pieces loaded on the conveyance), and attached to the first piece (lowest number) of the split shipment.

5. Supply Line Item Data Elements. The following commodity information for each supply line item in a shipment unit is also required to be encoded in the PDF417 2D bar code unless an exemption applies (e.g., data volume exceeds encode capability of the PDF417 2D bar code). Other supply line item entries are conditional based on applicability of the information.

National Stock Number

Quantity and Unit of Issue (e.g., 2 EA)

6. Supply Line Item Data Values. Every shipment with a Generic Cargo MSL must have the applicable supply line item commodity information encoded IAW DTR Part II, Table X-4, with exceptions as noted below. A repeating set of nine data elements is encoded for each supply line item in the shipment unit. For supply line item information, the Generic Cargo MSL PDF417 2D bar code for each piece of a generic cargo shipment will contain the information for all the pieces of the documented shipment unit, as marked by the origin shipper (i.e., the MSLs for all pieces of a shipment unit will have the same supply line item information). The exceptions are:

- a. If a single shipment unit (all pieces) contains more supply line items than can be encoded and printed in the space provided for the MSL's PDF417 2D bar code on each piece, then no supply line item information will be encoded and the "NO LINE ITEM DATA" entry is printed and encoded on the MSL. A full size PDF417 2D bar code on the MSL can normally hold the values for 10 supply line items – see Section 3.
- b. If any one of the applicable supply line items in the shipment unit does not have an accurate and complete set of the "required" commodity information (i.e., the NSN, Quantity, and Unit of Issue – see Section 2 – Table 2), no supply line item information is entered for any supply line item and the "NO LINE ITEM DATA" entry is printed and encoded on the MSL. The "required" data and other applicable data are sourced from information available in the packing list document (DD Form 1348-1A, DD Form 250/250c, DD Form 1150, DD Form 1155, DD Form 1149, contract, etc.). If one or more supply line items are included within the supply line item information segment of the PDF417 2D bar code, specific data identifiers (DIs 12S and 12Q) must be encoded to mark the beginning and end of the looping data structure (DIs 12S and 12Q may be followed by data, no data, blanks, or zeros as appropriate).
- c. If shipment units (marked with a MSL) are unitized for movement within a consolidated shipment unit, no supply line item data are encoded in the MSL applied to the consolidated shipment unit. A clear text statement, "NO LINE ITEM DATA", is printed below the PDF417 2D bar code for the consolidated shipment unit MSL and the statement is encoded as free text in the MSL's PDF417 2D bar code.

7. Address Data Elements. Clear text address information may be encoded in the PDF417 2D bar code:

- a. Every Generic Cargo MSL will conditionally have the clear text Ship From, Ship To, and Consignee Address information encoded in the PDF417 2D bar code. The condition is: the address information will be encoded only if the commodity information for no more than one supply line item is encoded in the PDF417 2D bar code. The address information

potentially uses so much of the PDF417 2D bar code space that only one supply line item can be accommodated.

b. The Unit Move MSL, unless classified, and Personal Property MSL will always have clear text address information encoded in the PDF417 2D bar code.

8. **TCMD Data Elements.** For shipment units described and documented with TCMD information, specifically identified TCMD data elements, as applicable, must be encoded in the MSL PDF417 2D bar code IAW DTR Part II, Appendix M TCMD formats (Generic Cargo MSL, Unit Move MSL, and Personal Property MSL).

9. **TCMD Data Values.** DTR Part II, Table X-2 identifies the TCMD source references for the data – not all shipment TCMD data is in the PDF417 2D bar code. TCMD shipment data not included in the PDF417 2D bar code are identified in paragraph 15 of this section.

10. **Consolidated Shipment Unit Data Elements.**

a. The DTR requires the MSL PDF417 2D bar code to contain encoded "entries for available MSL, TCMD, and supply data." This guide assumes the term "available" to mean that the PDF417 2D bar code for the MSL attached to a shipment unit unitized for movement within a consolidated shipment unit will only contain the text information printed on the MSL, the commodity data for each supply line item, and the TCMD information known at the time the MSL was printed prior to the consolidation. For example, the MSLs for shipment units within a consolidation need not be updated to encode the additional TCMD data for the consolidation Container Number, Mode to POE, SEAVAN Stop Off Numbers, or to encode the TCMD Document Identifier Code changes (T_0/1 to T_4).

b. The PDF417 2D bar code for the MSL attached to a consolidated shipment unit will not contain the TCMD data (T_3/4 and all their respective trailer records) for the shipment units within the consolidated shipment unit.

11. **Unit Move Data Elements.** Unit move cargo will be documented IAW DTR Part II, Appendix O. For unit move cargo, a Joint Operation Planning and Execution System (JOPES) Time-phased Force Deployment Document (TPFDD) provides timing, priority, and mode selection for movement of cargo and equipment. For that reason, selected data elements, such as Transportation Priority, Type Service, and Date Shipped are blank or not listed on a Unit Move MSL. The Port of Debarkation (POD) Code, Consignee DODAAC/Address, and Required Delivery Date (RDD) fields may be blank for a classified move. There are also other TCMD exceptions which must be accounted for when generating a Unit Move MSL.

a. The DTR guidance provides that all unit move cargo will be documented as a single shipment unit (TCMD T_0/1) with applicable trailer data as prescribed in DTR Part II, Appendix M and will not be documented as a consolidated shipment unit (TCMD T_2/3) unless otherwise directed by the responsible Clearance Authority. Unit move cargo documented in this manner includes a loaded SEAVAN, a loaded 463L Pallet shipment unit, "other consolidation" containers, or a unitized pallet load.

b. When authorized by the appropriate Transportation Component Command (TCC), compatible hazardous material (HAZMAT) may be consolidated within a unit move cargo shipment which is documented as a single shipment unit (TCMD T_0/1). However, the single shipment unit MSL format cannot document more than one HAZMAT line item for a single shipment unit. Therefore, if two or more different HAZMAT line items are consolidated as unit move cargo in a single shipment unit, none of the HAZMAT properties

of the supply line item should be encoded in the MSL PDF417 2D bar code. In this situation, the hazardous nature of the consolidated HAZMAT shipment is documented by the Commodity Code, Water Type Code, and Special Handling Code in the MSL PDF417 2D bar code.

c. It is possible for a unit move single shipment unit to consist of multiple government vehicles, trailers, wheeled/tracked guns, aircraft, or oversized cargo. In this situation, multiple sets of TCMD T_5 record data would be generated. However, the MSL format can only accommodate one set of TCMD T_5 data. If the items are identical in nature, include the information in the MSL; otherwise do not include the information.

d. Unit owned cargo or unit owned equipment that is not shipped on a JOPES TPFDD dedicated airlift or sealift carrier must be documented with a Generic Cargo MSL. Classified data elements, may be left blank.

12. MSL Data Encode for TCMD Formatted Data. Some of the clear text data on the MSL must be encoded for bar code entry IAW with DTR Part II formats. Software can be used to encode the data or the user must be asked for the clear text and the encoded values. Examples: a shipment Weight of “109,000” lbs is encoded as “&9000”; a clear text Date Shipped of “9/12/03” is encoded for the PDF417 2D bar code in a Julian date format as “3255” to meet TCMD data format requirements.

a. Clear text items that may be in a code format are:

- 1) Piece, Total Pieces, Weight, and Cube. See DTR Chap 203.
- 2) Date Shipped. See DTR Part II, Appendix ZZ.

b. In the TCMD data formats, the space allotted for the entry of Pieces, Weight, and Cube is limited to four, five, and four characters respectively. If any entry exceeds the capacity of the field (i.e., more than 9,999 pieces, 99,999 lbs, or 9,999 cubic feet), the entry will be as follows:

- 1) For 10,000 to 19,999 pieces/cubic feet or 100,000 to 199,999 lbs, drop the first position “1.” For the second digit, substitute a letter/character as follows: 0=&, 1=A, 2=B, 3=C, 4=D, 5=E, 6=F, 7=G, 8=H, 9=I. For example: 13,468 pieces = C468.
- 2) For 20,000 to 29,999 pieces/cubic feet or 200,000 to 299,999 lbs, drop the first position “2.” For the second position digit, substitute a letter/character as follows: 0=- (i.e., a hyphen), 1=J, 2=K, 3=L, 4=M, 5=N, 6=O, 7=P, 8=Q, 9=R. For example: 220,015 lbs = K0015.
- 3) When shipment Pieces, Weight, and Cube details exceed the character limits noted above, the data element will indicate a “W” followed by zeroes in the appropriate Piece, Weight, or Cube field.

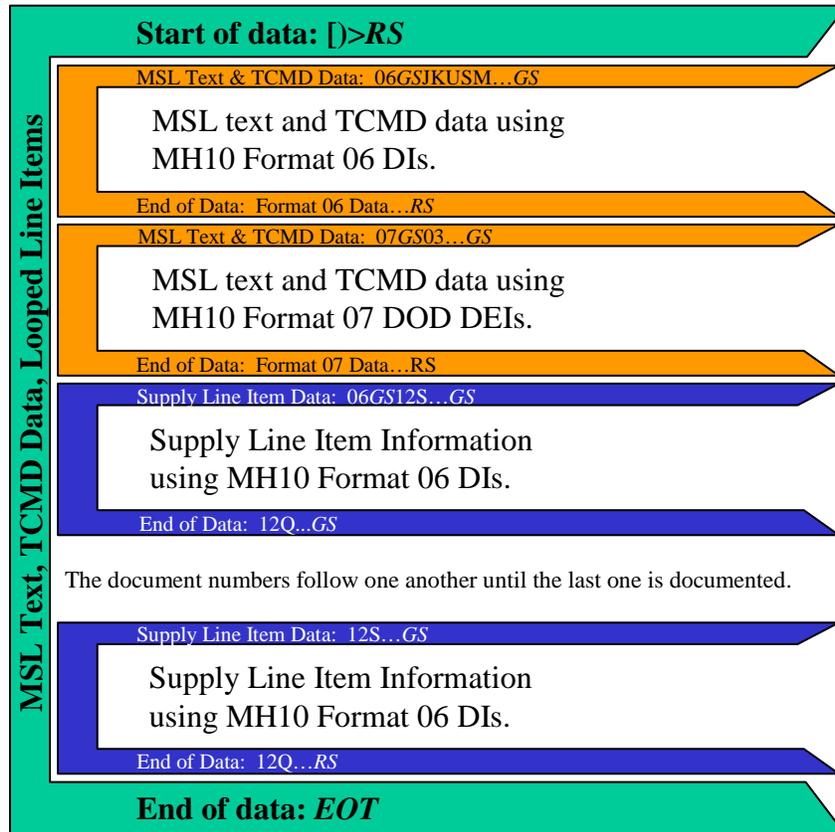
c. For the MSL clear text entries, all encoded numeric values for Piece, Total Pieces, Weight, Cube, Length, Width, and Height will be stripped of leading zeros and entered as whole numbers. Alphanumeric encoded values for Piece, Total Pieces, Weight, and Cube will be converted to numeric values.

d. MSL PDF417 2D bar code metric values must be converted to U.S. unit measures (i.e., lb., in., \$, cu. ft., etc.) for MSL clear text entry. Unit measure values may be printed as MSL block title information, e.g., CUBE (ft) to provide the required unit of measure indicators.

e. Data in-put fields may be a variable length or fixed length, but the field length cannot be exceeded and data length must be controlled during entry.

13. **PDF417 2D Bar Code Semantics and Syntax.** The PDF417 2D bar code data semantics and syntax are as summarized from ANSI MH10.8.2 and ISO/IEC 15434 respectively.

a. The following graphic is an example of how ANSI MH10.8.2 data identifiers (DI) or DOD data element identifiers (DEI) are used in an ISO/IEC 15434 message and format envelopes for an MSL PDF417 2D bar code to depict a shipment with multiple supply line items within the shipment unit.



b. Message envelope for the MSL PDF417 2D bar code:

- 1) The message envelope begins with a three character Compliance Indicator $] >$ that is followed by a Format Trailer character R_S . The Format Trailer character is a non-printable single ASCII character which cannot be typed into the PDF417 2D bar code; the single character must be electronically encoded with software.
- 2) The message envelope ends with the Message Trailer character E_{O_T} , which is a non-printable single ASCII character.

c. Format envelopes for the MSL PDF417 2D bar code:

- 1) The format envelopes define the start and end of data in a given format within the message envelope.

2) The format envelope begins with a format number. The MSL uses two format numbers: Format 06 (data using DIs) and Format 07 (free form text or data using DEIs).

(a) Format 06 uses DIs to uniquely identify each data element and it uses a Data Element Separator G_s between each data element. A DI precedes each data element. The G_s Data Element Separator is a non-printable single ASCII character.

(b) Format 07 has been modified by DOD to use DEIs to uniquely identify each data element and it uses a Data Element Separator G_s between each data element. A DEI precedes each data element.

(c) Each format envelope ends with the Format Trailer character R_s non-printable single ASCII character.

d. The TCN document number and related MSL text and TCMD data are contained in the first Format 06 message envelope that terminates with an R_s code followed by a Format 07 message envelope that terminates with an R_s code.

e. The supply line item data for specific Requisition Document Numbers are contained in a Format 06 message envelope that follows the Format 07 envelope. Data looping is required to document a multipack shipment when one or more supply line items exist within a single shipment unit. In this data looping structure, the order in which the supply line information is stored in the PDF417 2D bar code is critical to the meaning of the data. Each data set within a looping structure begins with DI 12S and ends with DI 12Q – see Section 2, Table 2. The number of supply line item documents is limited by the storage capacity of the PDF417 2D bar code. The following is an illustrative example (not a complete MSL):

1) PDF417 2D bar code message/format envelopes:

$] >^{R_s}$

$06^{G_s}JKUSMSW31238350D001XXX^{G_s}3D1090^{R_s}$

$07^{G_s}039BU^{G_s}12385^{R_s}$

$06^{G_s}12SSW31238350D001^{G_s}N531001198758511^{G_s}7Q1EA^{G_s}$

$VS9I^{G_s}2RA^{G_s}8V7V^{G_s}12Q12345.90USD^{G_s}$

$12S^{G_s}N531001198758511^{G_s}7Q1EA^{G_s}$

$12Q^{R_s}$

E_{O_T}

2) As a concatenated PDF417 2D bar code data stream it would appear as:

$] >^{R_s}06^{G_s}JKUSMSW31238350D001XXX^{G_s}3D1090^{R_s}07^{G_s}039BU^{G_s}12$

$385^{R_s}06^{G_s}12SSW31238350D001^{G_s}N531001198758511$

$^{G_s}7Q1EA^{G_s}VS9I^{G_s}2RA^{G_s}8V7V^{G_s}12Q12345.90USD^{G_s}12S^{G_s}N53100119$

$8758511^{G_s}7Q1EA^{G_s}12Q^{R_s}E_{O_T}$

14. Encode Source Priority. The priority for using PDF417 2D bar code data qualifiers (DI/DEI) to encode the same information from different sources is from first to last: 1) the TCMD; 2) supply line item commodity information; 3) the MSL clear-text. This provision deals primarily with different encoding formats for the same information as discussed in paragraph 12.

15. TCMD Data without Assigned DIs or DEIs. The following TCMD entries do not have assigned DIs or DEIs for entry in the PDF417 2D bar code. However DI/DEIs may be assigned at a later date to accommodate expanded AIT media capabilities or new data requirements. The current DI/DEI structure reflects those data elements deemed necessary to receive cargo into a terminal when an advance clearance is not available.

- a. DI/DEIs are not available for the following elements that are encoded in a specific record position in the 80 column TCMD format.

- Federal Stock Class
- Short Shelf Life Code
- Date Shipped to POE Code
- Estimated Time/Date Arrive at POE Code
- Shipment Total Pieces (TCMD total shipment)
- Shipment Weight (TCMD shipment total – 1 or more pieces)
- Shipment Cube (TCMD shipment total – 1 or more pieces)
- Courier Station Code + APOE Code
- Courier Station and APOE Collocated Indicator
- Courier Station Code +APOD Code
- SEAVAN Contents Weight
- SEAVAN Contents Cube
- Parent Container Number Code (RORO trailer or SEAVAN)
- Parent Container Number Code (other than RORO trailer or SEAVAN)
- Basic Issue Item (BII) Pieces
- Pieces with Dimensional Data
- Weight of One Outsize Piece
- Cube of One Outsize Piece
- HAZMAT Agency ID acronym (IMO)
- Pieces in Lot
- Weight of Lot
- Cube of Lot
- Net Weight (shipment total – 1 or more pieces by direct procurement method (DPM))
- TCMD T_9 Sequence Indicator
- Van Length Ordered
- 2nd Seal Number
- 2nd Seal Attaching Activity ID Code (DODAAC or SCAC)

- b. DI/DEIs are not available for the following elements that are encoded as remarks in TCMD T_9 free text data (rp 54-79).

- Not Otherwise Specified (NOS) Cargo Description
- Liquor Type
- Liquor Bottle Size
- Liquor Bottles per Case
- Cigarette Cartons per Case
- National Motor Freight Classification Text
- Standard Transportation Commodity Code Description
- Classified Container Number
- Classified Container Seal Number

Name of Origin Carrier
Shipment Units in a SEAVAN
Miscellaneous Comments
Missile Serial Number (Chap 203, para B.19.a.(10))
Round Count Total (actual value - see Table M-10)
TCMD Piece Number (actual value - see 203.B.8.d.(3))
TCMD Weight (actual value - see 203.B.8.d.(3))
TCMD Cube (actual value - see 203.B.8.d.(3))
Clear text Consignee Address (if no DODAAC for TCMD entry - see 203.B.2)
SEAVAN Owner Name (see Table M-5)
Vehicle Model Year (see Table M-9)
Vehicle Make (see Table M-9)
HAZMAT Proper Shipping Name
HAZMAT Technical Name
HAZMAT Reportable Quantity Indicator
HAZMAT Waste Indicator
HAZMAT Hazard Class or Division
HAZMAT Packing Group
HAZMAT Limited Quantity Indicator
HAZMAT Cargo Aircraft Only Indicator
HAZMAT Poison Inhalation Hazard Zone
HAZMAT Dangerous When Wet Indicator
HAZMAT Total Quantity Described
HAZMAT Flash Point Description
Classification Level
Security Risk Category
Transportation Protection Service Requirements
HAZMAT Packed Date Statement
HAZMAT Competent Approval Authority Waiver Number
Travel Order Number (for unaccompanied baggage)
Travel Order Accounting Disbursing Station Number (for unaccompanied baggage)
Travel Order Issuing Organization and Address (for unaccompanied baggage)

16. MSL Text Data without Assigned DIs or DEIs. DI/DEIs are not available for the following MSL clear text entries.

Consignor Military Assistance Program Address Code (MAPAC)
Consignee MAPAC
Commercial Carrier Tracking Number
Name of Origin Carrier

17. MSL Text Data Not Part of TCMD. The following MSL text entries may not, or do not, reflect TCMD information:

- Generic Cargo: Clear text addresses (derived from DODAACs)
Consignor CAGE Code
Type Service (may be derived from Mode/Method Code)
Commercial Carrier Tracking Number
Date Shipped (this is not the Date Shipped Code to POE)
FMS Case Number
Consignor MAPAC (see DTR Prt II, App E)
Consignee MAPAC (see DTR Prt II, App E)
Piece Number
Total Pieces
Piece Weight
Piece Cube
- Unit Move: Clear text addresses (derived from DODAACs)
Equipment Description (may be derived from nomenclature)
Model (format is longer than TCMD Model format)
Bumper Number
Vehicle Identification Number (VIN)
Unit Identification Code (UIC)
Piece Number
Total Pieces
Piece Weight
Piece Cube
- Personal Property: Clear text addresses (derived from DODAACs)
Type Service (may be derived from Personal Property Code)
Name of Origin Carrier
Date Shipped (this is not the Date Shipped Code to POE)
Piece Number
Piece Weight
Total Pieces
Piece Cube
Piece Tare Weight (weight of packing materials)
Piece Net Weight

SECTION 2

Shipment Scenario Tables

1. **Using the Tables.** The following Quick Reference Scenario Decision Table, its related shipment scenario tables, and an Index of Decision Table Elements provide referenced access to the shipment and supply line item scenarios and data elements needed to generate each of the DTR MSL formats (Generic Cargo, Unit Move, and Personal Property).

a. The shipment scenarios and data instructions capture the shipment planning and TCMD logic patterns used to generate the applicable data set for the MSL clear text entries, the linear bar code data, and the DI/DEIs and data for the MSL PDF417 2D bar code. For the PDF417 2D bar code, insert the encoded PDF417 2D bar code DI/DEIs and data from each of the applicable tables into the syntax and semantics message and format envelopes to complete the digital data stream for the bar code – see Section 1.

b. The shipment scenarios also identify the supply line item commodity information required for the Generic Cargo MSL.

2. **Shipment Scenarios.** Begin the MSL generation process by selecting the appropriate shipment scenario table from the Quick Reference Scenario Decision Table on page 28.

a. Table 1 consists of five independent scenarios. Select the one, and only one (Table 1-A, 1-B, 1-C, 1-D, or 1-E), that applies, and capture the applicable data.

b. Proceed through the other applicable shipment scenario tables, capturing the data that pertains to that shipment. Refer to DTR Part II, Appendix M and X to resolve conflicted guidance.

3. **Shipment Scenario Table Data.**

a. The DI/DEI column in each shipment scenario table indicates the appropriate ISO/IEC 15434 Format 06 data identifier (DI) or the Format 07 data element identifier (DEI) for a specific data element.

(1) **Format 06.** For the MSL application, the Format 06 DIs contain all alpha characters (e.g., JKUSM) or contain a numeric character and an alpha character (e.g., 2Q).

(2) **Format 07.** For the MSL application, the Format 07 DEIs contain all numeric characters (e.g., 03).

b. The Format column in each shipment scenario table indicates whether the data is alpha and/or numeric and the length of the actual data represented by this field. A convention of “an..25” means a variable length data string of up to 25 alphanumeric characters, where “an25” means a fixed length of precisely 25 alphanumeric characters. A convention of “an13..15” means a minimum of 13 characters and a maximum of 15 characters. The plus symbol (+) is used to show concatenated data fields within a DI/DEI string and it may or may not be part of the data sub-string. The plus symbol (+) is only encoded as part of the data sub-string when specifically noted in the Instructions column to separate different types of data that are encoded within a single field, e.g., Table 4 DIs 2L, 3L, and 5L that are used for encoding address information. Variable length fields are not zero-filled unless the information is extracted from an external data source that has leading zeros, or as indicated in the instructions for data looping situations.

4. **Scenario Examples.** The following shipment scenario examples are provided to illustrate use of the decision table:

a. Shipment is a single supply line item with complete commodity information, nonhazardous, with one National Stock Number (NSN), in a box, Transportation Priority (TP)-3, to a continental US (CONUS) consignee.

Consider Tables 1-A, 2, 4, and 8.

b. Shipment is a single supply line item with incomplete information in a box, hazardous, with one NSN, TP-1, to a Defense Transportation System (DTS) aerial port of embarkation (POE).

Consider Tables 1-A, 3, 4, 6, and 9.

c. Shipment is multiple supply line items (12) in a box, nonhazardous, one NSN = 60% of weight, TP-2 to a consolidation and containerization point (CCP).

Consider Tables 1-A, 3, 4, 6, and 8.

d. Shipment is a consolidation of multiple shipments units (TCNs) in a tri-wall carton, many different NSNs, TP-3 to a CCP.

Consider Tables 1-E, 3, 4, and 7.

e. Shipment is a consolidation of multiple shipments units (TCNs) in a SEAVAN, several are hazardous, many different NSNs, TP-3, to a seaport POE.

Consider Tables 1-C, 3, 4, 5, and 7.

Table 9 does not apply – the SEAVAN MSL cannot document the multiple hazards.

f. Shipment is a consolidation of multiple shipments units (TCNs) on a 463L Pallet shipment unit with a TCN, many different NSNs, TP-1 is the highest priority on the pallet to an air POE.

Consider Tables 1-D, 3, 4, and 6.

g. Shipment is unit move cargo in a SEAVAN, contains 2 identical Government trucks packed with multiple hazards (all with UN ID Numbers), 1 hazardous NSN (2 fueled trucks each with a battery and fire extinguisher) to a water POE.

Consider Tables 1-A, 4, 5, 7, 9, and 10.

Table 9 applies because there are UN ID Number multiple hazards for a single line item.

h. Shipment is personal property in multiple household goods containers, TP-2, to an outside continental US (OCONUS) address via an air POE.

Consider Tables 1-A, 4, 6, and 11

Quick Reference Scenario Decision Table

Table		Shipment Scenario Select <u>one</u> scenario from the Table 1 group then add others as applicable	Page
Select One	1-A	Single Shipment Unit With No TCNs Consolidated Within It (TCMDs T_0/1 and MSL) or, Empty Roll On/Roll Off (RORO) Trailer and All Empty Containers or, Unit Move Cargo	26
	1-B	Loaded RORO Trailer / Vehicle (TCMD T_2 and MSL)	29
	1-C	Loaded SEAVAN (TCMD T_2 and MSL)	31
	1-D	463L Air Pallet Shipment Unit (TCMD T_2 and MSL)	34
	1-E	Other Consolidated Shipment Unit or Unitized Pallet Load (TCMD T_3 and MSL) Other than Table 1-B, 1-C, or 1-D applications.	36
2	Generic Cargo <u>With</u> Supply Line Item Information Use Table 3 for consolidated shipment units, incomplete required supply line item data, or shipments with over 10 supply line items.	39	
3	Generic Cargo MSL <u>Without</u> Supply Line Item Information	41	
4	All Shipments	42	
5	SEAVAN Miscellaneous Information Includes empty SEAVAN.	47	
6	Air Eligible Cargo (TP-1, TP-2, TP-4) or Unit Move Air Cargo To a CCP or DTS Air POE.	49	
7	Routine Cargo (TP-3), Non-air Eligible Cargo, or Unit Move Surface Cargo To a CCP or DTS Water POE.	50	
8	Nonhazardous Cargo Shipment contains an NSN (1 or more items) comprising at least 51% of shipment weight. Shipment contains no shipment units (i.e. TCNs) consolidated within it. Shipment contains no personal property or material for sale in stores.	51	
9	Hazardous Cargo, Explosives, and Ammunition Shipment contains no shipment units (i.e TCNs) consolidated within it. Shipment contains no more than 1 HAZMAT line item (one NSN). Shipment contains no more than 1 lot number.	52	
10	Government Vehicles, Wheeled/Tracked Guns, Aircraft, and Outsize Cargo or, Unit Move Cargo and Prepositioned Cargo For multiple occurrences of the listed items in the same shipment unit, the items must be identical. If otherwise, do not encode the data. Outsize = any piece exceeding 6 feet in any dimension (except a SEAVAN/POV). Prepositioned cargo is marked and load planned for long-term storage on a DTS carrier.	55	
11	Personal Property Cargo.	58	

Table 1-A
Single Shipment Unit
(TCMD T_0/1 and MSL Data)

Includes no shipment units (i.e. TCNs) consolidated within it.
Includes all unit move cargo.
Includes empty RORO trailer and empty SEAVAN.
Except for unit move cargo, does not include loaded RORO trailer/vehicle, SEAVAN, 463L Pallet, “other consolidation”, or unitized pallet load – see following Table 1 scenarios.

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
JKUSM	Transportation Control Number (TCN)	an17	<p>Encode data in a linear bar code. A DI is not required.</p> <p>Encode DI and data in the PDF417 2D bar code.</p> <p>Enter as text on MSL as applicable.</p> <p>Must not be duplicated and must conform to DTR Pt II, App L format</p>	<p>Table 208-2</p> <p>App L</p> <p>App M</p>
2Q	<p>Weight (shipment piece) Default = pounds</p> <p>If Piece Total equals 1 piece, this value will also be equal to the TCMD Total Shipment Weight. There is no DI available for TCMD Total Shipment Weight.</p>	<p>an..5 for 2D bar code only</p>	<p>Encode DI and data in PDF417 2D bar code and enter data as clear text on the MSL. Ensure unit of measure is shown on the MSL.</p> <p>Value may be encoded in the PDF417 2D bar code to fit the field size, e.g., “&9999” for a 109,000 lb shipment.</p> <p>Clear text value printed on MSL <u>must be for that piece only</u> (with no leading zeros, whole number only, no codes).</p>	<p>Table 208-2</p> <p>Chap 203, B.8</p>

Table 1-A (Continued)
Single Shipment Unit
(TCMDs T_0/1 and MSL Data)

13Q	Piece Number / Total Pieces - piece n of x of pieces	an..4/an..4 for 2D bar code only	<p>Encode just the piece number in a linear bar code, e.g., "2". A DI is not required and there is no mandated field length.</p> <p>Encode the DI and the (Piece / Total Pieces) in the PDF417 2D bar code, e.g., "2/2".</p> <p>Enter as clear text on MSL as applicable, e.g., "2 of 2".</p> <p>See Note 1 for partial or split shipments.</p> <p>For unit move cargo (SEAVAN or marked vehicle (empty or loaded)), the piece count will be "1/1".</p>	Table 208-2 Chap 203 DTR Pt III
Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
03	Project Code	an3	Encode DEI and data in PDF417 2D bar code and enter data as text on MSL if applicable.	Table 208-2 App M DD 1348-1A (rp 57-59)
12	<p>Cube (shipment piece) Default = cubic feet</p> <p>If Piece Total equals 1 piece, this value will also be equal to the TCMD Total Shipment Cube. There is no DEI available for TCMD Total Shipment Cube.</p>	an..4 for 2D bar code only	<p>Encode DEI and data in PDF417 2D bar code and enter data as clear text on the MSL. Ensure unit of measure is shown on the MSL.</p> <p>Clear text value printed on MSL <u>must be for that piece only</u> (with no leading zeros, whole number only, no codes).</p>	Table 208-2 Chap 203

Table 1-A (Continued)
Single Shipment Unit
(TCMDs T_0/1 and MSL Data)

34	TCMD/Manifest Doc ID Code - Document Identifier Code (DIC)	an3	<p>Encode DEI and “T_0” for release unit (RU) qualified cargo (DTR para 202.Y). Example: “34TX0”.</p> <p>Encode DEI and “T_1” for less than release unit (LRU) qualified cargo. Example: “34TJ1”.</p> <p>Second character of the Doc ID is determined IAW DTR Pt II, App DD.</p> <p>Do not encode unless a TCMD is actually generated for the shipment unit.</p>	App M App DD
24	Container Number Code - last 5 digits of van ID number.	an5	Encode DEI and value for SEAVAN/RORO trailer if applicable. If none, enter no value.	App M
50	Type Pack Code	an2	Encode DEI and data as applicable.	App M App UU

Note 1: A partial shipment unit increment or a split shipment unit increment is usually piece marked at origin as a complete shipment and the pieces should be marked accordingly (1 to last piece). A split shipment unit increment marked at a transship point should not be re-marked as a complete shipment (retain the original Piece/Total Pieces Numbers). The carrier manifest and hazardous cargo declaration for a shipment must reflect the actual number of pieces loaded on the conveyance – for a partial or split shipment, the number of total pieces loaded on the conveyance could be different from the total pieces shown on the MSL.

Note 2: There are currently no DI/DEIs for Shipment Total Pieces (TCMD Shipment Total), for Shipment Weight (TCMD Shipment Total – 1 or more pieces), or for Shipment Cube (TCMD Shipment Total – 1 or more pieces). The TCMD reflects what will be loaded on a conveyance.

Table 1-B				
Loaded RORO Trailer / Vehicle (TCMD T_2 and MSL Data)				
Does <u>not</u> include unit move cargo – see Table 1-A.				
Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
JKUSM	Transportation Control Number (TCN)	an17	<p>Encode data in a linear bar code. A DI is not required.</p> <p>Encode DI and data in the PDF417 2D bar code.</p> <p>Enter as text on MSL as applicable.</p> <p>Must not be duplicated and must conform to DTR Pt II, App L format.</p>	<p>Table 208-2</p> <p>App L</p> <p>App M</p>
2Q	<p>Weight (shipment piece) Default = pounds</p> <p>This value will also be equal to the TCMD Total Shipment Weight. There is no DI available for TCMD Total Shipment Weight.</p>	<p>an..5 for 2D bar code only</p>	<p>Encode DI and data for the entire shipment (RORO trailer/vehicle and contents) in PDF417 2D bar code and enter as clear text on the MSL because Piece Weight and Shipment Weight are equal.</p> <p>Clear text value printed on MSL shows no codes, no leading zeros, and whole number only.</p>	<p>Table 208-2</p> <p>Chap 203</p>
13Q	Piece Number / Total Pieces - piece n of x of pieces	<p>an..4/an..4 for 2D bar code only</p>	<p>Encode just the Piece Number in a linear bar code. Encode as “1”. A DI is not required.</p> <p>Encode the DI and the (Piece / Total Pieces) in the PDF417 2D bar code as “1/1”.</p> <p>Enter as clear text on MSL as applicable with no leading zeros as “1 of 1”.</p>	<p>Table 208-2</p> <p>Chap 203</p>

Table 1-B (Continued)
Loaded RORO Trailer / Vehicle
(TCMD T_2 and MSL Data)

Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
12	<p>Cube (shipment piece) Default = cubic feet</p> <p>This value will also be equal to the TCMD Total Shipment Cube. There is no DEI available for TCMD Total Shipment Cube.</p>	an..4 for 2D bar code only	<p>Encode DEI and data value for the entire shipment (RORO trailer/vehicle external cube) in PDF417 2D bar code and enter as clear text on the MSL because Piece Cube and Shipment Cube are equal.</p> <p>Clear text value printed on MSL shows no codes, no leading zeros, and whole number only.</p>	Table 208-2 Chap 203
34	<p>TCMD/Manifest Doc ID Code - Document Identifier Code (DIC)</p>	an3	<p>Encode DEI and "T_2". Example: "34TX2" or "34TV2".</p> <p>Second character of the Doc ID is determined IAW DTR Pt II, App DD.</p> <p>Do not encode unless a TCMD is actually generated for the shipment unit.</p>	App M App DD
24	<p>Container Number Code -last 5 digits of van ID number.</p>	an5	<p>Encode DEI and data as applicable. Code serves as a reference link to other consolidated cargo TCNs.</p>	App M App QQ
50	<p>Type Pack Code</p>	an2	<p>Encode DEI and "RT".</p>	App M App UU
55	<p>Consignee Distribution (CDIST) Code</p>	an1	<p>Encode DEI and data as applicable. Enter code for single or multiple consignees.</p>	App M (TCMD T_2, Table M-4/5, rp 57)

Note: There are currently no DI/DEIs for Shipment Total Pieces (TCMD Shipment Total), for Shipment Weight (TCMD Shipment Total – 1 or more pieces), or for Shipment Cube (TCMD Shipment Total – 1 or more pieces). The TCMD reflects what will be loaded on a conveyance.

Table 1-C
Loaded SEAVAN
(TCMD T_2 and MSL Data)

Does not include unit move cargo – see Table 1-A.

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
JKUSM	Transportation Control Number (TCN)	an17	<p>Encode data in a linear bar code. A DI is not required.</p> <p>Encode DI and data in the PDF417 2D bar code.</p> <p>Enter as text on MSL as applicable.</p> <p>Must not be duplicated and must conform to DTR Pt II, App L format.</p>	<p>Table 208-2</p> <p>App L</p> <p>App M</p>
2Q	<p>Weight (shipment piece) Default = pounds</p> <p>There is no specific DI available for SEAVAN Contents Weight.</p>	<p>an..5 for 2D bar code only</p>	<p>Encode DI and data for the entire shipment (van and contents) in PDF417 2D bar code and enter as clear text on the MSL.</p> <p>Clear text value printed on MSL shows no codes, no leading zeros, and whole number only.</p>	<p>Table 208-2</p> <p>Chap 203</p>
13Q	Piece Number / Total Pieces - piece n of x of pieces	<p>an..4/an..4 for 2D bar code only</p>	<p>Encode just the Piece Number in a linear bar code as "1". A DI is not required.</p> <p>Encode the DI and the (Piece / Total Pieces) in the PDF417 2D bar code as "1/1".</p> <p>Enter as clear text on MSL as "1 of 1".</p>	<p>Table 208-2</p> <p>Chap 203</p>

Table 1-C (Continued)
Loaded SEAVAN
(TCMD T_2 and MSL Data)

Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
12	<p>Cube (shipment piece) Default = cubic feet</p> <p>There is no specific DEI available for SEAVAN Contents Cube.</p>	an..4 for 2D bar code only	<p>Encode DEI and data value for the entire shipment (van and contents) in PDF417 2D bar code and enter as clear text on the MSL.</p> <p>Clear text value printed on MSL shows no codes, no leading zeros, and whole number only.</p>	Table 208-2 Chap 203
24	Container Number Code - last 5 digits of van ID number.	an5	Encode DEI and data as applicable. Code serves as a reference link to other consolidated cargo TCNs.	App M App QQ
34	TCMD/Manifest Doc ID Code - Document Identifier Code (DIC)	an3	<p>Encode DEI and "T_2". Example "34TX2".</p> <p>Second character of the Doc ID is determined IAW DTR Pt II, App DD.</p> <p>Do not encode unless a TCMD is actually generated for the shipment unit.</p>	App M App DD
50	Type Pack Code	an2	Encode DEI and data as applicable.	App M App UU
51	SEAVAN Ownership Code	an4	<p>For SEAVAN only, encode DEI and data if applicable.</p> <p>The code usually precedes the van Serial Number. If no code on van, enter "XXXX".</p>	App M (TCMD T_2, Table M-5) App TT
55	Consignee Distribution (CDIST) Code	an1	Encode DEI and data as applicable. Enter code for single or multiple consignees and method of delivery.	App M (TCMD T_2, Table M-5, rp 57)
56	Number of Shipment Units in Van	n2	Encode DEI and number of shipment units (TCNs) loaded. If more than 99, enter "XX".	App M (TCMD T_2, Table M-5, rp 58-59)

Table 1-C (Continued)
Loaded SEAVAN
(TCMD T_2 and MSL Data)

57	Number of Pieces in Van	n4	For SEAVAN only, encode DEI and number of pieces in van.	App M (TCMD T_2, Table M_5, rp 68-71)
58	Van Inside Cube - default = cubic feet	an..4	Encode DEI and number applicable to the van.	App M (TCMD T_2, Table M_5, rp 64-67)
59	Van Length Default = feet	an..2	Encode DEI and actual length as applicable.	App M (TCMD T_2, Table M_5, rp 13-14)

Note: There are currently no DI/DEIs for Shipment Total Pieces (TCMD Shipment Total), for Shipment Weight (TCMD Shipment Total – 1 or more pieces), for Shipment Cube (TCMD Shipment Total – 1 or more pieces), for SEAVAN Contents Weight, or for SEAVAN Contents Cube. The TCMD reflects what will be loaded on a conveyance.

Table 1-D

**463L Air Pallet Shipment Unit (Loaded Channel Air)
(TCMD T_2 and MSL Data)**

Does not include unit move cargo – see Table 1-A.

See Note 1.

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
JKUSM	Transportation Control Number (TCN)	an17	<p>Encode data in a linear bar code. A DI is not required.</p> <p>Encode DI and data in the PDF417 2D bar code.</p> <p>Enter as text on MSL as applicable.</p> <p>Must not be duplicated and must conform to DTR Pt II, App L format.</p>	<p>Table 208-2</p> <p>App L</p> <p>App M</p>
2Q	<p>Weight (shipment piece) Default = pounds</p> <p>This value will also be equal to the TCMD Total Shipment Weight. There is no DI available for TCMD Total Shipment Weight.</p>	an..5 for 2D bar code only	<p>Encode DI and data for the entire shipment (pallet and contents) in PDF417 2D bar code and enter as clear text on the MSL. Piece Weight and Shipment Weight are equal.</p> <p>Clear text value printed on MSL shows no codes, no leading zeros, and whole number only.</p>	<p>Table 208-2</p> <p>Chap 203</p>
13Q	Piece Number / Total Pieces - piece n of x of pieces	an..4/an..4 for 2D bar code only	<p>Encode just the Piece Number in a linear bar code. Encode as “1”. A DI is not required.</p> <p>Encode the DI and the (Piece / Total Pieces) in the PDF417 2D bar code as “1/1”.</p> <p>Enter as clear text on MSL as “1 of 1”.</p>	<p>Table 208-2</p> <p>Chap 203</p>

Table 1-D (Continued)

**463L Air Pallet Shipment Unit (Loaded Channel Air)
(TCMD T_2 and MSL Data)**

Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
03	Project Code	an3	Encode DEI and data in PDF417 2D bar code and enter data as text on MSL if applicable.	Table 208-2 App M DD 1348-1A (rp 57-59)
12	Cube (shipment piece) Default = cubic feet This value will also be equal to the TCMD Total Shipment Cube. There is no DEI available for TCMD Total Shipment Cube.	an..4 for 2D bar code only	Encode DEI and value for the entire shipment (pallet and contents) in PDF417 2D bar code and enter as clear text on the MSL. Piece Cube and Shipment Cube are equal. Clear text value printed on MSL shows no leading zeros, whole number only.	Table 208-2 Chap 203
34	TCMD/Manifest Doc ID Code - Document Identifier Code (DIC)	an3	Encode DEI and "T_2". Example "34TX2". Do not encode unless a TCMD is actually generated for the shipment unit. Second character of the Doc ID is determined IAW DTR Pt II, App DD.	App M App DD
50	Type Pack Code	an2	Encode DEI and "LP".	App M App UU

Note 1: The 463L Pallet shipment units are usually built and marked with an MSL at the DLA CCPs for movement to, through, and beyond a POE/POD. The 463L Pallets built and manifested at aerial ports for carrier convenience are not normally considered to be a 463L Pallet shipment unit (a shipment unit requires an MSL and advance clearance into the DTS).

Note 2: There are currently no DI/DEIs for Shipment Total Pieces (TCMD Shipment Total), for Shipment Weight (TCMD Shipment Total – 1 or more pieces), or for Shipment Cube (TCMD Shipment Total – 1 or more pieces). The TCMD reflects what will be loaded on a conveyance.

Table 1-E

**Other Consolidated Shipment Unit
(TCMD T_3 and MSL Data)**

Contains 2 or more shipment units (multiple TCNs) in an “other consolidation” or unitized pallet load.

Does not include a loaded RORO trailer/vehicle, loaded SEAVAN, or 463L Pallet shipment unit – see prior Table 1 scenarios.

Does not include unit move cargo – see Table 1-A.

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
JKUSM	Transportation Control Number (TCN)	an17	<p>Encode data in a linear bar code. A DI is not required.</p> <p>Encode DI and data in the PDF417 2D bar code.</p> <p>Enter as text on MSL as applicable.</p> <p>Must not be duplicated and must conform to DTR Pt II, App L format</p>	<p>Table 208-2</p> <p>App L</p> <p>App M</p>
2Q	<p>Weight (shipment piece) Default = pounds</p> <p>If Piece Total equals 1 piece, this value will also be equal to the TCMD Total Shipment Weight. There is no DI available for TCMD Total Shipment Weight.</p>	<p>an..5 for 2D bar code only</p>	<p>Encode DI and data in PDF417 2D bar code and enter data as clear text on the MSL. Ensure unit of measure is shown on the MSL.</p> <p>Value may be encoded in the PDF417 2D bar code to fit the field size, e.g., “&9999” for a 109,000 lb shipment.</p> <p>Clear text value printed on MSL <u>must be for that piece only</u> (with no leading zeros, whole number only, no codes).</p>	<p>Table 208-2</p> <p>Chap 203</p>

Table 1-E (Continued)

**Other Consolidated Shipment Unit
(TCMD T_3 and MSL Data)**

13Q	Piece Number / Total Pieces - piece n of x of pieces	an..4/an..4 for 2D bar code only	<p>Encode just the Piece Number in a linear bar code, e.g., "1". A DI is not required and there is no mandated field length.</p> <p>Encode the DI and the (Piece / Total Pieces) in the PDF417 2D bar code, e.g., "1/1".</p> <p>Enter as clear text on MSL as applicable, e.g., "1 of 1".</p> <p>See Note 1 for partial or split shipments.</p>	Table 208-2 Chap 203
Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
03	Project Code	an3	<p>Encode DEI and data in PDF417 2D bar code and enter data as text on MSL if applicable.</p> <p>If consolidation contains more than one Project Code, enter highest priority JCS Project Code.</p>	Table 208-2 App M DD 1348-1A (rp 57-59)
12	<p>Cube (shipment piece) Default = cubic feet</p> <p>If Piece Total equals 1 piece, this value will also be equal to the TCMD Total Shipment Cube. There is no DEI available for TCMD Total Shipment Cube.</p>	an..4 for 2D bar code only	<p>Encode DEI and data in PDF417 2D bar code and enter data as clear text on the MSL. Ensure unit of measure is shown on the MSL.</p> <p>Clear text value printed on MSL <u>must be for that piece only</u> (with no leading zeros, whole number only, no codes).</p>	Table 208-2 Chap 203
34	TCMD/Manifest Doc ID Code - Document Identifier Code (DIC)	an3	<p>Encode DEI and "T_3". Example "34TX3".</p> <p>Second character of the Doc ID is determined IAW DTR Pt II, App DD.</p> <p>Do not encode unless a TCMD is actually generated for the shipment unit.</p>	App M App DD

Table 1-E (Continued)

**Other Consolidated Shipment Unit
(TCMD T_3 and MSL Data)**

24	Container Number Code - last 5 digits of the Container Number.	an5	Encode DEI and data if applicable. If no marked number, create a noncontrolled Container Number Code IAW DTR Pt II, App QQ. The code serves as a reference link to other consolidated cargo TCNs.	App M App QQ
50	Type Pack Code	an2	Encode DEI and data as applicable.	App M App UU

Note 1: A partial shipment unit increment or a split shipment unit increment is usually piece marked at origin as a complete shipment and the pieces should be marked accordingly (1 to last piece). A split shipment unit increment marked at a transship point should not be re-marked as a complete shipment (retain the original Piece/Total Pieces Numbers). The carrier manifest and hazardous cargo declaration for a shipment must reflect the actual number of pieces loaded on the conveyance – for a partial or split shipment, the number of total pieces loaded on the conveyance could be different from the total pieces shown on the MSL.

Note 2: There are currently no DI/DEIs for Shipment Total Pieces (TCMD Shipment Total), for Shipment Weight (TCMD Shipment Total – 1 or more pieces), or for Shipment Cube (TCMD Shipment Total – 1 or more pieces). The TCMD reflects what will be loaded on a conveyance.

Table 2

Generic Cargo with Supply Line Item Information

Only for a single shipment unit (may have multiple pieces) with no other shipment units (i.e. TCNs) consolidated within it. If otherwise, use Table 3.

Line item data must be accurate and available for all “required” elements (see this table’s Instructions blocks). If otherwise, use Table 3.

All encoded MSL/TCMD and supply line item applicable data must fit in the space provided on the MSL to print the PDF417 2D bar code (at least 10 supply line items usually fit). If otherwise, use Table 3.

For multi-piece shipments, the MSL for each piece of the shipment unit will have the same supply line item information that applies to all pieces of the shipment unit.

The information in this table is a repeating data set (encoded in order then repeated as necessary) for up to 10 supply line items in a shipment unit. DIs 12S and 12Q must be encoded to show the beginning and end of each data set (these are the only two DIs that may be left empty in the PDF417 2D bar code if a data entry is not applicable).

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
12S	Supply Document Number - and Suffix Code when applicable	an14..15	<u>DI must be encoded if one or more supply line items are entered.</u> Encode Document Number data if applicable. If data is not applicable, leave the DI empty (i.e., 12S ^G _S).	DD 1348-1A (rp 30-44) DD Form 250 or the contract
N	National/NATO Stock Number (NSN) - or stock identification elements thereof	an..15	<u>Required data element.</u> Encode DI and data.	DD 1348-1A (rp 8-22) DD Form 250 or the contract
4R	DOD Identification Code (DODIC)	an4	Encode DI and data if applicable for ammo.	DD 1348-1A block 27
1T	Lot Number	an..25	Encode DI and data if applicable for ammo. See Note.	DD 1348-1A block 27 DD Form 250 or the contract
7Q	Quantity and Unit of Issue (UI)	n..5+an2	<u>Required data element.</u> Encode DI and data. Example: “7Q7EA”.	DD 1348-1A (rp 23-29) DD Form 250 or the contract

Table 2 (Continued)

Generic Cargo with Supply Line Item Information

V	Routing Identifier Code (RIC) - Shipping Activity. The "From" RIC for shipper	an3	Encode DI and data if applicable.	DD 1348-1A (rp 4-6) DD Form 250 or the contract
2R	Condition Code	an1	Encode DI and data if applicable.	DD 1348-1A (rp 71) DD Form 250 or the contract
8V	Distribution Code - last 2 positions of DOD Distribution Code	an2	Encode DI and data if applicable. A blank in first or last position is significant and must be entered if present in the source data.	DD 1348-1A (rp 55-56) DD Form 250 or the contract
12Q	Unit Price - with unit of value = USD	n..5+.n2 +an3 (Includes a decimal)	<p><u>DI must be encoded if one or more supply line items are entered.</u></p> <p>Encode Unit Price data if applicable. Use decimal in the format. Example: 12Q123.98USD^G_S.</p> <p>If data is not applicable, leave the DI empty or enter zeros (i.e., 12Q^G_S or 12Q.00USD^G_S). If entering zeros, be sure to include the decimal point and unit of value to meet the format requirements.</p>	DD 1348-1A (rp 74-80) DD Form 250 or the contract

Note: For munitions with multiple Lot Numbers, use a separate data set for each lot to show the Lot Quantity.

Table 3

Generic Cargo MSL without Supply Line Item Information

Encode “NO LINE ITEM DATA” in the applicable MSL for a shipment that meets one or more of the following conditions:

Encode the statement in the MSL for a consolidated shipment unit that contains other shipment units (i.e. TCNs) within it.

Encode the statement in the MSL for a shipment unit that contains at least one supply line item for which the required supply line item information for NSN, Quantity, and Unit of Issue (see Table 2) is not accurate or not available.

Encode the statement in the MSL for a shipment unit that contains too many supply line items for the required and applicable supply line item information (see Table 2) to fit in the PDF417 2D bar code bar code. If more than 10 supply line items, consider using this table.

Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
35	Free Text –Comment	an..60	Encode DEI and “NO LINE ITEM DATA” if applicable. Enter as text on the MSL “NO LINE ITEM DATA” immediately below the PDF417 2D bar code.	As Required

Table 4
All Shipments

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
3D	Ship Date - format YDDD	an4 for 2D bar code only	<p>Encode DI and data in PDF417 2D bar code.</p> <p>Enter data in any recognized clear text format on the MSL if applicable. Data examples: YDDD DD/MMM/YY DD/MMM/YYYY MMM/DD/YY</p> <p>Blank for unit move cargo.</p> <p>This <u>is not</u> the TCMD Ship Date Code (from DTR Pt II, App RR).</p>	Table 208-2
2L	Ship To Address – up to 5 lines of 35 characters	an..35 +an..35 +an..35 +an..35 +an..35	<p>Enter as text on MSL as applicable.</p> <p>For generic cargo only, encode DI and data in the PDF417 2D bar code if supply line item data values are encoded for zero or one (0 or 1) line item.</p> <p>For unit move cargo and personal property cargo, encode DI and data in the PDF417 2D bar code as applicable</p> <p>For this DI, the “+” in the format is part of the data stream.</p> <p>Example data stream: “Traffic Management Officer (TMO)+26th Trans Sq, Bldg 45+123 Trucking Lane+High Flight AFB, TX”.</p>	Table 208-2

Table 4 (Continued)

All Shipments

<p>3L</p>	<p>From Address - up to 3 lines of 35 characters</p>	<p>an..35 +an..35 +an..35</p>	<p>Enter as text on MSL as applicable.</p> <p>For generic cargo only, encode DI and data in the PDF417 2D bar code if cargo supply line item data values are encoded for zero or one (0 or 1) line item.</p> <p>For unit move cargo and personal property cargo, encode DI and data in the PDF417 2D bar code as applicable.</p> <p>For this DI, the “+” in the format is part of the data stream.</p>	<p>Table 208-2</p>
<p>5L</p>	<p>Consignee Address - up to 5 lines of 35 characters</p>	<p>an..35 +an..35 +an..35 +an..35 +an..35</p>	<p>Enter as text on MSL if applicable.</p> <p>For generic cargo only, encode DI and data in the PDF417 2D bar code if cargo supply line item data values are encoded for zero or one (0 or 1) line item.</p> <p>For unit move cargo and personal property cargo, encode DI and data in the PDF417 2D bar code as applicable.</p> <p>Blank for classified unit move cargo.</p> <p>For this DI, the “+” in the format is part of the data stream.</p>	<p>Table 208-2</p>

Table 4 (Continued)

All Shipments

N	National/NATO Stock Number (NSN) - or stock identification elements thereof	an..13	<p>Encode DI and data if applicable. Usually shown as text on Unit Move MSL label.</p> <p>Note that ammo, explosives, HAZMAT info, and non-hazardous cargo NSN (Tables 8/9) have a conditional NSN encode requirement, which has priority over this optional entry.</p>	Ch 208 para G
17V	CAGE Code (for Consignor)	an5	<p>Encode DI and data in PDF417 2D bar code if applicable.</p> <p>For commercial vendors, enter as text on the MSL in the Consignor block in lieu of the DODAAC, if applicable.</p>	Table 208-2
Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
27	<p>Consignee DOD Activity Address Code (DODAAC) - for the receiving ultimate consignee or mark for consignee.</p> <p>Note: For Foreign Military Sales and Grant Aid programs, the derived MAPAC takes the place of the Consignee DODAAC (see DTR Prt II, App E). Encode the Consignee MAPAC in the linear bar code. <u>Do not</u> encode the Consignee MAPAC in the PDF417 2D bar code – there is no data qualifier for it.</p>	an6	<p>Encode DODAAC or MAPAC data in a linear bar code. A DEI is not required.</p> <p>Encode DEI and DODAAC data in the PDF417 2D bar code.</p> <p>Enter as text on MSL as applicable.</p> <p>Blank for classified unit move cargo.</p>	<p>Table 208-2</p> <p>App M</p> <p>DD 1348-1A</p>
28	Transportation Priority (TP) – TP 1 through TP 4	n1	<p>Encode DEI and data in PDF417 2D bar code and enter data as text on MSL as applicable.</p> <p>Blank for unit move cargo.</p> <p>Transportation Priority is based on Supply Priority and RDD. See DTR paragraph 203.B.3.</p> <p>For consolidated shipment units, enter highest priority.</p>	<p>Table 208-2</p> <p>App M</p> <p>Para 203 B.3</p>

Table 4 (Continued)

All Shipments

29	<p>Consignor DOD Activity Address Code (DODAAC) - for the shipper or loading activity</p> <p>Note: For Foreign Military Sales and Grant Aid program shipments, the derived MAPAC may take the place of the Consignor DODAAC (see DTR Prt II, App E). <u>Do not</u> encode the Consignor MAPAC in the PDF417 2D bar code – there is no data qualifier for it.</p>	an6	<p>Encode DEI and DODAAC data in PDF417 2D bar code. Enter only the DODAAC. <u>Do not enter</u> a CAGE Code or MAPAC for this DEI.</p> <p>Enter DODAAC or MAPAC as text on MSL if applicable.</p>	Table 208-2 App M
32	<p>Required Delivery Date (RDD) - may reflect RDD in DDD format or special codes, e.g., expedited shipment and handling (Code 999), Not Mission Capable Supply (NMCS) (Code N__), etc.</p>	an..3	<p>Encode DEI and data in PDF417 2D bar code and enter data as text on MSL if applicable.</p> <p>Blank for classified unit move cargo.</p> <p>For consolidated shipment units, enter earliest RDD or highest expedited handling or transportation signal.</p>	Table 208-2 App M DD 1348-1A (rp 62-64)
36	<p>Equipment Serial Number</p>	an..13	<p>Encode DI and data if applicable. Usually shown as text on the Unit Move MSL.</p> <p>Also see Table 10 for Gov't vehicles, guns, and aircraft.</p>	Ch 208 para G
48	<p>Type Service</p>	an..10	<p>Encode DEI and data in PDF417 2D bar code and enter data as clear text on MSL if applicable.</p> <p>Blank for unit move cargo.</p> <p>MSL entry is for transportation mode/method to first destination. <u>Do not enter</u> the TCMD “Mode/Method Code to POE” for this DEI.</p> <p>Example: “48FRT LTL”.</p>	Table 208-2
67	<p>FMS Case Number - Foreign Military Sales case number for MSL</p>	an3	<p>Encode DEI and data in PDF417 2D bar code and enter data as text on MSL if applicable.</p>	Table 208-2

Table 4 (Continued)

All Shipments

Clear Text	DOD Usage	Format	Instructions	Data Sources: DTR Part II
	Commercial Carrier Tracking Number	To fit MSL	Optional entry as text on MSL if applicable.	Ch 203, para G
	Consignee MAPAC – for Foreign Military Sales and Grant Aid programs.		See DEI 27.	
	Consignor MAPAC – for Foreign Military Sales and Grant Aid programs.		See DEI 29.	

Note 1: There are currently no DI/DEIs for Commercial Carrier Tracking Number (MSL text), Military Assistance Program Address Code (MAPAC), or Courier Transfer Station Codes (TCMD).

Note 2: The Generic Cargo MSL format in the DTR does not currently show inclusion of DI 17V for the CAGE Code. This will be included in the next change.

Table 5**SEAVAN Miscellaneous Information**

Includes empty SEAVAN.

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
51L	Origin ZIP Code – for SEAVAN	an5	For SEAVAN, encode DI and ZIP Code for point of origin as applicable.	App M (TCMD T_9, Table M-14, rp 9-14)
13S	Security Seal Number	an8	Encode DI and data if applicable.	App M (TCMD T_9, Table M-14)
4V	Ocean Carrier Code	an4	Encode DI and data as applicable for loaded vans.	App M (TCMD T_9, Table M-14) App SS
Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
59	Van Length Default = feet	an..2	For empty SEAVAN, encode DEI and actual length if applicable.	App M (TCMD T_9, Table M_14, rp 28-29)
60	Van Number - complete Serial Number or ISO ID Serial Number (without Owner Code or Check Digit)	an8	If longer than 8 digits, encode DEI and rightmost digits (zero fill left). Do not include special characters (dashes, slashes, symbols).	App M (TCMD T_9, Table M-14, rp 56-63)
61	Check Digit – following the van Serial Number	n1	Encode DEI and Check Digit which is usually separated from Container Number by dash, slash, or space; may also be colored, shaded, or enclosed in a box.	App M (TCMD T_9, Table M-14)
62	Temperature Range - shown in Fahrenheit degrees	an..5	Encode DEI and the Fahrenheit temp or temp range to maintain cargo, i.e., “62F34XX” for 34° or “62F3441” for 34° to 41°, if applicable.	App M (TCMD T_9, Table M-14/15)

Table 5 (Continued)

SEAVAN Miscellaneous Information

63	Stopoff Number and Consignee DODAAC	n..2+an6	Encode DEI, a Stop Number, and a DODAAC for each stopoff consignee if stopoff services are applicable. Use multiple repetitions of the DEI to encode a value for each stop. Example: “6301W55XGJ” “6302W44TYH”	App M (TCMD T_9, Table M-15, rp 54-65)
----	--	----------	--	---

Note: There are currently no DI/DEIs for Van Length Ordered (TCMD), 2nd Seal Number (TCMD), 2nd Seal Attaching Activity ID Code (TCMD), or TCMD T_9 Sequence Indicator.

Table 6**Air Eligible Cargo (TP-1, TP-2, TP-4) or Unit Move Air Cargo**

Shipped to OCONUS consignee via a consolidation and containerization point (CCP).
Shipped direct to a DTS aerial port POE.

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
9K	Transportation Account Code (TAC)	an4	Encode DI and data in PDF417 2D bar code and enter data as text on MSL only for Single Shipment Units (Table 1-A) and 463L Pallets (Table 1-D).	Table 208-2 App M App L
Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
23	Air Dimension Code	an1	Encode DEI and data for all shipments except loaded SEAVAN.	App M App BB
25	Port of Embarkation (POE) Code - Air Terminal Identifier Code	an3	Encode DEI and data in PDF417 2D bar code and enter data as text on MSL.	Table 208-2 App M App CC
26	Port of Debarkation (POD) Code - Air Terminal Identifier Code	an3	Encode DEI and data in PDF417 2D bar code and enter data as text on MSL. Blank for classified unit move cargo.	Table 208-2 App M App CC
30	Mode/Method Code - of shipment	an1	Encode DEI and the Mode/Method Code of shipment to POE.	App M App GG
49	Air Commodity/Special Handling Codes	an2	Encode DEI and Air Commodity Code from commodity with greatest weight. Encode Air Special Handling Code based on overall highest sensitivity of the shipment. For unit move cargo, enter as text on MSL.	Ch 208, para G App M App Z App AA

Note: There are currently no DI/DEIs for Federal Stock Classification (TCMD), Shelf Life Codes (TCMD), Date Shipped to POE Code (TCMD), or ETA Code (TCMD).

Table 7**Routine Cargo (TP-3), Non-Air Eligible Cargo, or Unit Move Surface Cargo**

Shipped to OCONUS consignee via a consolidation and containerization point (CCP).
 Shipped direct to a DTS seaport POE.

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
9K	Transportation Account Code (TAC)	an4	Encode DI and data in PDF417 2D bar code and enter data as text on MSL only for Single Shipment Units (Table 1-A) and 463L Pallets (Table 1-D).	Table 208-2 App M App L
Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
15	Water Commodity/Special Handling Codes	an5	Encode DEI and Water Commodity Code from commodity with greatest cube. Encode Water Type Cargo Code. When two or more codes apply to a shipment unit, the Water Type Cargo Code representing the greatest hazard (in the order of hazards from 49 CFR, when applicable) is used. Encode Water Special Handling Code based on overall highest sensitivity and difficulty of handling.	App M App KK App LL App NN
25	Port of Embarkation (POE) Code - Water Port Identifier Code	an3	Encode DEI and data in PDF417 2D bar code and enter data as text on MSL.	Table 208-2 App M App MM
26	Port of Debarkation (POD) Code - Water Port Identifier Code	an3	Encode DEI and data in PDF417 2D bar code and enter data as text on MSL. Blank for classified unit move cargo.	Table 208-2 App M App MM
30	Mode/Method Code - of shipment	an1	Enter DEI and Mode/Method Code of shipment to POE.	App M App GG

Note: There are no DI/DEIs for Date Shipped to POE Code (TCMD) or ETA Code (TCMD).

Table 8
Nonhazardous Cargo

Shipment contains a nonhazardous NSN (for one or more items) that comprises 51% or more of Total Shipment Weight for a single shipment unit (one TCN).
 Shipment contains no shipment units (i.e. TCNs) consolidated within it.
 Shipment contains no personal property or material for sale in stores.

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
N	National/NATO Stock Number (NSN) - or stock identification elements thereof	an..13	Encode DI and data if applicable. Use NNSN if NSN exists but is not known. Only use first 13 characters of NSN from DD 1348-1A.	App M (TCMD T_6) DD 1348-1A
Fmt 07 DE I	DOD Usage	Format	Instructions	Data Sources: DTR Part II
38	Nomenclature	an..14	Encode DEI and abbreviated nonhazardous item Nomenclature for the respective NSN (majority of weight) if applicable.	App M (TCMD T_5/6) DD 1348-1A

Table 9

Hazardous Cargo, Explosives, and Ammunition

Shipment contains no shipment units (i.e. TCNs) consolidated within it. See Note 1.
 Shipment contains no more than 1 HAZMAT line item (one NSN).
 The one line item may contain multiple hazards. See Note 2.
 Shipment contains no more than 1 Lot Number. See Note 3.

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
N	National/NATO Stock Number (NSN) - or stock identification elements thereof	an..13	Encode DI and data when Total Weight for the same NSN (one or more items) is 51% or more of Total Shipment Weight. Use NNSN if NSN exists but is not known. Use only first 13 characters of NSN from DD 1348-1A.	App M (TCMD T_6) DD 1348-1A
4R	DOD Identification Code (DODIC)	an4	Encode DI and data if applicable. For the Generic Cargo MSL only, also encode the DODIC data in the PDF417 2D bar code supply line item section (12Q to 12S) if applicable.	App M (TCMD T_6) DD 1348-1A
1T	Lot Number	an..25	Encode DI and data if applicable. For the Generic Cargo MSL only, also encode the Lot Number data in the PDF417 2D bar code supply line item section (12Q to 12S) if applicable.	App M (TCMD T_7) DD 1348-1A
Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
39	Number of Rounds - of ammunition	n..6	Encode DEI and data if applicable.	App M (TCMD T_6)
40	United Nations (UN) Class or Division Code	an2	Encode DEI and data as applicable.	App M (TCMD T_6)

Table 9 (Continued)

Hazardous Cargo, Explosives, and Ammunition

41	UN/NA Indicator - designates UN or North American source	an2	Encode DEI and data as applicable. DEI 41 is the qualifier for DEI 42. That is, DEI 41 indicates whether the code value in DEI 42 came from a UN or a North American table of values.	App M (TCMD T_6)
42	UN/North American ID Number	an4	Encode DEI and data as applicable. See instructions for DEI 41.	App M (TCMD T_6)
43	Compatibility Group Code	an1	For ammo/explosives, encode DEI and data if applicable.	App M (TCMD T_6)
44	Net Explosive Weight (NEW) – by Lot Number	n..6	For explosives, encode DEI and data if applicable.	App M (TCMD T_7)

Note 1: If a compatible HAZMAT shipment unit is consolidated within a higher-level shipment unit consolidation, the higher-level consolidation TCMD header/trailer documentation does not capture the HAZMAT information for each internal shipment unit. Since the MSL is only populated with data from the TCMD header and its respective trailer documentation, the MSL for the consolidated shipment unit will not reflect the HAZMAT detailed information from the internal shipment units. However, the Commodity and Special Handling Codes for the consolidation will reflect the nature of the consolidated shipment.

Note 2: There are several occasions when a single shipment unit may contain multiple hazards.

a. For example, one supply line item (one NSN) such as a vehicle or chemical kit packaged as a single shipment unit may contain multiple hazards. If the set of multiple TCMD T_6 records for the single line item contain only UN ID Numbers or only NA ID Numbers, the multiple records could be encoded using a combination of one DEI 41 (UN or NA title) and multiple repetitions of the DEI 42 (UN or NA ID Number) to encode the HAZMAT ID Numbers (e.g., "...41UN^G_S421389^G_S425234^G_S..."). However, if the set of TCMD T_6 records contain both UN and NA ID Numbers, the MSL PDF417 2D bar code cannot accommodate the repeated series of related information because HAZMAT data looping is not available at this time; therefore, when there are sets of related information (multiple DEIs 41 and multiple DEIs 42) for multiple hazards in a single shipment unit, the data elements for the DEI 41 and DEI 42 will not be encoded in the PDF417 2D bar code.

b. As an exception to the DTR directive that HAZMAT line items will not be consolidated, compatible HAZMAT line items may be consolidated as part of a unit move single shipment unit (SEAVAN/463L Pallet/unitized pallet load) when approved by the appropriate Transportation Component Command (TCC). In these situations, the HAZMAT documentation for the single shipment unit that contains multiple line items with hazards will require multiple TCMD T_6 records and may require multiple TCMD T_7 records. The MSL PDF417 2D bar code cannot accommodate a repeated series of HAZMAT related information (multiple NSNs with hazards) because HAZMAT data looping is not available at this time; therefore, when multiple sets of information (TCMD T_6) are repeated for

Table 9 (Continued)

Hazardous Cargo, Explosives, and Ammunition

single shipment unit with multiple HAZMAT line items, the data elements (Round Count, NSN, DODIC, UN Class or Division Number, UN ID, and Compatibility Group) will not be encoded in the PDF417 2D bar code. See Note 3 for TCMD T_7 records.

Note 3: A single shipment unit may contain multiple lots for one or more HAZMAT line items, which would be documented with multiple TCMD T_7 transactions. Data looping is not available at this time to capture the repeated sets of a Lot Number and its respective NEW, Piece, Weight, and Cube information. When a shipment contains multiple lots, the information will not be encoded from this table. For a Generic Cargo MSL, the Lot Numbers may be recorded as part of the supply line item information series. Use a separate supply line item data set (see Table 2 DIs 12Q through 12S) for each Lot Number in order to encode the quantity related to each Lot Number.

Note 4: There are currently no DI/DEIs for HAZMAT Agency ID of “IMO” (TCMD), Pieces in Lot (TCMD), Weight of Lot (TCMD), or Cube of Lot (TCMD).

Table 10

**Government Vehicles, Wheeled/Tracked Guns, Aircraft,
Outsize Cargo, Prepositioned Cargo, and Unit Move Cargo**

For multiple occurrences of the listed items in the same shipment unit, the items must be identical. If otherwise, do not encode the data.

Outsize = any piece exceeding 6 feet in any dimension (except a SEAVAN/POV).

Prepositioned cargo marked and load planned for long-term storage on a DTS carrier.

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
I	Vehicle Identification Number (VIN)	an17	For unit move cargo only, encode DI and data in PDF417 2D bar code and enter data as text on MSL if applicable.	Ch 208 para G
6JKUSM	Transportation Tracking Number (TTN)	n17	For unit move only. The automated shipping system will generate the TTN from planning data, as available, and encode the DI and data in the PDF417 2D bar code. The data <u>must not</u> be manually encoded into the PDF417 2D bar code.	Ch 203, para B.7 App X
25S	Unique Item Identifier (UII)	an..50	For unit move cargo only, encode the DI and UII data in the PDF417 2D bar code for the item, if applicable. For consolidated shipment data that exceeds the capacity of the PDF417 2D bar code, encode only the text "NO LINE ITEM DETAIL". <u>Do not print</u> the UII(s) as text on the MSL.	Ch 208, para J.3 App X
Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
04	Unit Line Number (ULN) - for Unit Move MSL	an..7	For unit move cargo only, encode DEI and data in PDF417 2D bar code and enter data as text on MSL as applicable.	Ch 208 para G App M (TCMD T_9, Table M-13, rp 58-64)
05	Unit Identification Code (UIC) - for Unit Move MSL	an6	For unit move cargo only, encode DEI and data in PDF417 2D bar code and enter data as text on MSL as applicable.	Ch 208 para G

Table 10 (Continued)

**Government Vehicles, Wheeled/Tracked Guns, Aircraft,
Outsize Cargo, Prepositioned Cargo, and Unit Move Cargo**

06	Bumper Number	an..8	For unit move cargo only, encode DEI and data in PDF417 2D bar code and enter data as text on MSL (Army/Navy) if applicable.	Ch 208 para G
09	Unit Equipment Description - for Unit Move MSL	an..20	For unit move cargo only, encode DEI and data in PDF417 2D bar code and enter data as text on MSL as applicable.	Ch 208 para G
10	Model Identifier	an..6	Encode DEI and data for Government vehicles, wheeled/tracked guns, and aircraft (TCMD T_5).	App M (TCMD T_5)
		an..10	For unit move (Army/Navy) cargo only, encode DEI and data in PDF417 2D bar code and enter data as text on MSL if applicable. This is an MSL data element and not a TCMD data element. Note that the entry for Gov't vehicles, guns, aircraft, and outsize (TCMD T_5) has priority to encode DEI 10 in the PDF417 2D bar code with a field length of (an..6).	Ch 208 para G
18	Length - Default = inches	an..6	Encode DEI and data as applicable.	Ch 208 para G App M (TCMD T_5)
19	Width - Default = inches	an..4	Encode DEI and data as applicable.	Ch 208 para G App M (TCMD T_5)
20	Height - Default = inches	an..4	Encode DEI and data as applicable.	Ch 208 para G App M (TCMD T_5)
36	Serial Number	an..13	Encode DEI and data for single Government vehicle shipment if applicable. For multiple vehicles, do not encode.	App M (TCMD T_5)

Table 10 (Continued)

**Government Vehicles, Wheeled/Tracked Guns, Aircraft,
Outsize Cargo, Prepositioned Cargo, and Unit Move Cargo**

Note 1: For TCMD T_5 entries, the abbreviated Model or abbreviated Nomenclature may be used. This guide uses the Model information because the Nomenclature is available in DEI 38 from Table 8.

Note 2: There are currently no DI/DEI Codes for BII Pieces (TCMD), Pieces of Outsize Cargo (TCMD), Weight of Outsize Cargo Piece (TCMD), or Cube of Outsize Cargo Piece (TCMD).

Table 11
Personal Property Cargo

Fmt 06 DI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
2K	Bill of Lading - number	an..12	Encode DI and data in PDF417 2D bar code and enter data as text on MSL if applicable.	Ch 208 para G
12K	Personal Property Standard Carrier Alpha Code (SCAC) - for HHG and baggage ITGBL carrier	an4	Encode DI and data if applicable.	App M (TCMD T_8)
11Q	Tare Weight Default = pounds	an..5	Encode DI and data in PDF417 2D bar code and enter the Tare Weight of the piece as clear text on MSL for TGBL and DPM shipments if applicable. There is no requirement to record the Total Shipment Tare Weight.	Ch 208 para G
Fmt 07 DEI	DOD Usage	Format	Instructions	Data Sources: DTR Part II
45	Owner's Last Name	an..13	Encode DEI and data in PDF417 2D bar code and enter data as text on MSL as applicable.	Ch 208 para G App M (TCMD T_8)
46	Owner's First and Middle Initials	an..2	Encode DEI and data in PDF417 2D bar code and enter data as text on MSL as applicable.	Ch 208 para G App M (TCMD T_8)
47	Owner's Grade	an2	Encode DEI and data as applicable. Do not enter as text on the MSL.	App FF App M (TCMD T_8)
69	Personal Property Code - for household goods and baggage	an1	Encode DEI and data as applicable.	App M (TCMD T_8, Table M-12, rp 71)
70	Net Weight (shipment piece) Default = pounds If Piece Total equals 1 piece, this value will also be equal to the TCMD Total Shipment Net Weight. There is no DEI available for TCMD Total Shipment Net Weight.	an..5	Encode DEI and data in PDF417 2D bar code and enter <u>Net Weight of the piece</u> as clear text only for TGBL and DPM shipments if applicable.	Ch 208 para G App M (TCMD T_8)

Table 11 (Continued)
Personal Property Cargo

71	Privately Owned Vehicle (POV) Model Year	n2	Encode DEI and data if applicable.	App M (TCMD T_8)
72	Privately Owned Vehicle (POV) Make	a4	Encode DEI and data if applicable.	App M (TCMD T_8)
73	Privately Owned Vehicle (POV) State of Registration	a2	Encode DEI and data if applicable.	App M (TCMD T_8)
74	Privately Owned Vehicle (POV) License Number	an..8	Encode DEI and data as applicable.	App M (TCMD T_8)
75	Privately Owned Vehicle (POV) Color	a3	Encode DEI and data as applicable.	App M (TCMD T_8)
Clear Text	DOD Usage	Format	Instructions	Data Sources: DTR Part II
	Carrier Name	To fit MSL	Enter as text on MSL as applicable.	Ch 208 para G

Note: There are currently no DI/DEI Codes for Name of Origin Carrier (MSL text and TCMD T_9 Remarks) or Net Weight (TCMD shipment total) by Direct Procurement Method (DPM).

Intentionally Blank

Index of Decision Table Elements

A

Air Commodity/Special Handling Codes, 49
Air Dimension Code, 49

B

Bill of Lading, 58
Bumper Number, 56

C

CAGE Code (for Consignor), 44
Carrier Name, 59
Check Digit, 47
Commercial Carrier Tracking Number, 46
Commodity Code. *See* Air Commodity or Water Commodity
Compatibility Group Code, 53
Condition Code, 40
Consignee Address, 43
Consignee Distribution (CDIST) Code, 30, 32
Consignee DOD Activity Address Code (DODAAC), 44
Consignor DOD Activity Address Code (DODAAC), 45
Container Number Code, 28, 30, 32, 38
Cube (shipment piece), 27, 30, 32, 35, 37

D

Distribution Code, 40
DOD Identification Code (DODIC), 39, 52

E

Equipment Serial Number, 45

F

FMS Case Number, 45
Free Text, 41
From Address, 43

H

Height, 56

L

Length, 56
Lot Number, 39, 52

M

Military Assistance Program Address Code (MAPAC), 44
Mode/Method Code, 49, 50
Model Identifier, 56

N

National/NATO Stock Number (NSN), 39, 44, 51, 52
Net Explosive Weight (NEW), 53
Net Weight, 58
Nomenclature, 51
Number of Pieces in Van, 33
Number of Rounds, 52
Number of Shipment Units in Van, 32

O

Ocean Carrier Code, 47
Origin ZIP Code – for SEAVAN, 47
Owner's First and Middle Initials, 58
Owner's Last Name, 58
Owner's Grade, 58

P

Personal Property Code, 58
Personal Property Standard Carrier Alpha Code (SCAC), 58
Piece Number / Total Pieces, 27, 29, 31, 34, 37
Port of Debarkation (POD) Code, 49, 50
Port of Embarkation (POE) Code, 49, 50
Privately Owned Vehicle (POV) Color, 59
Privately Owned Vehicle (POV) License Number, 59
Privately Owned Vehicle (POV) Make, 59
Privately Owned Vehicle (POV) Model Year, 59
Privately Owned Vehicle (POV) State of Registration, 59
Project Code, 27, 35, 37

Q

Quantity and Unit of Issue (UI), 39

R

Required Delivery Date (RDD), 45
Routing Identifier Code (RIC) - Shipping Activity, 40

S

SEAVAN Ownership Code, 32
Security Seal Number, 47
Serial Number, 56
Ship Date, 42
Ship To Address, 42
Special Handling Code. *See* Air Commodity or Water Commodity
Stopoff Number and Consignee DODAAC, 48
Supply Document Number, 39

T

Tare Weight, 58
TCMD/Manifest Doc ID Code - Document Identifier Code (DIC), 28, 30, 32, 35, 37
Temperature Range, 47
Transportation Account Code (TAC), 49, 50
Transportation Control Number (TCN), 26, 29, 31, 34, 36
Transportation Priority (TP), 44
Transportation Tracking Number (TTN), 55
Type Pack Code, 28, 30, 32, 35, 38
Type Service, 45

U

UN/NA Indicator, 53
UN/North American ID Number, 53
Unique Item Identifier (UII), 55
Unit Equipment Description, 56
Unit Identification Code (UIC), 55
Unit Line Number (ULN), 55
Unit Price, 40
United Nations (UN) Class or Division Code, 52

V

Van Inside Cube, 33
Van Length, 33, 47
Van Number, 47
Vehicle Identification Number (VIN), 55

W

Water Commodity/Special Handling Codes, 50
Weight (shipment piece), 26, 29, 31, 34, 36
Width, 56

SECTION 3

MSL and Bar Code Formats

1. **Overview.** The following is a summary of the specific MSL format and bar code provisions in the DTR, MIL-STD-129, and the commercial standards cited in those documents. They are here for information only and are amplified with additional user information in this guide. Program managers and programmers should have access to the referenced regulations, military standards, and national standards in order to assure system compliance with the intended provisions.
2. **MSL Format** (extracted from DTR and MIL-STD-129).
 - a. A specific MSL layout format is not mandated as long as the clear text entries and bar code entries meet required standards, comply with the DTR Table 208 and comply with DTR Part II, Appendix X. Since commodities shipped through the DTS have unique data requirements, different data content will be printed on the MSL such as for generic cargo, unit move cargo, and personal property shipments. MSL layout examples are in Section 4 of this guide.
 - b. Code 39 linear bar code labels, with human-readable interpretation (HRI), or PDF417 2D bar code labels may be affixed to the MSL as an alternative to direct printing on the MSL.
 - c. Data identifiers (DI) shall not be used in conjunction with the Code 39 linear bar codes; instead, each linear bar code will be identified with its respective human-readable interpretation. DIs and data element identifiers (DEI) are used in the high capacity PDF417 2D bar code to as data qualifiers to identify each separate data element.
 - d. The MSL unique transport unit identifier shall be the TCN and it shall be encoded and printed as the uppermost bar code on the label. It should be at the top of the label to provide maximum vertical separation between the bar codes and to be in a prominent location for easy viewing and scanning.
 - e. Code 39 linear bar codes or PDF417 2D bar code shall not be positioned in the same linear plane and the label layout should provide as much vertical spacing as available between the bar codes to reduce the possibility of scanning interference. MIL-STD-129 mandates a minimum of 0.375 in (9.525 mm) vertical clearance.
 - f. The text for all entries, except as noted below shall be no smaller than 10 lines per 1 inch (approximately a 7 point font). The preferred font size is 10 to 14 points.
 - (1) The “Ship To” Address character height shall be no smaller than the “From” Address character height and should be distinctive in appearance, e.g., larger, bolder, different color, etc. The “Ship To” Address shall be located below or to the right of the “From” Address.
 - (2) The Transportation Priority numeral shall be bold text and the minimum height shall be 0.75 inch (approximately a 72 point font).

3. Linear Bar Codes (extracted from DTR, MIL-STD-129, ISO/IEC 16388, and ANSI MH10.8.1).

- a. The three MSL linear bar codes are encoded in the Code 39 format.
- b. The ASCII basic character set shall be used; i.e., A-Z, 0-9, the \$ % + - . / symbols, and the start/stop (*) character. The ASCII expanded 128-character set shall not be used.
- c. The minimum bar height of the bar code shall be 0.5 in (12.7 mm).
- d. The minimum narrow element dimension (X dimension) shall not be less than .010 in (10 mils/.25 mm). The X dimension should range from .010 in (10 mils/.25 mm) to .017 in (17 mils/.43 mm) as determined by the printing capability of the supplier.
- e. The wide to narrow ratio of Code 39 bar code elements should be 3.0:1. The measured ratio, using a scanning verifier, shall be between 2.4:1 and 3.2:1.
- f. The quiet zones should be printed with leading and trailing zones of not less than 0.25 in (6.4 mm).
- g. The quality of the printed linear bar codes on the MSL shall be determined in accordance with ISO/IEC 15416 and MIL-STD-129.

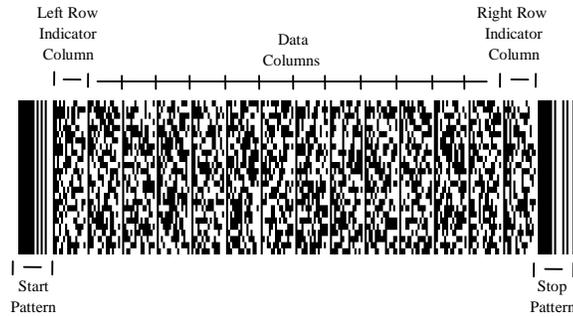
(1) It is highly recommended that bar code quality be determined during the system design stage and at periodic, frequent intervals for each printer. Print quality cannot be determined with a generic bar code scanner; it must be done with a bar code verifier. Bar code scanners have differing error tolerances; thus, what one scanner can read another may reject. Printed MSLs may be submitted to the USTRANSCOM J42 (618 220-4601) for verification and format review.

(2) DOD has specified that the print quality of the linear bar code be one grade higher than required by ANSI MH10.8.1 because the PDF417 2D bar code on the MSL must be a grade B. The minimum bar code grade, as specified by MIL-STD-129, shall be 2.5/10/660 where:

- (a) The minimum print quality grade for the linear bar code immediately prior to shipment = 2.5 (B grade).
 - (b) The measurement aperture = 0.010 in (0.254 mm).
 - (c) The inspection wavelength = 660 nanometers \pm 10 nanometers.
- h. The linear bar code bar codes should be presented on the label with the bars vertical (picket fence orientation). The best print quality also occurs when the bars are printed perpendicular to the long axis of the print head.

4. PDF417 2D Bar code (extracted from DTR, MIL-STD-129, and ANSI MH10.8.1).

- a. The PDF417 2D bar code used for shipping and receiving shall be printed with no more than 12 data columns in width. The MSL PDF417 2D bar code includes a start pattern, a left row indicator column, 1 to 12 data columns, a right row indicator column, and a stop pattern.



- b. The bar code shall have a minimum quiet zone of 0.04 inches (1 mm) above, below, to the left, and to the right.
- c. The bar code shall not exceed 2.4 inches (61 mm) in height to include the surrounding minimum quiet zone.
- d. The minimum narrow element dimension (X-dimension) shall not be less than 0.01 inches (10 mils/.254 mm). For bar codes up to 12 data columns, the X-dimension will not exceed 0.017 inches (17 mils/.432 mm).
- e. The bar code shall have a minimum row height of 3 times the width of the narrow element (X-dimension). A higher value will make the bar code easier to acquire with a scanner, but the bar code will accommodate less data in the same space.
- f. The bar code shall use error correction level 5.
- g. The start and stop bars of the bar code shall be perpendicular to the natural bottom of the label.
- h. Data identifiers, which contain no information, should not be printed. However, if a specific DI or DIs are designated to identify the start and stop points for a repeating (looping) set of data elements, the DIs must be encoded. For those PDF417 2D bar codes that contain encoded supply line item commodity information, each set of commodity information must begin with DI 12S and terminate with DI 12Q. These are the only DI/DEIs that are allowed to be encoded with no information (blank).
- i. The quality of the printed PDF417 2D bar code on the MSL shall be determined in accordance with ISO/IEC 15438 and MIL-STD-129.
 - (1) It is highly recommended that bar code quality be determined during the system design stage and at periodic, frequent intervals for each printer.
 - (2) The minimum bar code grade specified by MIL-STD-129 shall be 2.5/10/660 where:
 - (a) The minimum print quality grade for the PDF417 2D bar code immediately prior to shipment = 2.5 (B grade).
 - (b) The measurement aperture = 0.010 in (0.254 mm).
 - (c) The inspection wavelength = 660 nanometers \pm 10 nanometers.

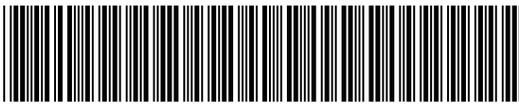
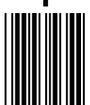
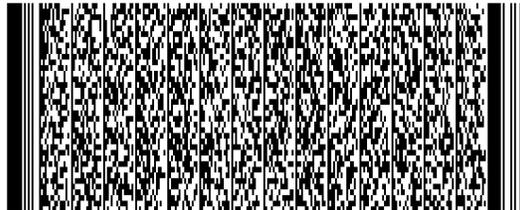
Intentionally Blank

SECTION 4

MSL Examples

Generic Cargo MSL

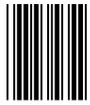
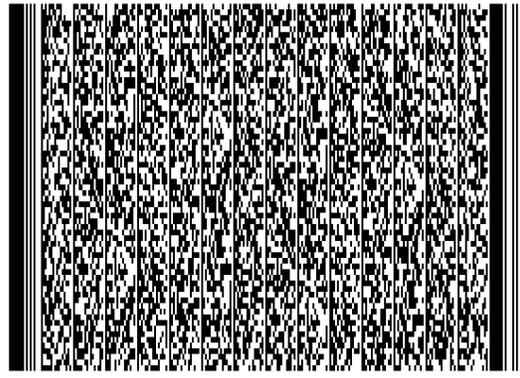
Example from a vendor with applicable MSL text data, no TCMD data, and no (0) supply line items in the PDF417 2D bar code.

TCN					SW81238350D002XXX				
									
From 1ABC2 In-the-clear Address 3 Lines Max, 35 Characters Per Line XXXXXXXXXX1XXXXXXXXXX2XXXXXXXXXX3XXXXX				TAC / Type Service / Postage Frt LTL					
Piece 1 Of 1 		Weight (lb.) 7760		Date Shipped 5090		RDD 110			
		Cube (ft.) 385		Project		Priority 3			
Ship To / POE				In-the-clear Address 5 Lines Max, 35 Characters Per Line Abcdefg Higjklmno Pqrstuv Wxyz Abcdefg Higjklmno Pqrstuv Wxyz XXXXXXXXXX1XXXXXXXXXX2XXXXXXXXXX3XXXXX					
POD		MSL, Supply, & TCMD Data 							
FMS Case									
		NO LINE ITEM DATA							
W55XGJ 				Ultimate Consignee / Mark For Consignee Ultimate / Mark For Consignee Address 5 Lines Max, 35 Characters Per Line Abcdefg Higjklmno Pqrstuv Wxyz Abcdefg Higjklmno Pqrstuv Wxyz XXXXXXXXXX1XXXXXXXXXX2XXXXXXXXXX3XXXXX					

[D]>^Rs06^GsJKUSMSW31238350D002XXX^Gs3D5090^Gs2LIn-the-clear Address+5 Lines Max, 35 Characters Per Line+Abcdefg Higjklmno Pqrstuv Wxyz+Abcdefg Higjklmno Pqrstuv Wxyz+XXXXXXXXXX1XXXXXXXXXX2XXXXXXXXXX3XXXXX^Gs3LIn-the-clear Address+3 Lines Max, 35 Characters Per Line+XXXXXXXXXX1XXXXXXXXXX2XXXXXXXXXX3XXXXX^Gs5LUltimate / Mark For Consignee Address+5 Lines Max, 35 Characters Per Line+Abcdefg Higjklmno Pqrstuv Wxyz+Abcdefg Higjklmno Pqrstuv Wxyz+XXXXXXXXXX1XXXXXXXXXX2XXXXXXXXXX3XXXXX^Gs2Q7760^Gs13Q1/1^Gs17V1ABC2^Rs07^Gs12385^Gs27W55XGJ^Gs283^Gs32110^Gs35NO LINE ITEM DATA^Gs48FRT LTL^Rs^EOT

Generic Cargo MSL

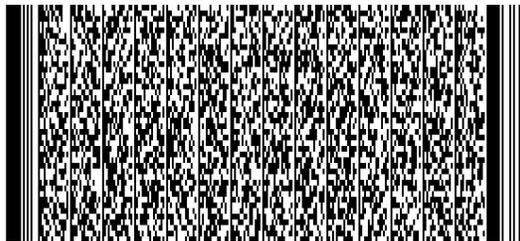
Example from a DOD shipper with applicable MSL text data,
TCMD data, and 10 supply line items in the PDF417 2D bar code.

TCN SW81238350D001XXX 			
From SW8123 In-the-clear Address 3 Lines Max, 35 Characters Per Line XXXXXXXXXXXXXXXXXXXXXXXXXX		TAC / Type Service / Postage SZZZ Fr LTL	
Piece 1 Of 1 	Weight (lb.) 7760 Cube (ft.) 385	Date Shipped 1090 Project 9BU	RDD 999 Priority <div style="font-size: 48pt; text-align: center; background-color: black; color: white; padding: 10px;">1</div>
Ship To / POE 	In-the-clear Address 5 Lines Max, 35 Characters Per Line Abcdefg Higklmno Pqrstuv Wxyz Abcdefg Higklmno Pqrstuv Wxyz XXXXXXXXXXXXXXXXXXXXXXXXXX		<div style="font-size: 48pt; text-align: center; background-color: black; color: white; padding: 10px;">1</div>
POD 	MSL, Supply, & TCMD Data 		
FMS Case CKM	Ultimate Consignee / Mark For Consignee Ultimate / Mark For Consignee Address 5 Lines Max, 35 Characters Per Line Abcdefg Higklmno Pqrstuv Wxyz Abcdefg Higklmno Pqrstuv Wxyz XXXXXXXXXXXXXXXXXXXXXXXXXX		
W55XGJ 			

|>^R_s06^G_sJKUSMSW31238350D001XXX^G_s3D1090^G_s9KSZZZ^G_s2Q7760^G_s13Q1/1^R_s07^G_s039BU^G_s12385^G_s23A^G_s25DOV^G_s26RMS^G_s27W
 55XGJ^G_s281^G_s29SW8123^G_s30A^G_s32999^G_s34TX1^G_s48FRT LTL^G_s49AZ^G_s50BX^G_s67CKM^R_s06^G_s12SSW31238350D001^G_sN53100119875
 8511^G_s7Q00001EA^G_sVS9I^G_s2RA^G_s8V7V^G_s12Q12345.90USD^G_s12SSW31238350D002^G_sN531001198758511^G_s7Q00001EA^G_sVS9I^G_s2RA
 ^G_s8V7V^G_s12Q12345.90USD^G_s12SSW31238350D003^G_sN531001198758511^G_s7Q00001EA^G_sVS9I^G_s2RA^G_s8V7V^G_s12Q12345.90USD^G_s12
 SSW31238350D004^G_sN531001198758511^G_s7Q00001EA^G_sVS9I^G_s2RA^G_s8V7V^G_s12Q12345.90USD^G_s12SSW31238350D005^G_sN53100119
 8758511^G_s7Q00001EA^G_sVS9I^G_s2RA^G_s8V7V^G_s12Q12345.90USD^G_s12SSW31238350D006^G_sN531001198758511^G_s7Q00001EA^G_sVS9I^G_s
 2RA^G_s8V7V^G_s12Q12345.90USD^G_s12SSW31238350D007^G_sN531001198758511^G_s7Q00001EA^G_sVS9I^G_s2RA^G_s8V7V^G_s12Q12345.90USD
 ^G_s12SSW31238350D008^G_sN531001198758511^G_s7Q00001EA^G_sVS9I^G_s2RA^G_s8V7V^G_s12Q12345.90USD^G_s12SSW31238350D009^G_sN5310
 01198758511^G_s7Q00001EA^G_sVS9I^G_s2RA^G_s8V7V^G_s12Q12345.90USD^G_s12SSW31238350D010^G_sN531001198758511^G_s7Q00001EA^G_sVS
 9I^G_s2RA^G_s8V7V^G_s12Q12345.90USD^R_sE^OT

Unit Move MSL

Example from a DOD shipper with applicable MSL text data and TCMD data in the PDF417 2D bar code.

TCN AWS1EAA\$0D00340XX 			
Equipment Description HELICPR CARGO MH-60K		Serial Number / Package ID 1234567890123	
Model 12345ASDFG	Bumper Nm HQ-123	ULN 1234567	UIC WS1EAA
From AWA2UC In-the-clear Address 3 Lines Max, 35 Characters Per Line XXXXXXXXXX1XXXXXXXXXX2XXXXXXXXXX3XXXXX		NSN 1234567890123	
		Length (in.) 1239	TAC YZZZ
Piece 1 Of 1 	Weight (lb.) 14000	Width (in.) 123	Project 9BU
		Cube (ft.) 1200	Height (in.) 135
		RDD 123	
Ship To / POE DOV In-the-clear Address 5 Lines Max, 35 Characters Per Line Abcdefg Higjklmno Pqrstuv Wxyz Abcdefg Higjklmno Pqrstuv Wxyz XXXXXXXXXX1XXXXXXXXXX2XXXXXXXXXX3XXXXX			
POD RMS	MSL / TCMD / Unit Move Information 		
Commodity/SH VD			
Ultimate Consignee / Mark For Consignee W44TYH Ultimate / Mark For Consignee Address 5 Lines Max, 35 Characters Per Line Abcdefg Higjklmno Pqrstuv Wxyz Abcdefg Higjklmno Pqrstuv Wxyz XXXXXXXXXX1XXXXXXXXXX2XXXXXXXXXX3XXXXX 			

]>^Rs06^GsJKUSMAWS1EAA\$0D00340XX^Gs9KYZZZ^Gs2LShip To 1st address line+Ship To 2nd address line+Ship To 3rd address line+Ship To 4th address line+Ship To 5th address line^Gs3LFrom 1st address line+From 2nd address line+From 3rd address line^Gs5LConsignee 1st address line+Consignee 2nd address line+Consignee 3rd address line+Consignee 4th address line+Consignee 5th address line^GsN123456789123^Gs2Q14000^Gs13Q1/1^Rs07^Gs039BU^Gs041234567^Gs05WS1EAA^Gs06HQ-123^Gs09HELICPR CARGO MH-60K^Gs1012345ASDFG^Gs121200^Gs1812345^Gs19123^Gs20123^Gs23A^Gs25DOV^Gs26RMS^Gs27W44TYH^Gs29AWA2UC^Gs30A^Gs32123^Gs34TX1^Gs361234567890123^Gs40AS^Gs41NA^Gs422766^Gs43Z^Gs49VD^Rs^EOT

