APPENDIX X

BACKGROUND AND TECHNICAL DETAILS FOR 2-DIMENSIONAL (2D) SYMBOLOGY ON THE MILITARY SHIPPING LABEL (MSL)

A. GENERAL

1. This appendix is a technical description of the MSL PDF417 bar code symbol requirements.
2. Defense Transportation Regulation (DTR) Part II references are noted throughout the following instructions. The bar code symbol data descriptions are in this regulation, Chapter 208 and are summarized in Military Standard 129, Department of Defense Standard Practice, Military Marking For Shipment and Storage (MIL-STD-129).
3. Most MSL data for the 2D symbol is based on shipment planning and Transportation Control and Movement Document (TCMD) information as described in this regulation, Chapter 203, Appendix L, and Appendix M. For shipments that enter the Defense Transportation System, 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. The supply information for the 2D symbol usually comes from selected Military Standard Requisitioning and Issue Procedures (MILSTRIP) data information.

B. TRANSPORTATION PROCESSING

1. Advance Transportation Control and Movement Document (ATCMD) Available. The MSL 2D symbol improves the accuracy of transportation in-check when ATCMD data is available in the Automated Information System (AIS) being used to process the cargo.
   a. When the ATCMD data is available in the AIS, three TCMD bar code data points are used from the MSL 2D symbol of each Shipment Unit (SU) to complete the in-check: The Transportation Control Number (TCN) of the SU, the piece number, and the consignee agents' Department of Defense Activity Address Code (DODAAC).
   b. To meet this requirement, the MSL 2D symbol label must contain the International Standards Organization (ISO)/International Engineering Consortium (IEC) 15418 (American National Standards Institute (ANSI), Material Handling Industry of America (MHIA) Materials Handling (MH) 10.8.2) Data Identifiers (DI) and related data that are mapped to the source document header TCMD prime data.
2. ATCMD Not Available. When ATCMD data are not available, the 2D symbol is also intended to improve the speed and accuracy of transportation in-check by the processing activity.
   a. The MSL 2D symbol is intended to provide selected MSL and TCMD data to resolve a "no-hit" situation that occurs during shipment in-check when header ATCMD prime and/or trailer data are not available. In this situation, the data required to be read from the MSL 2D symbol become system dependent because each AIS (Distribution Standard System, Global Air Transportation Execution System, Worldwide Port System, Cargo Movement Operations System, Standard Army Retail Supply System) has different minimum data requirements (TCMD prime and trailers) for transportation in-check.
   b. Because the MSL 2D symbol on a unitized shipment can only contain limited amounts of data, it will not be populated with TCMD information from the internal SUs. It is imperative for each SU in a unitized shipment to be marked with a 2D MSL. If each SU, within a

unitized shipment, contains an MSL 2D symbol with the TCMD prime and trailer data, sufficient information will be available to resolve a "no-hit" for each SU.

3. Reprint MSL. The 2D symbol can also serve as a data file to assist in reprinting a label that has been damaged or for printing a new label when information changes. This is especially useful when transshipment activities must split multi-piece shipments for onward movement. The MSL 2D symbol will contain pertinent information that is human readable on the MSL (e.g., Unit Identification Code [UIC], equipment description, Foreign Military Sales [FMS] shipping case, and in-the-clear addresses). The 2D symbol may contain TCMD coded information that will have to be converted to in-the-clear text for printing on the MSL (e.g., deletion of leading zeros from pieces, weight, cube, length, width, height TCMD data; conversion of alpha numeric pieces, weight, cube TCMD codes to numeric digits; conversion of metric unit of measure to United States [US] unit of measure).

C. SUPPLY RECEIPT

1. Single Item or Multipack SU. The MSL 2D symbol is structured to provide selected MILSTRIP data for supply receipt of line items from a single SU containing a single line item and from a single SU containing multiple line items (often referred to as a multipack). See Chapter 203 and Appendix M for a description of the documentation requirements and differences between a single SU and a consolidated SU.

   a. The MSL 2D symbol is structured to store a repeating set of selected data for each line item in a single item pack or multipack SU. Each data set reflects what is normally marked in the bar codes or 2D symbol on a DD Form 1348-1A, Issue Release/Receipt Document (Figure 202-5). The data capacity restrictions of the MSL 2D symbol will normally limit its content to ten line items depending on the amount of MSL and TCMD data recorded.

   b. The MSL 2D symbol must contain line item data for either all or none of the line items within the labeled single SU. If any required line item data is missing within a data set and/or all the selected line item data cannot fit into the MSL 2D symbol, the label must default to no line item information in the 2D symbol because partial information may cause supply receipt errors. When the MSL 2D symbol, for cargo other than a unit move or personal property, contains no line item information, some form of the following will be printed in clear text below the MSL 2D symbol and be coded into the 2D symbol: "NO LINE ITEM DATA".

2. Consolidated Shipment of Multiple SUs. To preclude confusion concerning 2D symbol content, the 2D symbol will not be used to provide MILSTRIP data for a consolidated SU of multiple SUs. The 2D symbol capacity restrictions and a lack of line item information for the multiple SUs within the consolidated SU will normally preclude the entry of line item information in the 2D symbol. In this situation, another high capacity media may be the Automated Identification Technology (AIT) media for expediting supply receipt.

D. EXPLANATION OF MSL 2D PORTABLE DATA FILE (PDF) 417 SYMBOL STRUCTURE FOR CODING MSL TEXT, TCMDS, AND LINE ITEMS

1. Each SU must be marked with a 2D symbol shipping label and the 2D symbol will contain the data elements from the Tables in this appendix. The data elements include MSL information, header TCMD data (T_0 through T_3) and the respective trailer data (T_5 through T_9) for export shipments, and the line item contents of the single SU package for generic cargo. Table X-2 and Table X-3 provide data descriptions, formats, and data sources for the ISO/IEC 15418 (MHIA MH10.8.2) DIs used in the 2D symbol and for the Data Element Identifiers (DEI) that identify Department of Defense (DOD) unique data elements from this regulation and MILSTRIP. Table X-4, Table X 5, and Table X 6 provide the content of the data streams for generic cargo, personal property, and unit move MSLs.

2. All SU data and line item data in the MSL 2D symbol replicate data from the three sources noted below. If the data is available for a corresponding DI or DEI from Table X-4, Table X 5, or Table X 6, the data must be entered into the 2D symbol. Blank data fields are not to be used. When multiple sources for a data element are identified, the sources are prioritized as follows (TCMD source has priority if it exists):

   a. Source 1: Header TCMD data. Format 07 DEI 34 must be used to identify the Document Identifier Code (DIC) of header TCMD data being documented in the 2D symbol.

   b. Source 2: Supply documentation (DD Form 1348-1A bar code and 2D symbol data) or contract data for each supply line item packaged within the SU.

   c. Source 3: Shipment information entered in the clear on the MSL.

3. Because of the limited capacity of the 2D symbol, there are several factors to consider when determining the amount of available data to record in the 2D symbol.

   a. A consolidated SU containing multiple SUs will be documented by bar coding only the header TCMD data and its trailer TCMD information. The MSL 2D symbol does not contain enough capability to consistently record containerized prime TCMD data (T_4) and the trailer data. The 2D symbol for a consolidated SU of multiple SUs, or a mix of line items and multiple SUs, will not contain any line item information and will be marked In Accordance With (IAW) Paragraph D.3.c. below.

   b. To provide space for a single line item or supply data in the 2D symbol of the generic cargo MSL, the in-the-clear address data will only be printed in the 2D symbol of a generic cargo MSL for a single line item shipment or when no line item data is printed in the 2D symbol. Most multi-piece shipments consist of a single line item; therefore, the addressing data will usually be available for reprinting MSLs of split shipments. The in-the-clear address data will be printed in the 2D symbol of the personal property MSL.

   c. It may not be possible to document the supply line items of an entire multipack shipment. If the AIT media cannot store all of the line item data required to document the SU, the line item information will be eliminated from the 2D symbol. An in-the-clear text message will be entered at the bottom of the 2D symbol stating "NO LINE ITEM DATA" and it will be entered into the Format 07 DEI 35 (free text comment) area of the MSL 2D symbol for reprinting purposes. If line item data is still desired for a shipment, it will be included on an alternate form of high capacity AIT media.

   d. For Unit Move MSLs, and for Generic Cargo MSLs when used to document Unit Move cargo, the TTN for Unit Move cargo must be encoded in the 2D symbol. The in-the-clear address data will only be printed in the 2D symbol of a Unit Move MSL if it does not interfere with the encoding the TTN.

4. When an MSL 2D symbol is generated IAW Table X-4 (Generic Cargo), Table X 5 (Personal Property), or Table X-6, (Unit Move), it does not need to include DIs that are blank. Metric units of measure may be used in the 2D symbol for selected DIs/DEIs as noted in Table X-2 and Table X-3.

5. Explanation of Table X-4, Table X 5,and Table X 6

   a. Compliance Indicator (Column 1) shows the special formatting characters associated with the ISO/IEC 15434 (MHIA MH10.8.3) data format. The Compliance Indicator will be the first three characters in the Message Header. The Compliance Indicator will be []> (left bracket, right parenthesis, and greater than).

b. Element Separators (Column 2), shows the separator or terminal code that is for that particular part of the data stream. The Format Trailer Character (RS) will be used at the end of the Message Header (before a format series) and at the end of each format series of data (before the next series of data). The Data Element Separator (GS) separates data elements within each format series of the data table. The Message Trailer (EOT) identifies the end of the message within the data stream (See Table X-1).

c. Format Header (Column 3) is a two-digit numeric identifier "06" or "07"which identifies the rules governing the message format. It is followed by Format 06/07 data qualifiers (DIs or DEIs in Columns 4 and 5, respectively), which define data content within the message.

d. Data Field (Column 6) contains the description of the data field.

e. Data Format Type/Length (Column 7) contains indicators of whether the data is alpha and/or numeric and the length of the actual data represented by this field (e.g., an5). 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. When specifically identified by a note in the Data Format column, the plus symbol (+) becomes part of the data sub-string to separate different types of data that are encoded within a single field (e.g., DIs 2L, 3L, and 5L). Variable length fields are not zero-filled unless the information is extracted from an external data source that requires leading zeros.

f. Sample Data (Column 8) contains sample data for the field indicated.

6. The following drawing depicts a single SU TCMD with multiple supply line items within the SU.

a. The TCN document number and related TCMD data are contained in the first Format 06 block that terminates with a RS code followed by a Format 07 block that terminates with a RS code.

b. The supply line item data for specific document numbers are contained in a following Format 06 block. Data looping is required to document a multipack shipment when multiple line items exist within a single SU. In this data looping structure, the order in which the line items are stored on the media (2D symbol) is critical to the meaning of the data. Each supply document series begins with a DI "12S" and terminates with a DI "12Q" code. The number of supply line item documents is limited by the storage capacity of the AIT device. Figure X-1 depicts the looping structure.

E. PDF417 SYMBOL FORMAT COMPLIANCE REQUIREMENTS AS REFERENCED IN MHIA MH10.8.1 AND ISO/IEC 15434 (MHIA MH10.8.3)

1. The narrow element dimension ("X" dimension) range will be from 0.010 to 0.017 inches (10 to 17 mils).

2. The minimum bar height of an element will be three times the "X" dimension width.

3. The symbol will not exceed 2.4 inches to include the quiet zone as described in MHIA MH10.8.1.

4. The symbol will be printed with no more than 12 data columns in width. A PDF417 symbol includes a start pattern, a left row indicator column, one or more data columns, a right row indicator column, and a stop pattern. The start and stop patterns appear to be wide and narrow vertical lines on each end. The indicator and data columns appear to be checkered patterns separated by single vertical lines.

5. The symbol will have a minimum quiet zone of 0.04 inches above, below, to the left, and to the right.
6. An error correction level of five will be used.
7. ISO/IEC 15438 Automatic Identification and Data Capture Techniques - Bar Code Symbology Specification - PDF417 and ISO/IEC 15415 Information Technology - Automatic Identification and Data Capture Techniques - Bar Code Print Quality Test Specification - Two-dimensional Symbols will be used to determine a minimum symbol print grade of 2.5/10/660, where:
   a. Print quality grade ≥ 2.5 (B) at point of printing
   b. Measurement aperture = 0.010 inches
   c. Light source wavelength = 660 nanometers (nm) ± 10 nm.

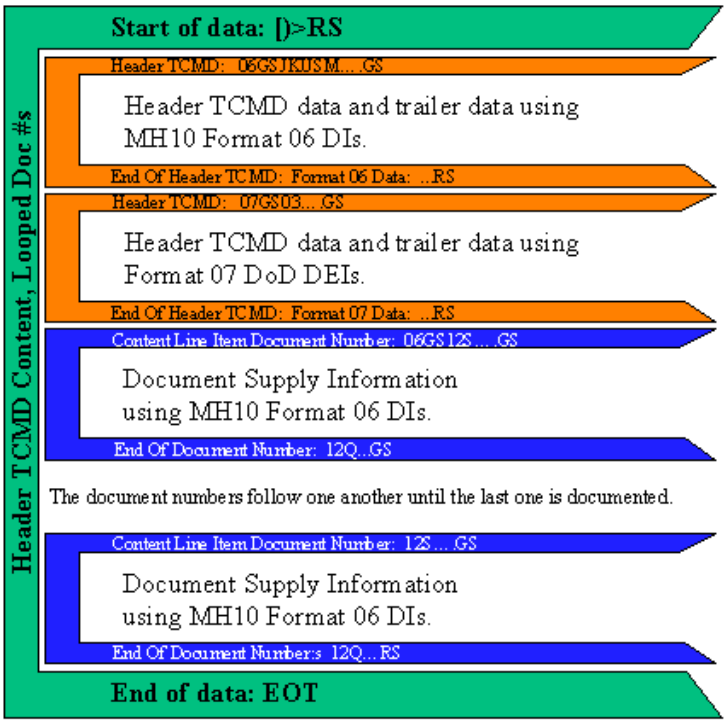

Figure X-1. Data Looping Structure

Table X-1. Excerpt from Subset of ASCII/ISO 646

(Table of Hexadecimal and Decimal Values)

ASCII/ISO 646	HEX	DEC
R_S	1E	30
G_S	1D	29
E_{OT}	04	04

Table X-2. Two-Dimensional Symbol Data (Format 06)

Format 06 Data Identifier	DOD Usage (See Note)	Data Sources DTR Part II References
JKUSM	**Transportation Control Number (TCN) -** 17 characters	Table 208-2, App L, App M
6JKUSM	**Transportation Tracking Number**	Chapter 208
3D	**Date Shipped -** Clear text not limited but must be coded as four characters (YDDD) in the 2D symbol	Table 208-2
I	**Vehicle Identification Number (VIN)**	Chapter 208
2K	**Bill of Lading -** number	Chapter 208
9K	**Transportation Account Code (TAC) -** Four characters	Table 208-2, App M, App V
12K	**Personal Property Standard Carrier Alpha Code (SCAC)** - for HHG and baggage ITGBL carrier	App M (TCMD T_8 Table M-12, rp 77-80)
2L	**Ship To Address -** up to five lines of 35 characters	Table 208-2
3L	**From Address** - up to three lines of 35 characters	Table 208-2
5L	**Consignee/Mark For Address**– up to five lines of 35 characters	Table 208-2
51L	**Origin Zip Code** – for SEAVAN point of origin	App M, (TCMD T_9, Table M-14, rp 9-14)
N	**National/NATO Stock Number (NSN)** – or stock identification elements thereof	App M (TCMD T_6) Table M-10, rp 54-66 DD 1348-1A
6P	Not for use: Item Identifier (DODIC) See Format 07 DEIs for Item Identifiers	
10P	Not for use: Hazardous Material Code See Format 07 DEI 41/42	
2Q	**Weight** – Digits not limited as clear text but may be coded as no more than five characters plus an optional two character unit of measure suffix in the 2D symbol. With optional metric unit of value for generic cargo. Default = pounds	Table 208-2
7Q	**Quantity and Unit of Issue (UI)**	DD 1348-1A
11Q	**Tare Weight** – with optional metric unit of value for generic cargo Default = pounds	Chapter 208
12Q	**Unit Price** – with unit of value = USD	DD 1348-1A
13Q	**Piece Number/Total Pieces** – piece n of x of pieces	Table 208-2
2R	**Condition Code**	DD 1348-1A
4R	**DOD Identification Code (DODIC)**	App M, (TCMD T_6) Table M-10, rp 67-70 DD 1348-1A
12S	**Supply Documentation Number** – and suffix code	DD 1348-1A
13S	**Security Seal Number**	App M, (TCMD T_9) Table M-14, rp 66-73
1T	**Lot Number**	App M, (TCMD T_7) Table M-11, rp 54-67 DD 1348-1A
25S	**Unique Item Identifier (UII) –** documents as a single value the concatenated UII elements of an Item Unique Identification (IUID) mark or the DOD IUID equivalent mark (see MIL-STD-130)	Derived from the item UID mark
V	**Routing Identifier Code –** shipping activity	DD 1348-1A (rp 4-6)

Format 06 Data Identifier	DOD Usage (See Note)	Data Sources DTR Part II References
4V	**Ocean Carrier Code** – for SEAVANs	App M, (TCMD T_9, Table M-14, rp 74-77), App SS
8V	**Distribution Code** – last two positions of DOD Distribution Code used for DD Form 1348-1A linear bar code	DD 1348-1A (rp 55-56)
17V	**Commercial and Government Entity Code (CAGE)**	Table 208-2

NOTE: The MHIA MH10.8.2 (ISO/IEC 15418) DIs show the current, reserved, and "Not for use" DOD data descriptions for historical reference. For an updated list of Format 06 DIs and Format 07 DEIs selected for use by DOD, contact the DOD Logistics AIT Office through USTRANSCOM J5/4-I.

Table X-3. Two-Dimensional Symbol Data (Format 07)

Format 07 Data Element Identifier	DOD Usage (See Note 1)	Data Sources DTR Part II References
00	Reserved – for future assignment	
01	Reserved – for future assignment	
02	Reserved – for future assignment	
03	**Project Code**	Table 208-2 App M
04	**Unit Line Number (ULN)** – for unit move MSL	Chapter 208 App M (TCMD T_9, Table M-13, rp 58-64) App O
05	**Unit Identification Code (UIC)** – for unit move MSL	Chapter 208 App O
06	**Bumper Number**	Chapter 208
07	Not for use: Shipment Number	
08	Not for use: Unit Name – for ship to location See Format 06 DI 2L or 5L	
09	**Unit Equipment Description** – for unit move	Chapter 208
10	**Model Identifier** – for equipment or vehicle identifier	Chapter 208 App M (TCMD T_5)
11	Not for use: Home Station – for unit move	
12	**Cube** – with optional metric unit of value for generic cargo Default = cubic feet	Table 208-2
13	Not for use: Item Weight – for each piece	
14	Not for use: Actual Load Weight – for complete load	

Format 07 Data Element Identifier	DOD Usage (See Note 1)	Data Sources DTR Part II References
15	**Water Commodity/Special Handling Codes**	Chapter 208 App M TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Water Commodity. Select Display Data from Action Legends box and TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Water Special Handling. Select Display Data from Action Legends box
16	Not for use: JCS Cargo Category Code for unit move	
17	Not for use: UTC – Unit Type Code for unit move	
18	**Length** – with optional metric unit of value for generic cargo Default = inches	Chapter 208 App M
19	**Width -** with optional metric unit of value for generic cargo Default = inches	Chapter 208 App M
20	**Height** – with optional metric unit of value for generic cargo Default = inches	Chapter 208 App M
21	**Pallet Identifier**	App M (TCMD T_9, Table M-22, rp 7-12)
22	Reserved – for future assignment	
23	**Air Dimension Code**	App M TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Air Dimension Code. Select Display Data from Action Legends box
24	**Container Number Code** - a code derived from the last five characters (no symbols) of a van/container identification number	App M (DD 1384 Blk 2) App QQ
25	**Port of Embarkation (POE) Code**	Table 208-2 App M TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Aerial Port. Select Display Data from Action Legends box and TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Water Port. Select Display Data from Action Legends box

Format 07 Data Element Identifier	DOD Usage (See Note 1)	Data Sources DTR Part II References
26	**Port of Debarkation (POD) Code**	Table 208-2 App M TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Aerial Port. Select Display Data from Action Legends box and TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Water Port. Select Display Data from Action Legends box
27	**Consignee DOD Activity Address Code (DODAAC)** – for the receiving ultimate consignee or mark for consignee	Table 208-2 App M
28	**Transportation Priority** – 1 through 4	Table 208-2 App M
29	**Consignor DOD Activity Address Code (DODAAC)** – for the shipper or loading activity	Table 208-2 App M
30	**Method Code** – of shipment	App M TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Transportation Method. Select Display Data from Action Legends box
31	Not for use: Required Port Delivery Date	
32	**Required Delivery Date (RDD)**	Table 208-2 App M
33	Not for use: Special Priority	
34	**TCMD/Manifest Doc ID Code** – Document Identifier Code (DIC)	App M TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Document Id 2 Position Code. Select Display Data from Action Legends box and TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Document Id 3 Position Code. Select Display Data from Action Legends box
35	**Free Text –Comment** See Note 3	As Required
36	**Package ID/Serial Number** – Also see Format 06 DI I for VIN	Chapter 208 App M (TCMD T_5, Table M-9, rp 68-71)
37	Not for use: Vehicle Model Number See Format 07 DEI 10	

Format 07 Data Element Identifier	DOD Usage (See Note 1)	Data Sources DTR Part II References
38	**Nomenclature**	DD 1348-1A App M (TCMD T_5/6, Tables M-9 and M-10)
39	**Number of Rounds** – of ammunition	App M (TCMD T_6, Table M-10, rp 9-14)
40	**United Nations (UN) Class/Division Code**	App M (TCMD T_6, Table M-10, rp 76-79)
41	**UN/NA Indicator** – designates United Nations or North American source See Note 2	App M (TCMD T_6, Table M-10, rp 74-75)
42	**UN/North American ID Number** See Note 2	App M (TCMD T_6, Table M-10, rp 76-79
43	**Compatibility Group Code**	App M (TCMD T_6, Table M-10, rp 80)
44	**Net Explosive Weight**	App M (TCMD T_7, Table M-11, rp 9-14)
45	**Owner's Last Name**	Chapter 208 App M (TCMD T_8, Table M-12, rp 54-66)
46	**Owner's First and Middle Initials**	Chapter 208 App M (TCMD T_8, Table M-12, rp 67-68)
47	**Owner's Grade**	Chapter 208 TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Pay Grade Code. Select Display Data from Action Legends box App M (TCMD T_8, Table M-12, rp 69-70)
48	**Type Service**	Table 208-2
49	**Air Commodity/Special Handling Codes**	Chapter 208 App M TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Air Commodity. Select Display Data from Action Legends box and TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Air Special Handling. Select Display Data from Action Legends box

Format 07 Data Element Identifier	DOD Usage (See Note 1)	Data Sources DTR Part II References
50	**Type Pack Code**	App M TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Type Pack Code. Select Display Data from Action Legends box
51	**SEAVAN Ownership Code**	App M (TCMD T_2, Table M-5, rp 9-12) TRDM website at: https://trdm.c2.amc.af.mil/trdm/index.jsp, then select DTR Data and Seavan Ownership Code. Select Display Data from Action Legends box
52	Reserved – for future assignment	
53	Reserved – for future assignment	
54	Reserved – for future assignment	
55	**Consignee Distribution (CDIST) Code –** for number of Consignees	App M (TCMD T_2, Tables M-4 & M-5, rp 57)
56	**Number of Shipment Units in Van**	App M (TCMD T_2, Table M-5, rp 58-59)
57	**Number of Pieces in Van**	App M (TCMD T_2, Table M-5, rp 68-71)
58	**Van Inside Cube** – default = cubic feet	App M (TCMD T_2, Table M-5, rp 64-67)
59	**Van Length** Default = feet	App M (TCMD T_2, Table M-5, rp 13-14)
60	**Van Number** – complete serial number or ISO ID serial number (without Owner code or Check Digit)	App M (TCMD T_9, Table M-14, rp 56-63)
61	**Check Digit** – of the van number	App M (TCMD T_9, Table M-14, rp 65)
62	**Temperature Range** – shown in Fahrenheit degrees	App M (TCMD T_9, Tables M-14/15, rp 15-19)
63	**Stopoff Number and Consignee DODAAC**	APP M (TCMD T_9, Table M-15, rp 54-65)
64	Not for use: Major Subordinate Element (MSE)	
65	Not for use: Ultimate Consignee/Mark For DODAAC See Format 07 DEI 27	
66	Not for use: FMS Country Code	
67	**FMS Case Number** – foreign military sales case number for MSL	Table 208-2
68	Not for use: FMS Charges	
69	**Personal Property Code** – for household goods and baggage	App M (TCMD T_8, Table M-12, rp 71)
70	**Net Weight** Default = pounds	Chapter 208 App M (TCMD T_8, Table M-12, rp 72-76)
71	**Privately Owned Vehicle (POV) Model Year**	App M (TCMD T_8, Table M-12, rp 9-10)

Format 07 Data Element Identifier	DOD Usage (See Note 1)	Data Sources DTR Part II References
72	**Privately Owned Vehicle (POV) Make**	App M (TCMD T_8, Table M-12, rp 11-14)
73	**Privately Owned Vehicle (POV) State of Registration**	App M (TCMD T_8, Table M-12, rp 71-72)
74	**Privately Owned Vehicle (POV) License Number**	App M (TCMD T_8, Table M-12, rp 73-77)
75	**Privately Owned Vehicle (POV) Color**	App M (TCMD T_8, Table M-12, rp 78-80)
76	**Stopoff Consolidation Code** – stopoff point for delivery	App M (TCMD T_3/4, rp 63 see Note in rp 63)
77	Not for use: To Be Redefined	
78	Not for use: To Be Redefined	
79	Not for use: To Be Redefined	
80	Not for use: To Be Redefined	

NOTE 1. The DOD DEIs listed show the current, reserved, and "Not for use" DOD data descriptions for historical reference. For an updated list of Format 06 DIs and Format 07 DEIs selected for use by DOD, refer to the DOD OADUSD (SCI) AIT web site at http://www.transcom.mil/ait data values must be marked with the metric units of measure from the ANSI X12.3 code list 355. The ANSI X12.3 codes selected for use are: KG = kilograms, CM = centimeter, CC = cubic centimeter, MR = meter, CR = cubic meter. Decimal values are allowed in the 2D symbol. Human readable values printed on the DOD MSL will be in US standard unit of measure format and will be rounded to the next higher whole number with leading zeros suppressed.

NOTE 2. Format 07 DEI 41 is the qualifier for DEI 42. That is, DEI 41 indicates whether the code value in DI 42 came from the United Nations or North American table of values (e.g., International Maritime Dangerous Goods Code, 49CFR, or other source publication).

NOTE 3. The System must be expecting and be able to accommodate free text information.

Table X-4. Generic Cargo Shipping Label 2D Symbol Format

Compliance Indicator	Element Separators	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
[)>					**Message Header Compliance Indicator**		**[)>**
	RS	**06**			**Data Identifier Format Header**		**06**
	GS		JKUSM		TCN	an17	SW81238350D001XXX
	GS		6JKUSM		TTN	n17	12345678901000007
	GS		3D		Ship Date	an4	1090
	GS		9K		TAC	an4	SZZZ
	GS		2L		Ship To Address See Note 1	an..35+ an..35+ an..35+ an..35+ an..35 See Note 3	1st address line+2nd address line+3rd address line+4th address line+5th address line
	GS		3L		From Address See Note 1	an..35+ an..35+ an..35 See Note 3	1st address line+2nd address line+3rd address line

Compliance Indicator	Element Separators	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
	GS		5L		Consignee Address See Note 1	an..35+ an..35+ an..35+ an..35+ an..35 See Note 3	1st address line+2nd address line+3rd address line+4th address line+5th address line
	GS		51L		Origin Zip Code for SEAVAN point of origin	an5	45324
	GS		N		NSN See Note 2	an..13	1234567890123
	GS		2Q		Weight (shipment piece)	an..5+../an2 See Note 4	7760 Or metric: 1759/KG
	GS		13Q		Piece Number/Total Pieces	an..4/an..4	1/1
	GS		4R		DODIC See Note 2	an4	PL23
	GS		13S		Security Seal Number	an8	90876787
	GS		1T		Lot Number See Note 2	an..25	MCG77G002-060
	GS		4V		Ocean Carrier Code	an4	SEAU
	GS		17V		CAGE Code – Consignor	an5	6R517
	RS	**07**			**Free Text Format Header**		**07**
	GS			03	Project Code	an3	9BU
	GS			10	Model Identifier	an..10	KZ456754
	GS			12	Cube (shipment piece)	an..4+../an2 See Note 4	35
	GS			15	Water Commodity/Special Handling Codes	an5	390Z9
	GS			18	Length Default = inches	n..6+../an2 See Note 4	1239
	GS			19	Width Default = inches	n..4+../an2 See Note 4	123
	GS			20	Height Default = inches	n..4+../an2 See Note 4	135
	GS			21	Pallet Identifier	an..6	DOVARC
	GS			23	Air Dimension Code	an1	A
	GS			24	Container Number Code	an5	13579
	GS			25	POE Code	an3	DOV
	GS			26	POD Code	an3	RMS
	GS			27	Consignee DODAAC	an6	W55XGJ
	GS			28	Transportation Priority	n1	1
	GS			29	Consignor DODAAC	an6	SW8123

Compliance Indicator	Element Separators	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
	GS			30	Method Code	an1	B
	GS			32	RDD	an..3	999
	GS			34	TCMD/Manifest Doc ID Code (header DIC only)	an3	TX1
	GS			35	Free Text Comment	an..60	NO LINE ITEM DATA
	GS			36	Serial Number	an..13	234567890123
	GS			38	Nomenclature	an..14	Boots
	GS			39	Number of Rounds	n..6	112000
	GS			40	UN Class/Division Code	an2	1A
	GS			41	UN/NA Indicator	an2	UN
	GS			42	UN/NATO ID Number	an4	2766
	GS			43	Compatibility Group Code	an1	Z
	GS			44	Net Explosive Weight	n..6	449800
	GS			48	Type Service	an..10	Frt LTL
	GS			49	Air Commodity/Special Handling Codes	an2	AZ
	GS			50	Type Pack Code	an2	BX
	GS			51	SEAVAN Ownership Code	an4	SEAU
	GS			55	CDIST Code for number of Consignees	an1	M
	GS			56	SUs in Van	n2	12
	GS			57	Pieces in Van	n4	1234
	GS			58	Van Inside Cube	an..4	1234
	GS			59	Van Length	an..2	40
	GS			60	Van Number (complete)	an8	12345678
	GS			61	Check Digit	n1	9
	GS			62	Temperature Range	an..5	F632
	GS			63	Stopoff Number and Consignee DODAAC	n..2+an6	1AF5612
	GS			67	FMS Case Number	an3	CKM
	GS			76	Stopoff Consolidation Code	an1	X
	RS	**06**			**Data Identifier Format Header**		**06**
	GS		12S		Supply Document Number	an14..15	WK4GEY80110231
	GS		N		NSN	an..15	5310011987585
	GS		4R		DODIC (ammo only)	an4	PL23
	GS		1T		Lot Number (ammo only)	an..25	MCG77G002-060
	GS		7Q		Quantity & UI	n..5+an2	5EA
	GS		V		Routing Identifier Code	an3	S9I
	GS		2R		Condition Code	an1	A

Compliance Indicator	Element Separators	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
	GS		8V		Distribution Code	an2	7V
	GS		12Q		Unit Price	n..9+.n2+an3	12345.90USD
	GS		12S		Supply Document Number	an14..15	WK4GEY80110232
	GS		N		NSN	an..15	5310011987585
	GS		4R		DODIC (ammo only)	an4	PL23
	GS		1T		Lot Number (ammo only)	an..25	MCG77G002-060
	GS		7Q		Quantity & UI	n..5+an2	5EA
	GS		V		Routing Identifier Code	an3	S9I
	GS		2R		Condition Code	an1	A
	GS		8V		Distribution Code	an2	7V
	GS		12Q		Unit Price	n..9+.n2+an3	12345.90USD
	RS EOT						

NOTE 1. In order to provide space in the 2D symbol for multiple supply line item data, the in-the-clear address data is not printed in the 2D symbol for SUs containing multiple supply line items (multipack or consolidated shipment).

NOTE 2. The Format 06, DI N, 4R, or 1T elements will only be shown in this part of the 2D symbol if TCMD T_6 data or TCMD T-7 data is available as a source. In most cases, NSN information will not be available from TCMD T_6 data for a SU of consolidated multiple line items.

NOTE 3. The plus symbol (+) is used as a delimiter between the data elements and is part of the data sub-string.

NOTE 4. To accommodate current automated information systems, US default values are assumed as shown. Metric data values may be used in the 2D symbol for generic cargo shipment descriptions, but the data values must be marked with the metric units of measure from the ANSI X12.3 code list 355. The ANSI X12.3 codes selected for use are: KG = kilograms, CM = centimeter, CC = cubic centimeter, MR = meter, CR = cubic meter. Decimal values are allowed in the 2D symbol. Human readable values printed on the DOD MSL will be in US standard unit of measure format and will be rounded to the next higher whole number with leading zeros suppressed.

Table X-5. Personal Property Shipping Label 2D Symbol Format

Compliance Indicator	Element Separators	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
[)>					**Message Header Compliance Indicator**		**[)>**
	RS	**06**			**Data Identifier Format Header**		**06**
	GS		JKUSM		TCN	an17	F1096305469621JXX
	GS		3D		Ship Date	an4	1090

Compliance Indicator	Element Separators	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
	GS		2K		Bill of Lading	an..12	M1234567
	GS		9K		TAC	an4	FZZZ
	GS		12K		Personal Property SCAC	an4	XYZW
	GS		2L		Ship To Address	an..35+an..35+an..35+an..35+an..35 See Note 1	1st address line+2nd address line+3rd address line+4th address line+5th address line
	GS		3L		From Address	an..35+an..35+an..35 See Note 1	1st address line+2nd address line+3rd address line
	GS		5L		Consignee Address	an..35+an..35+an..35+an..35+an..35 See Note 1	1st address line+2nd address line+3rd address line+4th address line+5th address line
	GS		2Q		Weight (shipment piece)	an..5+../an2 See Note 2	350
	GS		11Q		Tare Weight	an..5+../an2	40
	GS		13Q		Piece Number/Total Pieces	an..4/an..4	1/4
	GS		17V		CAGE Code – Consignor	an5	6R517
	RS	**07**			**Free Text Format Header**		**07**
	GS			12	Cube (shipment piece)	an..4+../an2 See Note 2	36
	GS			15	Water Commodity/Special Handling Codes	an5	390Z9
	GS			23	Air Dimension Code	an1	A
	GS			25	POE Code	an3	DOV
	GS			26	POD Code	an3	RMS
	GS			27	Consignee DODAAC	an6	FB5612
	GS			28	Transportation Priority	n1	2
	GS			29	Consignor DODAAC	an6	FB4407
	GS			30	Method Code	an1	P
	GS			32	RDD	an..3	118
	GS			34	TCMD/Manifest Doc ID Code (header DIC only)	an3	TF1

Compliance Indicator	Element Separators	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
	GS			35	Free Text Comment	an..60	Free text up to 60 characters
	GS			45	Owner's Last Name	an..13	Smith
	GS			46	Owner's First and Middle Initials	an..2	JB
	GS			47	Owner's Grade	an2	O5
	GS			48	Type Service	an..10	TGBL UB
	GS			49	Air Commodity/Special Handling Codes	an2	JZ
	GS			50	Type Pack Code	an2	MW
	GS			69	Personal Property Code	an1	B
	GS			70	Net Weight	an..5+../an2	310
	GS			71	POV Model Year	n2	05
	GS			72	POV Make	a4	MERC
	GS			73	POV State of Registration	a2	VA
	GS			74	POV License Number	an..8	PAE8393X
	GS			75	POV Vehicle Color	a3	BLK
	RS EOT						

NOTE 1. The plus symbol (+) is used as a delimiter between the data elements and is part of the data sub-string.

NOTE 2. To accommodate current automated information systems, US default values are assumed as shown. Metric data values may be used in the 2D symbol for generic cargo shipment descriptions, but the data values must be marked with the metric units of measure from the ANSI X12.3 code list 355. The ANSI X12.3 codes selected for use are: KG = kilograms, CM = centimeter, CC = cubic centimeter, MR = meter, CR = cubic meter. Decimal values are allowed in the 2D symbol. Human readable values printed on the DOD MSL will be in US standard unit of measure format and will be rounded to the next higher whole number with leading zeros suppressed.

Table X-6. Unit Move Shipping Label 2D Symbol Format

Compliance Indicator	Element Separator	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
[)>					**Message Header Compliance Indicator**		**[)>**
	RS	**06**			**Data Identifier Format Header**		**06**

Compliance Indicator	Element Separator	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
	GS		JKUSM		TCN	an17	AWS1EAA$0D00340XX
	GS		6JKUSM		TTN	n17	12345678901000007
	GS		I		VIN	an17	V739GXL1794AB12PZ
	GS		9K		TAC	an4	YZZZ
	GS		2L		Ship To Address	an..35+an..35+an..35+an..35+an..35 See Note 1	1st address line+2nd address line+3rd address line+4th address line+5th address line
	GS		3L		From Address	an..35+an..35+an..35 See Note 1	1st address line+2nd address line+3rd address line
	GS		5L		Consignee Address	an..35+an..35+an..35+an..35+an..35 See Note 1	1st address line+2nd address line+3rd address line+4th address line+5th address line
	GS		51L		Origin Zip Code for SEAVAN point of origin	an5	45324
	GS		N		NSN	an..15	8115001682275
	GS		2Q		Weight (shipment piece)	an..5+../an2 See Note 2	14000
	GS		13Q		Piece Number/Total Pieces	an..4/an..4	1/1
	GS		4R		DODIC	an4	PL23
	GS		13S		Security Seal Number	an8	90876787
	GS		25S		Unique Item Identifier	an..78	UN077991289123456789012 3
	GS		1T		Lot Number	an..25	MCG77G002-060
	GS		4V		Ocean Carrier Code	an4	SEAU
	RS	**07**			**Free Text Format Header**		**07**
	GS			03	Project Code	an3	9BU
	GS			04	ULN	an..7	1234567
	GS			05	UIC	an6	WS1EAA
	GS			06	Bumper Number	an..8	HQ-123
	GS			09	Unit Equipment Description	an..20	HELICPR CARGO MH-60K
	GS			10	Model Identifier	an..10	12345ASDFG
	GS			12	Cube (shipment piece)	an..4+../an2 See Note 2	1200
	GS			15	Water Commodity/Special Handling Codes	an5	900Z9

Compliance Indicator	Element Separator	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
	GS			18	Length Default = inches	n..6+../an2 See Note 2	1239
	GS			19	Width Default = inches	n..4+../an2 See Note 2	123
	GS			20	Height Default = inches	n..4+../an2 See Note 2	135
	GS			21	Pallet Identifier	an..6	DOVARC
	GS			23	Air Dimension Code	an1	A
	GS			24	Container Number Code	an5	13579
	GS			25	POE Code	an3	DOV
	GS			26	POD Code	an3	RMS
	GS			27	Consignee DODAAC	an6	W44TYH
	GS			29	Consignor DODAAC	an6	AWA2UC
	GS			30	Method Code	an1	A
	GS			32	RDD	an..3	123
	GS			34	TCMD/Manifest Doc ID Code (header DIC only)	an3	TX1
	GS			35	Free Text Comment	an..60	60 characters free text
	GS			36	Package ID/Serial Number	an..13	1234567890123
	GS			38	Nomenclature	an..14	Parts
	GS			39	Number of Rounds	n..6	112000
	GS			40	UN Class/Division Code	an2	1A
	GS			41	UN/NA Indicator	an2	UN
	GS			42	UN/NATO ID Number	an4	2766
	GS			43	Compatibility Group Code	an1	Z
	GS			44	Net Explosive Weight	n..6	449800
	GS			49	Air Commodity/Special Handling Codes	an2	VD
	GS			50	Type Pack Code	an2	BX
	GS			51	SEAVAN Ownership Code	an4	SEAU

Compliance Indicator	Element Separator	Format Header	Format 06 DI	Format 07 DEI	Data Field	Data Format Type/Length	Sample Data without DI/DEI
	GS			55	CDIST Code	an1	M
	GS			56	SUs in Van	n2	12
	GS			57	Pieces in Van	n4	1234
	GS			58	Van Inside Cube	n4	1234
	GS			59	Van Length	n2	40
	GS			60	Van Number (complete)	an8	12345678
	GS			61	Check Digit	n1	9
	GS			62	Temperature Range	an..5	F632
	GS			63	Stopoff Number and Consignee DODAAC	n..2+an6	1AF5612
	GS			76	Stopoff Consolidation Code	an1	X
	RS EOT						

NOTE 1. The plus symbol (+) is used as a delimiter between the data elements and is part of the data sub-string.

NOTE 2. To accommodate current automated information systems, US default values are assumed as shown. Metric data values may be used in the 2D symbol for generic cargo shipment descriptions, but the data values must be marked with the metric units of measure from the ANSI X12.3 code list 355. The ANSI X12.3 codes selected for use are: KG = kilograms, CM = centimeter, CC = cubic centimeter, MR = meter, CR = cubic meter. Decimal values are allowed in the 2D symbol. Human readable values printed on the DOD MSL will be in US standard unit of measure format and will be rounded to the next higher whole number with leading zeros suppressed.