

*Product Manager
Joint - Automatic Identification Technology*



**Active RFID Tag Format
and Data Specifications**

**Joint Defense Total Asset Visibility (JDTAV)
Version 2.5 (ISO Tables)**

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Version 2.5

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Revision History

Release	Issue Date	By	Paragraph and Text Revised
v2.5	14 Mar 08	PM J-AIT	Final Draft for input to Table Manager Module (TMM)
v2.5	31 Mar 08	PM J-AIT	TMM Working Integrated Process Team (WIPT) (18-19 Mar) voted to publish the tag format as separate document changed as follows: IV.A: Removed provision that Routing Code of "000000" was a default US Routing Code. Table 2: Added a note that Table IDs 8000 to 81FF are reserved for DOD use. Table 3: Changed the Routing Code Metadata to "an6". VI.B.5, Format Sub Type: Changed the definition of tag type LP. VI.B.5, Routing Code: Added a note for Routing Code. VI.B.5, Tag Model Number: Changed the example. VI.B.5, Tag Firmware Version: Changed the example. VII.B.5: Changed the definition of "M" to mission essential. VII.B.5, Shipment Unit Number: Modified the definition. IX.C, National Stock Number: Modified the definition. IX.C, Org/Shop/Detail: Modified the definition. X.B: Changed the truncation rule. XI.B: Changed the truncation rule. XII.C: Changed the number of fields to two.
v2.5	21 May 08	PM J-AIT	Table Manager was changed to Table Manager Module (TMM) TMM WIPT 29-30 Apr 08 voted to modify the Commodity table (Table ID 8104) to move the Remark fields (MISC1 & MISC2) to a separate table with a reference index to the applicable parent record in the Commodity table. The committee also voted to create a separate table for ammunition fields (DODIC, Lot Number, Serial Number, and Lot/Serial Quantity) that will also be reference indexed to the applicable parent record in the Commodity table. II.B. The TMM interface description was incorrect and was deleted. Table 1: Deleted Country Code from the table. The Country Code is part of the Issuing Agency Code. Table 2. Table IDs 8107 and 8108 were added. VII.A. The Note was changed to introduce the License Plate (LP) tag format. Table 8 (Table ID 8104). Sequence Number field was added, MISC1 & MISC2 were removed, and the field index numbers changed. Table 10 (Table ID 8107). Added Commodity Remarks. Table 11 (Table ID 8108). Added Ammunition Detail trailer record information. Appendix A. The field index numbers changed for Table ID 8104 and index numbers were added for Table IDs 8107 and 8108.
v2.5	1 July 08	PM J-AIT	Table 2: Added a License Plate tag type for potential use -- associated data remains undefined. Table 6 and related text: Changed the Asset Tag table (Table ID 8103) to Asset Detail table -- the Asset tag uses more than just the Asset Detail table. Table 5 -- Container Type code: Added optional codes for use.

Release	Issue Date	By	Paragraph and Text Revised
v2.5	1 May 09	PM J-AIT	<p>Tables 4 and 5. Added a note to JDTAV Table ID 8101 and Table ID 8102 to identify Unit Move data elements that are not on the active tag but they can be sent to the RF-ITV Server.</p> <p>Table 5. Changed Container Type codes to optional.</p> <p>VIII.C. Container Type. Deleted a conflicted requirement to enter an optional code. Removed several codes from the example list and identified the location of the complete code list.</p> <p>XIII.A. Removed the provision that the Ammunition Commodity Record could not have a Remark data element.</p> <p>XVI.B. Modified the provision to clarify that tags with a "null" Routing Code may be erased.</p>

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Active RF Tag Format and Data Specifications

JDTAV v2.5 (ISO)

I. PURPOSE

A. This document provides a detailed description of the active Radio Frequency Identification (RFID) tag formats and the data specifications for applicable sustainment/unit move cargo and asset management scenarios. This document is intended to describe data element configuration and the application provisions of that data; it is not intended to describe how data is configured in tag memory.

B. These formats and data specifications are intended to provide a standard means of storing, accessing, and transferring information with active RFID tags in support of sustainment, unit movement, or asset management efforts.

1. For sustainment activity, the RFID tag Sustainment data format provides a method of storing manifests, Transportation Control and Movement Document (TCMD) transactions, and shipment content level detail. Data written to the tag by the supplier supports both the shipper and the receiver. By providing local and immediate access to manifest and shipment unit data, the RFID tag allows the user to quickly and reliably identify and locate supplies and equipment. For ammunition and pre-positioned cargo shipments, the Sustainment format is modified to accommodate specific information requirements.

2. For support of unit movement activity, the RFID tag Unit Movement data format provides for the storage of data identifying materiel, containers, rolling stock, and individual end items. This data supports the movement of these items from garrison location, through staging locations, to a tactical location. The content level detail to be provided in the RFID tag Unit Movement format for a unitized/consolidated shipment unit is more comprehensive than what is required in the TCMD shipment unit transaction (see DTR 4500.9-R, Defense Transportation Regulation, Part II, Appendix O).

3. For support of asset management, which is separate and distinct from sustainment and unit move in transit visibility, the Asset tag data format provides a capability to record information of a more permanent nature as related to the tagged item. The Asset tag format in this document is intended to be a place holder for software development until such time that the Asset tag procedures for use are approved for use and published in DOD regulatory publications.

C. The formats and specifications addressed in this document specifically describe the tag data table structure required to support the ISO/IEC 18000-7 air interface protocol.

II. BACKGROUND

A. These tag formats and data specifications are based on the data requirements described in the legacy JDTAV v2.0 (International Committee for Information Technology Standards (INCITS) 256 tag format and the new requirements that incorporate use of the ISO/IEC 18000-7 air interface protocol standard. Enterprise migration to the ISO protocol requires the data on the tag to be stored in a different format and different commands are used to write/read the information. Migration to the ISO/IEC 18000-7 protocol will occur in two parts and they have been identified in the tag Migration Plan as Part A and Part B.

1. Part A, which is the format described in this document, is the migration of the legacy active RFID tag format from the INCITS 256 protocol to the ISO/IEC 18000-7 protocol. During the migration period to the ISO/IEC 18000-7 protocol, active RFID tags may be written in one of

several situations depending on the hardware configuration of the tag and the capability of the applications used by the trading partners.

(a) Legacy RF tags (400/600 series with a 22-bit tag ID) will continue to be written and read IAW with the updated JDtav v2.0 (INCITS) format as published and available from PM J-AIT. The prototype Asset tag data is currently written in a Unit Move version of the JDtav v2.0 (INCITS) format.

(b) RF tags (with a 48-bit tag ID) and other vendor tags (with a 48-bit tag ID) may be written and read IAW with the JDtav v2.5 (ISO) format published in this document, which also includes all of the proposed Asset tag data..

2. Part B, the format to be published later, will describe migration from the JDtav v2.5 (ISO) formats to a Radio Frequency Total Asset Visibility (RFTAV) data requirement.

(a) Subsequent to the migration to the ISO/IEC 18000-7 protocol format described in this document, DOD will begin migrating to the new RFTAV data requirement (an MH10-Block 1/2/3 data structure), which is essentially most of the JDtav v2.5 (ISO) data plus DOD mandated content level detail data requirements. The RFTAV format will use standard ISO/IEC 15434 (MH10.8.3) syntax and ISO/IEC 15418 (MH10.8.2) semantics to provide hierarchy relationships between the shipment unit layers in a consolidated shipment and the content level detail for that shipment (to include passive RFID tag relational information). The MH10-Block structure also provides more data storage capability on the tag.

(b) During the migration period to the RFTAV format, RF tags (with 48-bit tag ID) could be written and read IAW the JDtav v2.5 (ISO) format or the RFTAV MH10-Block (ISO) format.

B. To serve as the interface between functional applications and the tag write/read functions, DOD will provide a Table Manager Module (TMM) to process the information. The Table Manager Module documentation specifically describes user/application input format requirements and Table Manager Module output formats. The three primary Table Manager Module functions are:

1. The Table Manager Module will determine tag type, "ownership" of the tag, and available memory.

(a) An ISO/IEC 18000-7 Routing Code will be used to determine tag "ownership". The Routing Code is a byte-oriented code in the following format: Issuing Agency Code (from ISO/IEC 15459-2), followed by the appropriate identifier as specified by the issuing agency. Tags will only be used by the activities that "own" them and the tag Routing Code will not be changed in the course of normal business operations.

(b) Most non-DOD tags will be marked with an owner's label or may be a different color than those purchased for the DOD. Tags possessed by DOD, but not owned by DOD, should be deactivated (battery removed or reversed) and processed IAW COCOM procedures.

2. The Table Manager Module will receive RF tag data objects/files from the functional application for processing and output to tag read/write information systems. JDtav file/object import/export will be processed as follows:

(a) For JDtav data written to INCITS 256 protocol (22-bit tag ID) compliant tags, the JDtav files or objects will be passed to the Table Manager Module to create the required records and database tables for the JDtav v2.0 (INCITS) format (published as separate format).

(b) For JDTAV data written to ISO/IEC 18000-7 (48-bit tag ID) compliant tags, the JDTAV files or objects will be passed to the Table Manager Module to create the required ISO/IEC 18000-7 data tables for the JDTAV v2.5 (ISO) format. This process must be used as tags are converted to use the ISO/IEC 18000-7 protocol.

(c) For those situations where application data exceeds the memory capacity of an RFID tag, the Table Manager Module will truncate the data as necessary to fit within the tag memory limits prior to passing the information to the FDF.

3. The Table Manager Module will translate the JDTAV format (INCITS 256 or ISO/IEC 18000-7) information back to the object/file formats originally processed by the Table Manager Module. For the most current version of this specification, refer to the PM J-AIT Web site at https://national.rfitv.army.mil/rfitv/rfdocs/RFITV_Documents.html (UserID/Password required).

III. OVERVIEW

A. This document defines the JDTAV data layout on an ISO/IEC 18000-7 compatible tag. The use of ISO/IEC 18000-7 table query commands requires all data to be written to one or more database tables. Each of the database tables is limited to 65535 records and each record may have up to 32 fields with up to 255 characters in each field.

B. For compatibility with the legacy JDTAV v2.0 (INCITS) format, this JDTAV v2.5 (ISO) format describes data written to six categories of ISO tables: Total Asset Visibility (TAV), Commodity, Commodity Remarks, Ammunition Detail, TCMD, and User Defined.

C. The Asset tag detail information is described in a separate Asset Detail table in this document.

D. The ISO/IEC 18000-7 protocol includes a Universal Data Block (UDB) of information on the tag which can be used for administrative purposes, to include user and tag vendor functions. DOD intends to only use a specific feature of the UDB that identifies a Routing Code for tag ownership and tag data information routing. The DOD recognizes that some legacy tag applications may have encoded information in the legacy RFID tag's (INCITS 256) Standard Memory section to identify user/shipment information during the tag's initial interrogation; however, for the migration ISO/IEC 18000-7 protocol format, DOD has elected to reserve the UDB User ID field for future use.

Note: For further information on the UDB, see ISO/IEC 18000-7.2 (CD) with incorporated DOD errata changes.

E. Appendix A contains an index of the JDTAV v2.5 (ISO) data elements and the ISO tables that define them.

IV. UNIVERSAL DATA BLOCK (UDB) ROUTING CODE

A. The UDB Routing Code is a data element whose purpose is to identify a country specific code for asset/information routing purposes. The Routing Code will be written to the ISO formatted tag by the TMM and it should be used as defined in the ISO 17363 standard (see Tag Data Routing Code). The Routing Code is in the following format (see Table 1): Issuing Agency Code (assigned IAW ISO/IEC 15459-2) followed by the appropriate identifier as specified by the issuing agency. USTRANSCOM J5/4-I AIT Office, as the issuing agency, will control the assignment of the Routing Code format extension identifiers.

B. The US DOD Routing Code is "KUS000".

Table 1. Routing Code Format

Issuing Agency Code	Extension
3 bytes	3 bytes
The letters "KUS "	3 digits

1. Issuing Agency Code (IAC) identifies the entity responsible for assigning the format and interpretation of the Routing Code. IACs are registered IAW ISO/IEC 15459-2. The first character of the Issuing Agency Code 'K' is defined for governmental administration and it shall be completed with the relevant two-character country code as defined in ISO/IEC 3166-1. The two-character Country Code for the United States is 'US'.
2. The Extension for this application is a three digit code indicating a location or source defined by the IAC. An IAC of 'KUS' indicates the Extension is assigned by the US Government, which is the USTRANSCOM J5/4-I office for this application. The Extension consists of three decimal digits, with leading zeros, representing the valid numeric range of 000 (zero) through 999. The digits are represented as three byte values in left to right order. The DOD Extension '000' is encoded as 0x30 0x30 0x30.

V. JD TAV FORMAT – ISO/IEC 18000-7 TABLE IDs

A. Table 2 is an overview description of the ISO/IEC 18000-7 table IDs used to encode the JD TAV v2.5 (ISO) format information. The table IDs will be encoded as hex values. The JD TAV data types are:

- S = Sustainment
- U = Unit Move
- A = Asset
- L = License Plate

Note: The table IDs are not unique to just the JD TAV formats. Some of the following tables may also be used for other follow-on data RFID tag formats to encode data elements that are in common between formats. For example, the RFTAV format is a follow-on data format being developed that will integrate and use some of the JD TAV data elements.

- B. Table ID: Identifies the pre-assigned identifier value of the ISO/IEC 18000-7 table.
- C. Description: Describes the business use of the data elements in the table.

Table 2. Table IDs

Table ID	Description	Potential Table Use by Tag Type			
		S	U	A	L
8000	Metadata	x	x	x	
8101	TAV 1 (JD TAV only)	x	x		
8102	TAV 2 (JD TAV & RFTAV Block 1)	x	x		
8103	Asset Detail			x	
8104	Commodity (JD TAV only)	x	x		
8105	TCMD (JD TAV only)	x	x		
8106	User Defined Title & Value	x	x	x	

8107	Commodity Remarks	x	x		
8108	Ammunition Detail				

Note: All Table IDs (8000 to 81FF) are hex values. The Table ID series 8000 to 81FF will be used by DOD. The last 64 tables are blocked for DOD system-only use (81C0-81FF).

VI. METADATA – TABLE ID: 8000

- A. Table 3 identifies the context (version) of the metadata for the tag format followed by the metadata. The information will be used primarily during the tag read process for application processing.
- B. The Metadata table is required for the Sustainment, Unit Move, and Asset tag formats (see below). The active RFID tag will also be written in a License Plate (LP) format which will contain no user-defined data and will not have a Metadata table.
- C. The table has nine fields and one record. The ISO/IEC 18000-7 table fields are indexed starting at zero. The first table record is indexed starting at zero.

Table 3. Metadata

Table ID: 8000 Metadata			
Data Title	Field Index	Type/Size (bytes)	Value
Metadata Version	0	binary 1	0x01
Format Owner	1	an2	code
Format Type	2	an2	code
Format Sub Type	3	an2	code
Format Major Version	4	n2	01-99
Format Minor Version	5	n2	00-99
Routing Code	6	an6	code
Tag Model Number	7	an4	code
Tag Firmware Version	8	an8	code

1. Table ID: Identifies the pre-assigned identifier value of the ISO/IEC 18000-7 table.
2. Data Title: Identifies the data element. All of the data is system generated by the Table Manager Module.
3. Field Index: Identifies the field index used for ISO/IEC 18000-7 commands.
4. Type/Size (bytes): Defines the data structure of the element to be numeric (n), alphanumeric (an), or hexadecimal (hex); denotes a fixed or variable data structure; and defines the field length in bytes. The field size for this table and all following tables is always fixed at the maximum value for the data in the field – the field length does not vary for variable data lengths.
 - (a) Fixed length alphanumeric data is annotated as (an); or annotated as (n) for numeric data.
 - (b) Variable length alphanumeric data is annotated as (an.); or annotated as (n.) for numeric data.

(c) The size of the field is annotated with a numeric number; for example, (an..50) denotes variable length alphanumeric data in a fixed field length of 50 bytes. The field length must be defined for ISO/IEC 18000-7 commands.

5. Value: Identifies the specific value or type of information in the field – see the following data explanations for this table and following tables for more information. The following justification and padding business rules apply:

(a) Alphanumeric (an) fields are left justified – padded with trailing spaces.

(b) Numeric (n) fields are right justified – padded with leading zeros as needed.

- Metadata Version identifies the metadata version for the table (a binary value).

Value = hex 0x01

- Format Owner identifies the entity that controls the format being written.

US = US DOD

- Format Type identifies the format types for ISO/IEC 18000-7 tags using ISO/IEC 15459 Routing Codes recognized by PM J-AIT.

TV = JD TAV

RF = RFTAV (a follow-on data version)

- Format Sub Type identifies categories of formats within a named format.

SU = Sustainment

UM = Unit Move

AA = Asset Tag

LP = License Plate – a proposed tag version with a DOD Routing Code and no user-defined data written to the tag (the format is not final).

- Format Major Version identifies the root number of the published data format. Right justify and pad with leading zero. Major version changes are used for adding tables or changing existing field cell size definitions.

Example: for version JD TAV v2.5 (ISO), major version value = 02

- Format Minor Version identifies the division of the root number for the published data format. Right justify and pad with leading zero. Minor version used for table column growth (added fields – not inserted) and changes to data element specification definitions.

Example: for version JD TAV v2.5 (ISO), minor version value = 05

- Routing Code identifies the UDB Routing Code, which identifies the owner of the tag.

Note: The Routing Code is also written to the Universal Data Block in tag memory. The Routing Code entry in the Universal Data Block may be written during the tag write process by the Table Manager Module or during the manufacturing process as per contract requirements.

- Tag Model Number identifies the manufacturer defined, immutable 2-byte Model Number as specified in ISO 18000-7. This 2-byte value is converted to a 4-byte hexadecimal string for storage in the Metadata Table.

Example for manufacturer tag model (in binary):

Byte 1(MSB)	Byte 0(LSB)
0000 0010	1000 1110

Field entry (as hexadecimal string) = 028E

- Tag Firmware Version identifies the manufacturer defined, immutable 4-byte Firmware Version as specified in ISO 18000-7. This 4-byte value is converted to an 8-byte hexadecimal string for storage in the Metadata Table.

Example for manufacturer firmware version (in binary):

Byte 3(MSB)	Byte 2	Byte 1	Byte 0(LSB)
0000 0000	0100 0000	0001 0100	1110 0001

Field entry (as hexadecimal string) = 004014E1

VII. TAV 1 (JDTAV ONLY) – TABLE ID: 8101

A. Table 4 contains the JDTAV v2.5 (ISO) header data that may apply to one or more of the tag format sub types. The total asset visibility (TAV) data stored in this table provides a way to access important summary information from the tag. The data in this table will not be used for the follow-on RFTAV format.

B. The table has 11 fields and 1 record. The ISO/IEC 18000-7 table fields are indexed starting a zero. The table record is indexed starting at zero.

Table 4. TAV 1 (JDTAV only)

Table ID: 8101 TAV 1 (JDTAV only)				
Data Title	Field Index	Type/Size (bytes)	Sustainment	Unit
JDTAV Commodity Truncated Data Indicator Y = yes Null = no or n/a	0	an1	S	S
JDTAV TCMD Truncated Data Indicator Y = yes Null = no or n/a	1	an1	S	S
Commodity Class Example: CLASS VIII	2	an..10	O	O
Hazard Class or Division				
Note: The decimal and Compatibility code (see CFR 49) are included in the field length.	3	an..4	C	Note
Home Station	4	an..15		O
Operation	5	an..16	O	O
Service	6	an..16	O	O
Ship Date (Julian) DDD	7	n3	C	Note 2
Shipment Piece Count	8	n..4	M	Note 2
Shipment Unit Number (SUN – Army only)	9	an..6		C
Transportation Priority	10	n1	C	

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Note 1: All fields are left justified – padded with trailing spaces.

Note 2. For Unit Move, this element is not part of the legacy JDTAV v2.0 tag format or JDTAV v2.5 format, but can be provided to the RF-ITV Server in accordance with the server interface specification.

1. **Table ID:** Identifies the pre-assigned identifier value for the ISO/IEC 18000-7 table.
2. **Data Title:** Identifies the data element.
3. **Field Index:** Identifies the field index used for ISO/IEC 18000-7 commands.
4. **Type / Size (bytes):** Defines the data structure of the element to be numeric (n), alphanumeric (an), or hexadecimal (hex); denotes a fixed or variable data structure; and defines the field length in bytes.
5. **Sustainment / Unit:** Identifies the tag type for Sustainment (S) or Unit Move (U). Each column identifies the data requirement for the tag type.

M = mission essential data (user value must be entered, to include zero, “none”, “unknown”, or “n/a”).

C = conditional data (must be provided if available)

O = optional data

S = system data (no user input)

- **JDTAV Commodity or TCMD Truncated Data Indicator** is created by the Table Manager Module during file processing. If the Table Manager Module must truncate JDTAV Commodity record or TCMD record information to fit within the tag memory or data format constraints, the Truncated Data Indicator will be set to “Y” for yes. The Asset tag is not expected to require truncation because the data volume is very low (no Commodity or TCMD records).

Y = yes

Null = no or not applicable

- **Commodity Class** identifies the commodity class of the cargo in terms as defined by DOD. There are ten categories into which supplies are grouped in order to facilitate supply management and planning.

I = Rations and gratuitous issue of health, morale, and welfare items.

II = Clothing, individual equipment, tentage, toolsets, and administrative and housekeeping supplies and equipment.

III = Petroleum, oils, and lubricants.

IV = Construction materiel.

V = Ammunition.

VI = Personal demand items.

VII = Major end items, including tanks, helicopters, and radios.

VIII = Medical.

IX = Repair parts and components for equipment maintenance.

X = Nonstandard items to support nonmilitary programs such as agriculture and economic development.

- **Hazard Class or Division** is the United Nations Class or Division Number for the hazardous cargo and ammo – may include the Compatibility Code as listed in 49 CFR 172.101.
- **Home Station** is the free text name or DODAAC for the unit’s home station.
- **Operation** is a code name assigned by DOD or a user to identify the supported activity of the shipment.

- Service is the DOD department of the Consignee receiving the shipments packaged within a conveyance container.
- Ship Date (Julian) is the Julian date the shipment departed the shipment unit Consignor location or the date the manifested load departed an Origin location.
- Shipment Piece Count is either the separate segments (pieces) of the shipment unit that have not been unitized (i.e., the packages have been marked “Piece n of X Pieces”) or it is the total number of pieces listed on a load manifest or bill of lading. The DTR term “shipment unit” defines the configuration and handling characteristic elements of a shipment marked with a Military Shipping Label (MSL). A “manifest” or a “bill of lading” is a document describing a load of shipment units.
 - For shipment units, the Shipment Piece Count is the number of separate segments (pieces) marked with MSLs for the same shipment. The Shipment Piece Count should be the number X in the MSL annotation for (Piece n of X Pieces).
 - For shipment units documented with a TCMD, except for SEAVANs, the Shipment Piece Count may be derived from the TCMD T_0/1/2/3 header record, rp 68-71. For shipment units, other than SEAVANs, this will be the separate segments (pieces) of the shipment unit that have not been unitized.
 - For a SEAVAN shipment unit, the Shipment Piece Count will always be 0001. The piece count cannot be extracted from TCMD T_2 record for a SEAVAN (Type Pack Code in rp 28 = Z); the TCMD pieces value in rp 68-71 is a van contents piece count and not a shipment unit handling characteristic element.
 - For a 463L System pallet shipment unit (the pallet load has an MSL and TCN – usually built by a DLA CCP), the Shipment Piece Count will always be 0001.
 - For a manifested load, such as a manifested load on a truck or a manifested load on an aerial port built-up 463L System pallet (neither the truck load nor pallet load are marked with an MSL), the Shipment Piece Count is the total number of pieces annotated on the manifest.
- Shipment Unit Number is Army unique and is often referred to as the “SUN” number. The SUN usually identifies a specific piece of equipment in a deployment list.
- Transportation Priority is a priority code of 1, 2, 3, or 4, as defined in the DTR, for the conveyance container.

VIII. TAV 2 (JDTAV & RFTAV) – TABLE ID: 8102

A. Table 5 contains the JDTAV v2.5 (ISO) header data that may apply to one or more of the tag types. The TAV data stored in this table provides a way to access important summary information from the tag. The data in this table will also be used for the follow-on RFTAV format.

B. The table has 25 fields and one record. The ISO/IEC 18000-7 table fields are indexed starting a zero. The table record is indexed starting at zero.

C. For Data Titles Consignee Type, Consignor Type, Container Type, and Shipment ID Type, the “type” codes are included in this generic format ISO table to provide a search capability that will provide common fields for the RFTAV tag specification and data formats that are expected to be fielded at a later date.

Table 5. TAV 2 (JDTAV & RFTAV)

Table ID: 8102 TAV 2 (JDTAV & RFTAV)				
Data Title	Field Index	Size (bytes)	Sustainment	Unit
Bumper Number	0	an..8		C
Cargo Type (HAZMAT) Code	1	an1	M	M
Carrier Code	2	an..4	O	
Commodity and S/H Codes	3	an..5		C
Consignee	4	an..6	C	O
Consignee Type (Value = D) Code D indicates a DODAAC	5	an1	C	C
Consignor	6	an..6	C	
Consignor Type (Value = D) Code D indicates a DODAAC	7	an1	C	
Container Number	8	an..15	C	C
Container Type (Default = null) Optional codes for JDTAV	9	an1	O	O
Cube (Gross)	10	n..4	M	Note 2
Equipment Description	11	an..32		M
Free Text	12	an..60	O	O
Lead TCN (see Shipment ID)				
Line Item Number (LIN)	13	an..6		C
Model Number	14	an..10		C
NEW (net explosive weight)	15	n..8	C	Note 2
POD	16	an3	C	C
POE	17	an3	C	C
Serial Number / Package ID	18	an..10		C
Shipment ID (includes LEAD TCN)	19	an..18	M	M
Shipment ID Type (Value = T) Code T indicates a TCN	20	an1	M	M
Unit Identification Code (UIC)	21	an6		M
Unit Line Number (ULN)	22	an..7		M
Unit Name	23	an..20		O
Weight (Gross)	24	n..5	M	Note 2

Note 1: All fields are left justified - padded with trailing spaces.

Note 2: For Unit Move, this element is not part of the legacy JDTAV v2.0 tag format or JDTAV v2.5 format, but can be provided to the RF-ITV Server in accordance with the server interface specification.

- **Bumper Number** is the Bumper / Vehicle Number marked on a specific piece of equipment.

Note: The Bumper Number field expanded from the legacy JDTAV v2.0 (INCITS) format (an..6).

- **Cargo Type (HAZMAT) Code** flags hazardous or non-hazardous conditions of the shipment. The code may be extracted from the second position of the TCMD Document Identifier Code (see DTR Part II Appendix DD). Examples of the most used codes are:

E = ammunition/explosives.

J = hazardous materials (except ammunition/explosives and ORM-D hazards).

V = Government vehicles, trailers, wheeled guns, and aircraft.

X = shipments (including those with ORM-D hazards) not covered above.

- Carrier Code is the code assigned to identify the carrier of the conveyance container. The code may be a Standard Carrier Alpha Code or a free-form text abbreviation for the carrier type (e.g., ARMY, USAF, USMC, SHIP, TRCK, TRLR, and HMVE).
- Commodity and S/H Codes are the Commodity Code and Special Handling Codes assigned to the conveyance container or equipment. For surface movements, the five-digit code is the Water Commodity Code + the Water Type Cargo Code + the Water Special Handling Code (DTR Part II, Appendices KK, NN, and LL). For air movements, the two-digit code is the Air Commodity Code + the Air Special Handling Code (DTR, Part II, Appendix Z).
- Consignee is the DOD Activity Address Code (DODAAC) for the conveyance container Consignee (the shipment's final receipt entity). Use the DTR specified code table.
- Consignee Type identifies the type of code. The "type" field is a place holder for RFTAV data and therefore will need to be filled with fixed data. This code is required if a Consignee code is entered in the table.

D = DODAAC

- Consignor is the DODAAC for the shipper. Use the DTR specified code table.
- Consignor Type identifies the type of code. The "type" field is a place holder for RFTAV data and therefore will need to be filled with fixed data. This code is required if a Consignor code is entered in the table.

D = DODAAC

- Container Number identifies the complete serialized identification number of the conveyance container, which may be a 463-L System pallet ID number. For ISO containers (e.g. SEAVANs), the owner marked container identification number (11 characters) is usually assigned in accordance with ISO/IEC 6346 and includes the Owner Code and Equipment Category Identifier (4 characters), the Serial Number (6 digits), and the Check Digit (1 digit). It does not include a dash (-), space (/), or other discriminating mark that sometimes sets off the Check Digit from the Serial Number.
- Container Type identifies the type of container/conveyance marked with the Container Number. The "type" field is a place holder for RFTAV data. For JD TAV applications, the default value is a "null" entry; or, one of the Container Type data elements may be optionally used when a Container Number is identified. The full code list includes the DTR Part II, Appendix L SEAVAN and Conveyance codes used for position 17 of the TCN. Examples of the most frequently used codes are:

null = the default value for JD TAV applications.

2 = Dry Cargo ISO Container

5 = Refrigerated ISO Container

7 = Insulated ISO Container

8 = Open Frame or Rack ISO Container

9 = Tank Type ISO Container

D = Trailer/Truck

P = 463L Air Pallet

Note: The Container Type ISO codes are based on the DTR Part II, App L, Para J, rp 17 codes.

- Cube (Gross) is the total exterior cube of the conveyance container or the total cube of the manifested items. This value cannot be extracted from the TCMD T_2 record for a SEAVAN (Type Pack Code in rp 28 = Z), which only documents the cube of the SEAVAN's contents – use the Cube annotated on the MSL.

- Equipment Description is a free text description of the equipment.

Note: The Equipment Description field expanded from the legacy JDTAV v2.0 (INCITS) format (an..20).

- Free Text is 60 characters.

Note: The Free Text field for the Unit Move format expanded from the legacy JDTAV v2.0 (INCITS) format (an..33).

- Lead TCN (see Shipment ID)
- Line Item Number (LIN) is the LIN of the equipment – usually a number used to authorize and account for assigned property.
- Model Number is the equipment Model Number.
- Net Explosive Weight (NEW) identifies the net explosive weight for the shipment.
- POD is the Port / Point of Debarkation Code for the conveyance container. Use the DTR specified code tables for POD values. To encode manifest Destination location information, a User Defined Data Title and Value record is recommended (see Table 10). Inland Location Codes (ILCs) must not be used for shipments transiting air or sea ports of debarkation.
- POE is the Port / Point of Embarkation Code for the conveyance container. Use the DTR specified code tables for POE values. To encode manifest Origin location information, a User Defined Data Title and Value record is recommended (see Table 10). Inland Location Codes must not be used for shipments transiting air or sea ports of embarkation.
- Serial Number / Package ID is the equipment Serial Number or assigned permanent ID number.
- Shipment ID is the conveyance container's shipment unit Transportation Control Number (TCN) or a manifest TCN for cargo loaded on carrier equipment – a TCN may be used either for shipment units or for manifests. If a manifest does not use a TCN constructed IAW DTR Part II, Appendix L, a unique TCN for the RFID tag Shipment ID field may be constructed in the following manner:
 - Enter the unique manifest control number for the shipment and right fill with 'X' characters as necessary to complete a fixed length TCN (an17).
 - Enter the applicable 463L System pallet ID number (an6) followed by a Julian date (n4) or calendar date (an8) and right fill with 'X' characters as necessary to complete a fixed length TCN (an17).

Note: The Shipment ID field is a new field and expands the legacy JDTAV v2.0 (INCITS) format TCN field (an17).

- Shipment ID Type identifies the type of code used for the Shipment ID. The "type" field is a place holder for RFTAV data and therefore will need to be filled with fixed data. This code is required if a Shipment ID is entered in the table.

T = TCN

- Unit Identification Code is a Joint Operation and Planning Execution System (JOPES) six-character alphanumeric code that uniquely identifies each Active, Reserve, or National Guard unit of the Armed Forces.
- Unit Line Number is a JOPES two to seven-character alphanumeric code that describes a unique increment of a unit deployment in an operations plan.
- Unit Name is the name of the unit shipping the equipment.
- Weight (Gross) is the gross weight of the conveyance container (includes contents) or the total weight of the manifested items. This value cannot be extracted from the TCMD T_2 record for

a SEAVAN (Type Pack Code in rp 28 = Z), which only documents the weight of the SEAVAN's contents – use the weight annotated on the MSL.

IX. ASSET DETAIL – TABLE ID: 8103

A. Table 6 is the Asset Detail format based on the “ST-614 Asset Data Format Specification and Application Specifications” which identifies the data element code values and application business rules for the Asset tag prototype development. The document is available from PM J-AIT.

B. The Asset Types column in Table 7 identifies the data requirement for each Asset tag type.

C. The Asset Detail table has 29 fields and one record. The ISO/IEC 18000-7 table fields are indexed starting a zero. The table record is indexed starting at zero.

Table 6. Asset Detail

Table ID: 8103			
Asset Detail			
Data Title	Field Index	Size (bytes)	Asset
Asset ID	0	an..17	M
Asset Manager Org Type	1	an1	C
Asset Manager Organization	2	an..9	C
Asset Type	3	an..6	M
Bumper Number	4	an..8	O
Command	5	an..8	C
Container Number	6	an..15	C
Container Size	7	an..2	C
Container Type	8	an1	C
Date of Manufacture (DOM)	9	n8	C
Date of Service (DOS)	10	n8	O
Detail Number	11	an..15	C
Equipment Description	12	an..32	C
IUID (Item Unique Identification) or UII (Unique Item Identifier)	13	an..50	O
Lease End Date (LED)	14	n8	O
Lot Number	15	an..6	O
Management Code	16	an..4	C
Manufacturer	17	an..20	O
Model Number	18	an..10	O
National Stock Number (NSN) or CAGE+Part Number (PN)	19	an..15	C
Org/Shop/Detail Code	20	an..9	C
Ownership Type	21	an1	C
Pallet Type	22	an1	C
PO / Contract Number	23	an..15	O
Serial Number (SN)	24	an..15	C
SRAN (Stock Record Account Number)	25	an..6	C
Vehicle Registration	26	an..8	C
VIN (Vehicle ID Number)	27	an..17	O
Weight	28	n..6	O

Note: All fields are left justified - padded with trailing spaces.

- Asset ID is a generic data element used to encode a Container Number, Vehicle Registration Number, Detail Number, or SN.
- Asset Manager Org Type identifies the type of Asset Manager Organization with a code.
 - S = Standard Carrier Alpha Code (SCAC).
 - D = DODAAC
 - U = UIC
 - V = Service Owner (for Army Materiel Command (AMC))
- Asset Manager Organization identifies the asset owner organization according to the respective Asset Manager Org Type code.
- Asset Type identifies the type of asset.
 - C = Container
 - V-AF = US Air Force Vehicle / Trailer
 - E-AF = US Air Force Equipment
 - P = Pallet
- Bumper Number is the Bumper / Vehicle Number marked on a specific piece of equipment.
- Command identifies the owning / managing command of the asset.
- Container Number identifies the complete serialized identification number of the conveyance container, which may be a 463-L System pallet ID number. For commercial SEAVANs, the owner marked container identification number (11 characters) is usually assigned in accordance with ISO/IEC 6346 and includes the Owner Code and Equipment Category Identifier (4 characters), the Serial Number (6 digits), and the Check Digit (1 digit). It does not include a dash (-), space, slash (/), or other discriminating mark that sometimes sets off the Check Digit from the Serial Number.
- Container Size identifies container as 20-foot, 40-foot, etc.
- Container Type identifies the container type using DTR TCMD codes of:
 - 2 = Dry Cargo
 - 5 = Refrigerated
 - 7 = Insulated
 - 9 = Tank type
- Date of Manufacture (DOM) in a format of DDMMYYYY.
- Date of Service (DOS) the service, inspection, or expiry date in a format of DDMMYYYY.
- Detail Number the asset identification number from the USAF Custodian Authorization/Custodian Receipt Listing (R-14) report.
- Equipment Description is a free text description of the equipment or asset. (a.k.a. Asset Description).
- Item Unique Identification (IUID) identifies the Unique Item Identifier (UII) assigned to an item in accordance with MIL-STD-130.
- Lease End Date (LED) identifies the date when a container is to be returned in the format DDMMYYYY.
- Lot Number identifies the lot number of the item.
- Management Code identifies the equipment management codes assigned to USAF vehicles; e.g., B102 = sedan.
- Manufacturer identifies the manufacturer of an item. A CAGE code may be used.

- Model Number is the equipment Model Number.
- National Stock Number (NSN) is 15 alphanumeric characters to include the 13-character NSN and 2 Material Management Codes, as applicable.
 - CAGE + Part Number may be used if the NSN does not exist.
- Org/Shop/Detail Code identifies the USAF organization, shop code responsible for the item, and a detail number may be added at the end of the code to identify the item.
- Ownership Type identifies ownership of an item:
 - G** = Government Owned
 - L** = Leased
 - C** = Commercially Owned
- Pallet Type identifies the type of pallet:
 - 1** = ATGL (Air Transport Galley/Lavatory) Pallet
 - 2** = Cargo Movement Pallet (Default value)
 - 3** = Communications Suite Pallet
 - 4** = C-17 Seat Pallet
 - 5** = C-130 Seat Pallet
 - 6** = C-135 Seat Pallet
 - 7** = KC-10 Seat Pallet
 - 8** = PSP (Patient Support Pallet
 - 9** = Rest Capsule Pallet
 - A** = Security Pallet
 - B** = Other
- PO / Contract Number identifies the Purchase Order or Contract Number for the item.
- Serial Number is the equipment Serial Number.
- SRAN (Stock Record Account Number) identifies a specific MILSTRIP supply or equipment account.
- Vehicle Registration identifies the equipment registration number assigned to USAF vehicles.
- Vehicle Identification Number (VIN) identifies the VIN assigned to a vehicle by the manufacturer in accordance with ISO 3779.
- Weight is the gross weight of the conveyance container (includes contents) or equipment.

Table 7. Asset Types (Prototype)

Data Elements	Asset Types			
	Container (C)	Air Force Vehicle / Trailer (V-AF)	Air Force Equipment (E-AF)	Pallet (P) (463L)
Asset ID	M	M	M	M
Asset Manager Org	M			M
Asset Manager Org Type	M			M
Asset Type	M	M	M	M
Bumper Number		O	O	
Command		M	M	
Container Number	M			
Container Size	M			
Container Type	M			
Date of Manufacture				M
Date of Service	O	O	O	O
Detail Number			M	
Equipment Description			M	
IUID (same as VIN # for AF Vehicle)	O	O	O	O
Lease End Date	O			
Lot Number				O
Management Code		M		
Manufacturer				O
Model Number		O	O	
NSN/PN		M	M	O
Org/Shop/Detail Code			M	
Ownership Type	M	M		
Pallet Type				M
PO / Contract Number	O			
Serial Number			M	M
SRAN		O	M	O
Vehicle Registration		M		
VIN (see IUID)		O		
Weight	O	O	O	O

Note: Additional elements were added to the above extract from the “ST-614 Asset Data Format Specification and Application Specifications” table to accommodate prototype issues identified during the evaluation period. Elements added are Asset ID, PO/Contract Number, Date of Service, Weight, Org/Shop/Detail Code, and VIN. The data title “Asset Description” was changed to “Equipment Description” to align the element with other JD TAV and RFTAV formats.

X. COMMODITY – TABLE ID: 8104

A. Table 8 is the Commodity record format which is structured to encode the shipment content level detail for sustainment and unit move cargo. For sustainment receiving and in-checking, it includes the data element information encoded in a DD Form 1348-1A Issue Release/Receipt Document used for supply requisitions.

B. Commodity header records in this table may have associated trailer user Remarks. The associated trailer Remarks for each of the Commodity table header records are cross-referenced to the header record via a Sequence Number that is system generated by the Table Manager Module. The Remarks are in the Commodity Remarks table (Table 11) and are encoded in the Remark1 and Remark2 fields.

C. Ammunition header records encoded in the Commodity table may have associated trailer information (DODIC, Lot Number, Serial Number, and Lot/Serial Quantity) for the records. The associated trailer information is cross-referenced via a Sequence Number that is system generated by the Table Manager Module for each of the Commodity table header records. The ammunition associated trailer information fields are in the Ammunition Detail table (Table 12).

D. The number of Commodity records encoded in an RFID tag is determined by the memory capacity of the tag. If tag memory is not sufficient to encode all of the Commodity records and the associated Commodity Remarks or Ammunition Detail trailer records, the Commodity records and each Commodity parent’s associated records will be truncated incrementally from the bottom of the Commodity table data set subsequent to truncation of the TCMD records as described in paragraph XI. If records are truncated, the Table Manager Module will also post a “Y” (yes) in the JD TAV Commodity Truncated Data Indicator (see Table 4).

E. The RFID tag write transaction sent to the respective RF-ITV System server must include all the truncated Commodity records.

F. The table has 10 fields with multiple records. The ISO/IEC 18000-7 table fields are indexed starting at zero for the first field. The table records are indexed starting at zero for the first record.

Table 8. Commodity (JD TAV only)

Table ID: 8104 Commodity				
Data Title	Field Index	Size (bytes)	Sustainment	Unit
Sequence Number	0	an4	M	M
Nomenclature	1	an..30	M	M
Document Number	2	an..15	C	O
Line Item Number (LIN)	3	an..6	C	C
National Stock Number	4	n..15	M	M
Routing Identifier Code	5	an3	C	O
Unit of Issue	6	an2	C	M
Quantity Shipped	7	n..7	C	M
Condition Code	8	an1	C	C
Shipment TCN	9	an17	M	M

Note: All fields are left justified - padded with trailing spaces.

- Sequence Number is a system generated (TMM) unique 4-byte hex-encoded alpha-numeric string for each record that does not change when records are deleted. The Sequence Number is used by the TMM to link trailer Commodity Remark records (see Table 11) and Ammunition

Detail records (see Table 12) back to the parent record in the Commodity table. The Sequence Numbers start with “0000” for the first record.

- Nomenclature is text identification of the item. A DD Form 1348-1A truncated Nomenclature or the TCMD T_6 Nomenclature is often used for this entry.
 - “UNKNOWN” should be encoded if the Nomenclature cannot be determined.
 - For ammunition records, this field may have an asterisk (*) in the first position to indicate that it is a trailer record with Lot or Serial Number information (see paragraph X.E.).

Note: The Nomenclature field expanded from the legacy JDTC v2.0 (INCITS) format (an..10) to (an..30) to match RF-ITV System server input value; includes TCMD T_9 field size for Proper Shipping Name.

- Document Number may be sourced from the DD Form 1348-1A or other requisition/release documents that pertain to the line item.
- Line Item Number is a number used to identify property or materiel. It may be a number used to authorize and account for assigned property/equipment.
- National Stock Number (NSN) may be sourced from the DD Form 1348-1A or a TCMD T_6 record. The 15 alphanumeric characters include the 13-character NSN and 2 Material Management Codes, as applicable.
 - CAGE + Part Number may be used if the NSN does not exist.
 - “NNSN” (no NSN) may be encoded if the NSN is unknown – as encoded in a TCMD.
- Routing Identification Code (RIC) may be sourced from the DD Form 1348-1A. It should be the “shipper/from” RIC (rp 4-6).
- Unit of Issue (UI) may be sourced from the DD Form 1348-1A.
 - The UI information is not available from a TCMD and therefore must be extracted from user or system files.
 - The DOD UI Codes may be viewed in DOD 4100.39-M, Vol 10, Table 53. Codes commonly used are: EA = each; IN = inch; FT = foot, YD = yard, AY = assembly, BD = bundle, BE = bale, BX = box, BG = bag, GL = gallon, BL = barrel, CN = can, CY = cylinder, DR = drum, RO = roll.
- Quantity Shipped is determined by the shipper.
 - Information is not available from a TCMD and therefore must be extracted from user or system files.
 - For ammunition records, this field will be the total quantity shipped for each header record. For the Lot/Serial Quantity see Table 12.

Note: The Quantity Shipped field expanded from the legacy JDTC v2.0 (INCITS) format (an..5).

- Condition Code may be sourced from the DD Form 1348-1A or determined by the Consignor. The DOD codes may be viewed in DOD 4000.25-2-M. Codes commonly used are: A = serviceable; C = serviceable priority issue; F = unserviceable repairable.
- Shipment TCN is the first TCN marked on the packaging (the single shipment unit) for the documented item(s). The Shipment TCN could also be encoded in the Shipment ID record (see Table 5) if the Shipment TCN has not been consolidated with other TCNs in the shipment.

XI. TCMD – TABLE ID: 8105

- A. Table 9 is the TCMD format that contains the TCMD records for each shipment moved in the Defense Transportation System (DTS). TCMD data records are conditional (must be provided if available) for the DOD RFID tag. The TCMD record is an 80-character format in accordance with DTR 4500.9-R, Part II, Appendix M. Each memory position in the TCMD record must be encoded with alphanumeric data values, including spaces, when a record is created.
- B. The number of TCMD records encoded in an RFID tag is determined by the memory capacity of the tag. If tag memory is not sufficient to encode all of the TCMD records, the Table Manager Module will incrementally truncate the TCMD record set from the bottom of the set until zero TCMD records remain. If records are truncated, the Table Manager Module will also post a “Y” (yes) in the JD TAV TCMD Truncated Data Indicator (see Table 4).
- C. The RFID tag write transaction sent to the respective RF-ITV System server must include all the truncated TCMD records.
- D. The table has a single field with multiple records. The field width is fixed at 80 characters. Each 80-character TCMD record is written to one row. The maximum number of records of this table is calculated based on the available memory on the tag. The ISO/IEC 18000-7 table field is indexed at zero. The table records are indexed starting at zero for the first record.

Table 9. TCMD (JD TAV only)

Table ID: 8105 TCMD				
Data Title	Field Index	Size (bytes)	Sustainment	Unit
TCMD	0	an80	C	C

XII. USER DEFINED TITLE & VALUE – TABLE ID: 8106

- A. Table 10 provides a capability for users to define a data Title and a respective Value for that title, which adds data element expansion/flexibility to the JD TAV v2.5 (ISO) format. The entry of data into this table provides a capability to query a tag with a point-to-point command (by tag ID) to determine if the tag contains a record in Table ID 8106 with a specific relational value for the Title and Value field (e.g., FMS CASE = CKM).
- B. The records in this table should not be truncated until all Commodity records have been truncated.
- C. The table has two fields and multiple records. Each record has one data Title element and a related Value element for the defining data Title. The ISO/IEC 18000-7 table fields are indexed starting at zero for the first field. The table records are indexed at zero for the first record.

Table 10. User Defined Data Title & Value

Table ID: 8106 User Defined Data Title & Value					
Data Title	Field Index	Size (bytes)	Sustainment	Unit	Asset
User Defined Title	0	an..20	O	O	O
User Defined Value (associated to Name/Title)	1	an..20	O	O	O

Note: All fields are left justified - padded with trailing spaces.

- User Defined Title is a user assigned data Title that a user wants added to the tag format. The information in this field is comparable to the JD TAV v2.0 (INCITS) user defined MISC1 data element in the Single Data Item record from the Commodity database.
- User Defined Value is a user assigned data Value that is related to a data Title. The information in this field is comparable to the JD TAV v2.0 (INCITS) user defined MISC2 data element in the Single Data Item record from the Commodity database.

XIII. COMMODITY REMARKS – TABLE ID: 8107

- A. Table 11 is the Commodity Remarks record format which is structured to encode the Remark1 and Remark2 fields associated with a respective parent record from the Commodity table (see Table 8).
- B. The table has 3 fields with multiple records. The ISO/IEC 18000-7 table fields are indexed starting at zero for the first field. The table records are indexed starting at zero for the first record.

Table 11. Commodity Remarks

Table ID: 8107 Commodity Remarks				
Data Title	Field Index	Size (bytes)	Sustainment	Unit
Parent Sequence Number	0	an4	C	C
Remark1	1	an..20	C	O
Remark2	2	an..20	C	O

Note: All fields are left justified - padded with trailing spaces.

- Parent Sequence Number is a system generated (TMM) unique 4-byte hex-encoded alphanumeric string for Commodity Remarks table information that refers back to the same parent record Sequence Number in the Commodity table (see Table 8). Only one Commodity Remarks trailer record may be associated to the same Commodity table Sequence Number.
- Remark1 and Remark2 are user defined data fields. For most commodity items listed in the Commodity table, the associated Remarks fields are not required, but they may be used to encode Remarks as either separate or conjoined fields. When displayed for reporting, the Remark1 text is immediately followed by the Remark2 text with no inserted spacing between them. For example, an item’s complete Nomenclature could be encoded by filling the Remark1 field and continuing the text in the Remark2 field.

Note: The Remark1 and Remark2 fields can also be used as title/value pairs, similar to User Defined Title/Value pairs in Table 10.

XIV. AMMUNITION DETAIL – TABLE ID: 8108

- A. Table 12 is the Ammunition Detail trailer record format which is structured to encode ammunition specific information associated with a Commodity table (see Table 8) parent for an ammunition shipment.
- B. The table has 5 fields with multiple records. The ISO/IEC 18000-7 table fields are indexed starting at zero for the first field. The table records are indexed starting at zero for the first record.

Table 12. Ammunition Detail

Table ID: 8108 Ammunition Detail				
Data Title	Field Index	Size (bytes)	Sustainment	Unit
Parent Sequence Number	0	an4	C	C
DODIC	1	an4	C	O
Lot Number	2	an..17	C	O
Serial Number	3	an..15	C	O
Lot/Serial Quantity	4	n..7	C	O

Note: All fields are left justified - padded with trailing spaces.

- Parent Sequence Number is a system generated (TMM) unique 4-byte hex-encoded alphanumeric string for Ammunition Detail table information that refers back to the same parent record Sequence Number in the Commodity table (see Table 8). Multiple Ammunition Detail table trailer records may be associated to the same Commodity table Parent Sequence Number.
- DODIC is a DOD Identification code for ammunition/explosive items.
- Lot Number is an identifying number assigned by the enterprise to a designated group of items, usually referred to as either a lot or batch, all of which were manufactured under identical conditions.
- Serial Number is an identifying number that uniquely identifies an end item.
- Lot/Serial Quantity is either the quantity shipped of Lot numbered items or the quantity shipped of a Serial numbered item.
 - If Lot Number data is encoded without a Serial Number, the Lot/Serial Quantity data element in the record is for the Lot Number.
 - If a Serial Number is encoded, with or without a Lot Number, the Lot/Serial Quantity data element in the record shall show a quantity of “1” or “0000001”. Serial Numbers must always be unique and therefore only one can be listed in each record.

XV. TRUNCATION RULES FOR JDTAV v2.5 (ISO)

JDTAV records are truncated according to the rules as laid out in Paragraphs II, X, XI, and XII.

XVI. ERASING AND FORMATTING A TAG

- A. When preparing an ISO/IEC 18000-7 tag for reuse, retrieve the Routing Code on the tag as it must be written back to the tag during the write process.
- B. Tags that contain the DOD Routing Code (“KUS000”) may be erased. Tags with a Routing Code “null” value may be erased if the tag owner cannot be determined from external marks. All other tags should be processed in accordance with COCOM procedures.
- C. Next, the tag is cleaned up using the ISO/IEC 18000-7 Delete Writeable Data command.
- D. Lastly, write the DOD Routing Code back to the tag.

Appendix A
Data Element Index

Data Title	Table	Field Index
Asset ID	8103	0
Asset Manager Org Type	8103	1
Asset Manager Organization	8103	2
Asset Type	8103	3
Bumper Number	8102	0
Bumper Number	8103	4
Cargo Type (HAZMAT) Code	8102	1
Carrier Code	8102	2
Command	8103	5
Commodity and S/H Codes	8102	3
Commodity Class	8101	2
Condition Code	8104	8
Consignee	8102	4
Consignee Type	8102	5
Consignor	8102	6
Consignor Type	8102	7
Container Number	8102	8
Container Number	8103	6
Container Size	8103	7
Container Type	8102	9
Container Type	8103	8
Cube (Gross)	8102	10
Date of Manufacture (DOM)	8103	9
Date of Service (DOS)	8103	10
Detail Number	8103	11
Document Number	8104	2
DODIC	8108	1
Equipment Description	8102	11
Equipment Description	8103	12
Format Major Version	8000	4
Format Minor Version	8000	5
Format Owner	8000	1
Format Sub Type	8000	3
Format Type	8000	2
Free Text	8102	12
Hazard Class or Division	8101	3
Home Station	8101	4
IUID (Item Unique ID) or UII	8103	13
JDTAV Commodity Truncated Data Indicator	8101	0
JDTAV TCMD Truncated Data Indicator	8101	1
Lead TCN (see Shipment ID)	8102	
Lease End Date (LED)	8103	14

Data Title	Table	Field Index
Line Item Number (LIN)	8102	13
Line Item Number (LIN)	8104	3
Lot Number	8103	15
Lot Number	8108	2
Lot/Serial Quantity	8108	4
Management Code	8103	16
Manufacturer	8103	17
Metadata Version	8000	0
Model Number	8102	14
Model Number	8103	18
National Stock Number (NSN) or CAGE+Part Number (PN)	8103	19
National Stock Number	8104	4
NEW (net explosive weight)	8102	15
Nomenclature	8104	1
Operation	8101	5
Org/Shop/Detail Code	8103	20
Ownership Type	8103	21
Pallet Type	8103	22
Parent Sequence Number	8107	0
Parent Sequence Number	8108	0
PO / Contract Number	8103	23
POD	8102	16
POE	8102	17
Quantity Shipped	8104	7
Remark1	8107	1
Remark2	8107	2
Routing Code	8000	6
Routing Identifier Code	8104	5
Sequence Number	8104	0
Serial Number	8103	24
Serial Number	8108	3
Serial Number / Package ID	8102	18
Service	8101	6
Ship Date (Julian)	8101	7
Shipment ID	8102	19
Shipment ID Type	8102	20
Shipment Piece Count	8101	8
Shipment TCN	8104	9
Shipment Unit Number (SUN)	8101	9
SRAN (Stock Record Account Number)	8103	25
Tag Firmware Version	8000	8
Tag Model Number	8000	7
TCMD	8105	0
Transportation Priority	8101	10
Unit Identification Code (UIC)	8102	21

Data Title	Table	Field Index
Unit Line Number (ULN)	8102	22
Unit Name	8102	23
Unit of Issue	8104	6
User Defined Title	8106	0
User Defined Value	8106	1
Vehicle Registration	8103	26
VIN (Vehicle ID Number)	8103	27
Weight	8103	28
Weight (Gross)	8102	24

Appendix B

Glossary of Terms

Shipment Unit:

Defined in the DTR Part II, Chapter 203. A Shipment Unit may be described as a Single Shipment Unit or a Consolidated Shipment Unit. It will always be marked with a unique Shipment ID. For DTS shipments, the Shipment ID is a TCN.

Single Shipment Unit:

Contains no other Shipment Units. It will always be marked with a unique Shipment ID.

Consolidated Shipment Unit:

Contains other Single Shipment Units and may contain other Consolidated Shipment Units. It will always be marked with a unique Shipment ID.

Conveyance Shipment:

Describes a Single Shipment Unit that is not unitized within a consolidation; or, it is the highest level parent Consolidated Shipment Unit in a hierarchy of unitized Shipment Units. It will have a Shipment ID that is a shipment unit tracking number (TCN or SSCC).

Manifested Load:

Describes the documented aggregation of Conveyance Shipments manifested to the same destination or to stop-offs en route to a destination. It will have a Shipment ID that is a manifest number.

Shipment TCN:

Describes the Shipment ID for a Single Shipment Unit.

Intermediate TCN:

Describes the Shipment ID for a Shipment Unit that is consolidated within another Shipment Unit.

Conveyance (Lead) TCN:

Describes the Shipment ID for a Shipment Unit that is a Conveyance Shipment (i.e., the TCN marked on the outermost shipping container that would be listed on a carrier's conveyance manifest). The Conveyance TCN could also be a Shipment TCN if the shipment unit contained no other shipment units. A Conveyance TCN structure may also be used by some Services to document a truck manifest ID number.

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