



DEFENSE LOGISTICS AGENCY
HEADQUARTERS
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IN REPLY
REFER TO

J627

March 18, 2011

MEMORANDUM FOR SUPPLY PROCESS REVIEW COMMITTEE (PRC) MEMBERS

SUBJECT: Approved Defense Logistics Management System (DLMS) Change (ADC)
399, Automated Data Capture for Serialized Item Shipments and
Preparation of the Issue Release/Receipt Document (IRRD) (DD Form
1348-1A or DD Form 1348-2) Continuation Page (MILSTRIP/ SUPPLY)
(Staffed as PDC 377)

The attached change to DOD 4000.25-1-M, Military Standard Requisitioning and Issue Procedures (MILSTRIP) and DOD 4000.25-M, Defense Logistics Management System (DLMS) is approved for phased implementation. The DLA Distribution timeline for ADC 399 change is estimated for FY 12 to be included in Distribution Standard System 12.2 release. Components are requested to share implementation schedules with the DLA Logistics Management Standards Office.

Addressees may direct questions to Ms. Ellen Hilert, e-mail: Ellen.Hilert@dla.mil. Others must contact their Component designated Supply PRC representative.

A handwritten signature in black ink, appearing to read "Donald C. Pipp", written over a circular stamp or seal.

DONALD C. PIPP
Director
DLA Logistics Management
Standards Office

Attachment

cc:
ODASD(SCI)
JSA/LWCG

ADC 399

Automated Data Capture for Serialized Item Shipments and Preparation of the IRRD (DD Form 1348-1A or DD Form 1348-2) Continuation Page

1. ORIGINATOR:

- a. Service/Agency: HQMC, DLA J-627, and USTRANSCOM
- b. Originator(s):
 - (1) HQMC/LPC
 - (2) HQMC/LPD
 - (3) USTRANSCOM (TCJ54-T)

2. FUNCTIONAL AREA:

- a. Supply
- b. Transportation

3. REFERENCES:

- a. DLA Logistics Management System Office (formally DLMSO) memorandum dated December 5, 2001, subject: Approved DLMS Change (ADC) 44, Two-Dimensional Symbol on the Issue Release/Receipt Document (IRRD) (DD Form 1348-1A) (Supply/MILSTRIP)
- b. DLA Logistics Management System Office memorandum dated January 3, 2003, subject: ADC 89, Inclusion of Supplemental information for Unique Item Tracking/Serialized Item Management (UIT/SIM) in the Two-Dimensional Symbol on the Issue Release/Receipt Document (IRRD) (DD Form 1348-1A) (Supply/MILSTRIP)
- c. DLA Logistics Management System Office memorandum dated June 6, 2006, subject: Approved Addendum 44B to ADC 44, Inclusion of Supplemental information for Unique Item Tracking/Serialized Item Management (UIT/SIM) in the Two-Dimensional Symbol on the Issue Release/Receipt Document (IRRD) (DD Form 1348-1A) (Supply/MILSTRIP)
- d. DLA Logistics Management System Office memorandum dated April 10, 2006, subject: ADC 195, DLMS Unique Item Tracking (UIT) Procedures
- e. Department of Defense Standard Practice, Military Marking for Shipment and Storage, MIL-STD-129P with Change 4, September 19, 2007.
- f. American National Standard (ANS) Data Identifier and Application Identifier Standard, American Standards Committee, MH10.8.2 CM 20110115, as of January 15, 2011. This document represents the most recent version of ANS MH10.8.2,

which is under the American National Standards Institute (ANSI) category “Under Continuous Maintenance.” This document represents the approved ANSI MH10.8.2 2010 plus those identifiers and descriptions approved by the DI Maintenance Committee since the approval of the standard.

4. REQUESTED CHANGE:

a. Description of Change:

(1) This change provides clarification and enhanced procedures supporting automated data capture in association with the preparation of the DD Form 1348-1A or DD Form 1348-2.

(2) This change establishes a mandatory continuation page for the DD Form 1348-1A or DD Form 1348-2 when used for serialized item shipments as required by DOD or intra-Component policy or for Unique Item Tracking (UIT). The continuation page contains machine readable bar code symbols for the encoded content information to include the serial numbers and unique item identifiers (UII).

(3) This change also removes optional use of the Automated Packing List (APL) in association with MILSTRIP. There are no known systems that use the MILSTRIP APL.

(4) Changes are identified in *bold italics*. Previously approved updates, revisions, and enhancements do not conflict with or affect this change.

b. Background:

(1) The original ADC 44 provided specifications for the two-dimensional symbol (Portable Data File 417 (PDF417) on the IRRD, including the current linear bar code data elements plus additional elements. The capability provided a means for receiving activities to capture a much greater level of scanning proficiency than the current Code 39 (three-of-nine) linear bar code with its error correction. Receiving activities that modify their scanning and automated information systems can scan one symbol versus three.

(2) Guidance applicable to supplemental data fields to the PDF417 2D symbol for the purpose of unique item tracking was initiated in ADC 89 and was later updated by Addendum 44B. The additional optional data fields allowed for identification of the manufacturer; the (current) part number (may be included in addition to the NSN); specific individual item by serial number; and the single value of the unique item identifier (UII) using a range of American National Standards Institute (ANSI) MH10.8.2 data identifiers (DI). However, this change allowed for only one item per IRRD.

(3) This change will provide functional process improvements that significantly enhance end-to-end logistics chain visibility; assist the automated receipt processing, and overall inventory management throughout processes at all levels. This change directs organizations processing serialized shipments, to use a bar code symbol enabled continuation page to the DD Form 1348-1A or DD Form 1348-2.

(4) While the addition of the UII information in the IRRD 2D bar code assisted the UIT/SIM for the Navy with Navy-managed depot-level reparable (DLR) items returned and inducted for repair (Addendum 44B), it only addressed individual item shipments. This change addresses the requirement to provide a means to assist with the automated data capture of multiple serialized items and establish an interim capability to support all tracking requirements of serial number tracking (SNT) efforts and assist in developing business processes to support UIT programs, as well as Component directed policy and the evolving DoD policy for item unique identification (IUID).

5. PROCEDURES

a. Modify MILSTRIP Chapter 5, Release and Receipt of Materiel, as shown in Enclosure 1.

b. Modify MILSTRIP Chapter 6, Security Assistance Program, as follows:

(1) Remove all references to the Automated Packing List (APL) from the text and figures.

(2) Add paragraph C6.17.3 to state:

“C6.17.3. IRRD (DD Form 1348-1A or DD Form 1348-2) Continuation Page. All references in this chapter to DD Form 1348-1A and DD Form 1348-2 and its distribution will by direct association also apply to its continuation page as described in Chapter 5. The continuation page contains encoded information for the automated processing of multiple serialized items in a shipment.”

c. Modify MILSTRIP Appendix AP1.1, Forms/Message Formats, to delete text associated with paragraph AP1.1.7, and insert new paragraph AP1.1.9:

~~“AP1.1.7. Automated Packing List. This is an optional single part listing of line item(s) shipped. The APL is free form; for example, it is not designed as a DD form. The data elements and suggested format are shown in AP1.30. *Reserved.*”~~

“AP1.1.9. IRRD (DD Form 1348-1A or DD Form 1348-2) Continuation Page. This is a mandatory document for serialized shipments containing machine readable bar code symbols for the encoded content information to include the serial numbers and unique item identifiers (UII) as required by DoD or intra-Component policy or for Unique Item Tracking (UIT). The continuation page is intended to expedite supply and distribution processes by providing a means to automate the capture of data using automatic identification technology (AIT) devices. The continuation page is free form. The data elements and preferred format are shown in AP1.36.”

d. Modify MILSTRIP Appendix AP1.35, Issue Release/Receipt Document (IRRD) (DD Form 1348-1A) with Three-of-Nine Coding and Two-Dimensional (PDF417) Symbol, as shown in Enclosure 3.

e. Insert MILSTRIP Appendix AP1.36, Continuation Page, as shown in Enclosure 2. Sample PDF version attached in Enclosure 2.

f. Delete the MILSTRIP Appendix AP1.30, Automated Packing List (APL), from DoD 4000.25-1-M.

g. Modify MILSTRIP Appendix AP3.48, Materiel Release Document DD Form 1348-1a or DD Form 1348-2, Block 27 to state:

“This block may contain additional data including bar coding for internal use. This block may contain a 2D symbol which *contains information for serially tracked items and* repeats bar coded data content. Data entered in this block is as required by shipping activity by commodity. When data is entered in this block, it will be clearly identified. *See Appendix 1.35 for Code 39 linear bar code and PDF417 2D symbol format information. See Appendix 1.36 for the Block 27 continuation page requirements.*”

h. Modify MILSTRIP Appendix AP3.49, Transfers to DLA Distribution Services (formerly Defense Reutilization and Marketing Office) on DD Form 1348-1a or DD Form 1348-2, Block 27 to state:

“This block may contain additional data including bar coding for internal use. This block may contain a 2D symbol which *contains information for serially tracked items and* repeats bar coded data content. Enter data in this block as required by the shipping activity or the DRMO receiving the material. When data is entered in the block, it will be clearly identified. *See Appendix 1.35 for Code 39 linear bar code and PDF417 2D symbol format information. See Appendix 1.36 for the Block 27 continuation page requirements.*”

i. Staffing Notes:

(1) There will be no PDF417 symbol on a DD Form 1348-1A or DD Form 1348-2 if multiple items that require a UII are shipped and those items are serially tracked.

(2) There may be a single PDF417 symbol or multiple Macro PDF417 symbols on the continuation page.

(3) If a Macro PDF417 symbol is shown on the continuation page, the data common to all items of the shipment should be in the first PDF417 symbol followed by data elements of stand-alone serial numbers (that have no associated UIIs) and/or followed by data elements identifying UIIs and their associated serial numbers. When space is exhausted in a symbol's data capacity, move on to next Macro PDF417 symbol to encode additional data elements. There is no “rule” requiring when a new symbol is begun. Space within a symbol's format is the determining factor; there is no need to repeat shipment-related data in the next Macro PDF417 symbol. **Staffing Note:** The MH10.8.2 standard data qualifier DI 42S used in the PDF417 symbol or the Macro

PDF417 symbol for associating each UII to its respective serial number is currently being staffed for approval by the MH10.8.2 standard community.

(4) If a single item is shipped, there is no continuation page and the PDF417 symbol on the IRRD has all the applicable information per AP 1.35 (the serial number need not appear in a linear bar code on a continuation page).

(5) The current PDF417 symbol specifications under AP 1.35 provide for the NSN as the primary materiel identification with the CAGE/part number (PN) as additional information, or the CAGE/PN takes the place of the NSN if there is no NSN (see DI N). If multiple items are coming from stock, it is possible that different manufactures were involved to make up the NSN quantity, in which case the CAGE/PN should be left off. For serially tracked items, the IUID registry may be used to retrieve CAGE/PN based upon the UII.

6. REASON FOR CHANGE:

a. In Addendum 44B, the Navy requested the accelerated adoption of the serial number in the DD Form 1348-1A 2D bar code symbol to support current unique item tracking (UIT) by serial number. This capability was approved for a staggered and phased implementation and is encouraged for DOD wide implementation.

b. This change is being submitted recognizing that many DoD activities are continuing to migrate from the current legacy systems to a logistics common operating environment (COE) or enterprise solution and are unable to take advantage of the robust information provided by DLMS transactions. Addendum 44B addressed single item shipments where the system/application could accept and utilize UIT information. This change is intended to provide an interim capability to assist with the processing and tracking of multiple serialized items using a simple and cost effective process. Virtually any data collection process that currently runs on clipboard and paper can be managed with bar code symbols and portable data terminals, creating a leap in productivity and accuracy.

c. The MILSTRIP Automated Packing List (APL) is not used by DOD systems and, therefore, its optional use is being removed from DOD 4000.25-1-M. MIL-STD 129P provides detailed requirements for packing list preparation, and removal of this requirement from MILSTRIP avoids proliferation of conflicting guidance.

d. Terminology and organization names are updated in MILSTRIP where revisions under this ADC are also applicable. This includes renaming of the DLA Disposition Services (formerly the Defense Reutilization and Marketing Service).

7. ADVANTAGES AND DISADVANTAGES:

a. **Advantages:** AIT enabled systems provide an array of benefits, including operational efficiency, better customer service, and improved visibility of key business information to management. Additionally, adopting a business process that is enabled by

AIT devices establishes a means to support SNT and assist in the migration to support UIT programs. Furthermore, there are many other benefits created by the enablement of AIT, which include, but are not limited to the following:

(1) Speed: A bar code symbol can be scanned in approximately the time it takes a keyboard operator to make two keystrokes. The speed difference is evident, when compared to manual entry using a keyboard, and in some cases log books.

(2) Accuracy: For every 1,000 characters typed by a keyboard operator, there are an average of ten keying errors. For an optical character reader (OCR), there is one error in every 10,000 reads; with linear bar code systems one error (misread) in every 4,500,000 characters, and with two dimensional symbols, approaching one error (misread) in 7 million entries.

(3) Implementation Ease: Most supply and distribution activities currently utilize AIT devices to capture data. Today the linear bar codes, PDF417 symbols, and Macro PDF417 symbols can easily be read by thousands of commonly available devices, and can be printed universally.

(4) Cost: AIT enabled systems have a demonstrated payback period of six to eighteen months, and provide the highest level of reliability in a wide variety of data collection applications. AIT enabled systems create value not only by saving time, but also by preventing costly errors.

b. Disadvantages:

(1) Several AISs currently being populated with serial numbers may require modification to work using portable data terminals configured to read Macro PDF417 symbols.

(2) This prescribed process may rely on the originating keyboard operator processing the correct data to produce the continuation page; thus, an increased potential for “Bad data in - bad data out”.

8. IMPACT:

a. Publications:

(1) DOD 4000.25-1-M, Military Standard Requisitioning and Issue Procedures (MILSTRIP) as shown in the enclosures. Comparable changes will be made to the DoD 4000.25, DLMS manual.

(2) DOD 4500.9-R, Defense Transportation Regulation (DTR)

(3) MIL-STD-129, Military Marking for Shipment and Storage

(4) DOD 4160.21-M, Defense Materiel Disposition Manual will require comparable changes.

(5) Review for impact on overarching policy under DoD 4140.1-R, DoD Supply Chain Materiel Management Regulation.

b. DLMS Data. There are no new DLMS data elements associated with this change.

c. Implementation Schedule. Phased implementation is authorized. Components are required to report implementation schedules to DLA Logistics Management Standards Office. The DLA Distribution timeline for ADC 399 change is estimated for FY 12 to be included in Distribution Standard System 12.2 release.

C5. CHAPTER 5

RELEASE AND RECEIPT OF MATERIEL

C5.1. GENERAL

C5.1.1. The Issue Release/Receipt Document, DD Form 1348-1A (or DD Form 1348-2 with attached shipping label) **and continuation page** are prepared by the supply/shipping activity. These documents are used for selecting, packing, shipping, and receiving materiel. They are also used as a receipt transaction and/or the data source for preparation of other documents **and/or to provide a means to automate the capture of data using automatic identification technology (AIT) devices.** The DD Form 1348-1A (or DD Form 1348-2) is **mandatory for** all shipments to DoD customers, including FMS and contractors, from DoD and GSA shipping activities. **Additionally, the continuation page is a mandatory document to assist the processing of serialized items (see API.36).**

C5.1.2. The DD Form 1348-1A (or DD Form 1348-2) may be manually or mechanically prepared and will contain data elements prescribed herein for the various types of transactions.

C5.1.3. Use of carbonless paper for a preprinted DD Form 1348-1A (or DD Form 1348-2) is authorized at the option of the Service/Agency.

C5.1.4. For the DD Form 1348-1A, see appendices AP1.25 through AP1.29, **API.31, and API.35.** There are two methods for generating the form:

C5.1.4.1. Preprinted form. Data entries will be made by automated printer, typewriter, or hand scribed **(text deleted).**

C5.1.4.2. Non-preprinted form. When this method is used, the form and data are printed simultaneously and will contain the prescribed data elements.

C5.1.5. The preprinted DD Form 1348-1A is 8-1/2 inches long (side to side) and 5-1/2 inches high (top to bottom). When printed on plain stock paper using laser, thermal transfer, ion disposition, cold fusion, or other nonimpact printers, the size may vary within a range of 7-3/4 to 9 inches long and 4 to 5 inches high (with one-sixth inch tolerance). When such print technology is used, the in-the-clear/human-readable data must be easily read **and the AIT entries must be machine readable.** Margins of one-fourth inch and outside lines are preferred, but may be eliminated to the extent that the DD form number is not sacrificed. When printed three per 8-1/2- by 14-inch sheet of sheet of paper, the originator of the form, shall ensure the form, spacing, size, and data entered thereon are legible and capable of being interpreted by a LOGMARS scanning device.

C5.1.5.1. Block numbers are provided for data entry. Data to be entered in the data blocks are shown in AP3.48 and AP3.49. Block 27 will contain clear-text information facilitating item unique identification (IUID) in support of unique item tracking (UIT) and serialized item management in conjunction with the expanded content of the **Portable Data File 417 (PDF417)** two-dimensional (2D) symbol as illustrated in **API.35**. **For a single item shipment**, include the clear-text, concatenated/single value unique item identifier (UII) and the serial number. Phased implementation is authorized pending DoD implementation of IUID policy. As an interim approach, identification of the item on the IRRD by serial number alone is authorized. Additional optional information may include the item manufacturer's CAGE, current part number, and batch/lot number. **Block 27** will contain all additional data and in-the-clear text that may be required and is not shown elsewhere on the form. The in-the-clear text may be used with the **AIT encoded** bar-coded information for those activities possessing bar coding capability

C5.1.5.2. The paper may be any color that provides a minimum bar code symbol contrast signal as specified in ISO/IEC 16388:1999 **15415**, Information Technology - Automatic Identification and Data Capture Techniques - Bar Code Symbology **Print Quality Test Specification - Code 39 Two-dimensional Symbols and in ISO/IEC 15416, Information Technology - Automated Identification and Data Capture Techniques - Bar Code Symbology Specification - Linear Symbols.**

C5.1.6. The **Code 39** (three-of-nine) **linear** bar code, **PDF417 symbol**, and **Macro PDF417 symbol** as defined in ISO/IEC 16388 **Information technology - Automated identification and data capture techniques - Bar code symbology specifications - Code 39 and ISO/IEC 15438 Information technology - Automated identification and data capture techniques - PDF417 bar code symbology specification:1999**, are established as the standard symbologies for the automated marking and reading of items of supply, equipment, materiel packs, and containers in logistics operations throughout the DoD. This symbology will be applied using MIL-STD-129P, or latest revision, unless otherwise authorized. When **Code 39 linear** bar **code symbols are printed** is contained on the DD Form 1348-1A **(or DD Form 1348-2)**, all record positions of data elements that will be **bar encoded** will contain a bar code character even if the position was blank on the source document.

~~C5.1.7. Automated Packing list. When the APL is not produced, a copy of the DD Form 1348-1A will be used for this purpose and will be placed inside the packing list envelope securely attached to the outside of the shipping container; on multiple container shipments, the DD Form 1348-1A will be placed inside a packing list envelope securely attached to the outside of the No. 1 shipping container. The APL will contain, at a minimum, the prescribed data elements outlined in API.31.~~

~~—~~ **C5.1.7. IRRD (DD 1348-1A or DD Form 1348-2) Continuation Page. For shipment quantities of two or more serialized items, the responsible activity shall prepare a continuation page to facilitate automatic data capture.**

C5.1.7.1. In lieu of printing the PDF417 symbol in Block 27 of the DD Form 1348-1A (or DD Form 1348-2), the continuation page will contain a single PDF417 symbol or multiple Macro PDF417 symbols (as required by data volume) for the included data.

C5.1.7.2. The continuation page shall contain, at a minimum, the prescribed data elements outlined in API.36. For systems capable of printing 2D symbols, see API.35 for a listing of encoded MH10.8.2 standard data identifiers for the data elements.

C5.1.7.3. The continuation page shall also contain linear bar coding with the respective human-readable interpretation (i.e. clear text) for the included serial numbers to satisfy legacy system requirements.

C5.2. DOCUMENT DISTRIBUTION

C5.2.1. Actual copies utilized, other than the original and first carbon copy, will be at the option of the individual S/A. See Figures C5.F1 and C5.F2 for the distribution of the transactions.

C5.3. ISSUES FROM SUPPLY SYSTEM STOCK **OR FROM DLA DISPOSITION SERVICES**; DEFENSE REUTILIZATION AND MARKETING OFFICE; REQUISITIONS FOR LOCAL ISSUE FROM **DLA DISPOSITION SERVICES** DEFENSE REUTILIZATION AND MARKETING OFFICES

C5.3.1. The DD Form 1348-1A (or DD Form 1348-2) ~~may~~ **shall** be prepared as a release document by the shipping activity (issues from supply system stock) or by the shipping **DLA Disposition Services Field Office** ~~DRMO (DLA Disposition Services DRMS~~-directed issues from the **local DLA Disposition Services Field Office**) ~~DRMO~~). The requisitioner may also use this format when hand carrying requisitions for local issue from the **DLA Disposition Services** ~~DRMO~~. Minimum data entries are outlined in AP3.48 for the DD Form 1348-1A (or DD Form 1348-2).

C5.3.2. In order **to** accommodate the various distribution systems and equipment, the DD Form 1348-1A (or DD Form 1348-2) provides **s** blocks for data entry. The use of these blocks, with the exception of Blocks 9, and 15, is optional, but when used, will contain information shown in AP3.48.

C5.3.3. The continuation page shall accompany the DD Form 1348-1A (or DD Form 1348-2) and shall be attached to the material and shipment IAW MIL-STD-129 shipping document requirements for all shipments of two or more items which are serially tracked in accordance with DoD policy or by Component agreement. See. Minimum data entries are outlined in API.36.

C5.4. RETURNS TO STOCK AND TRANSFERS (EXCLUDING TRANSFERS TO DLA DISPOSITION SERVICES DEFENSE REUTILIZATION AND MARKETING OFFICES)

C5.4.1. In addition to the release of materiel for shipment based upon a requisition, other occasions necessitate release of materiel for shipment based upon other situations, such as the following:

C5.4.1.1. Materiel returns from base to depot.

C5.4.1.2. Base-to-base movements.

C5.4.1.3. Retrograde or lateral system movements.

C5.4.2. The same documentation and distribution thereof prepared in the same number of copies as prescribed in Figures C5.F1 or C5.F2 will be used to accomplish **returns** and transfers. Entries will be as shown in Figure C5.F3 for all DLA and inter-S/A transactions.

C5.4.3. For intra-S/A use, the data prescribed in Figures C5.F3 must be entered. Other entries may be prescribed by the S/As concerned; however, any such entries must relate to the columnar and/or block headings indicated in the form.

C5.5. TRANSFERS TO DLA DISPOSITON SERVICES DEFENSE REUTILIZATION AND MARKETING OFFICES

C5.5.1. Use the DD Form 1348-1A (or DD Form 1348-2) as the **disposal turn-in document (DTID)** for all transfers to **DLA Disposition Services**. DRMOs. See AP3.49 for entries that are required for single line item turn-ins. See AP1.35 for 2D symbol content. **A continuation page shall accompany the DD Form 1348-1A (or DD Form 1348-2) for all shipments of two or more items which are serially tracked in accordance with DoD policy or by Component agreement.** See AP1.35 for **PDF417 symbol content** and **AP1.36 for the continuation page content.**

<i>TRANSACTION</i>	<i>NO. OF COPIES</i>	<i>DISTRIBUTION</i>
DD Form 1348-1A (or DD Form 1348-2)	Three	One copy shall be produced and retained by the shipper unless an automated capability is available to prove a shipment has been made. Two copies shall accompany all shipments. When the DD Form 1348-1A (or DD Form 1348-2) contains bar coding, one of the two copies to accompany the shipment will be the original copy. A minimum of one copy will be on the outside of the

shipping container if not in conflict with other applicable directives. **Copies shall be attached IAW MIL-STD-129.**

APL	One	If an APL is produced, it will be attached to the outside of the shipping container.
Continuation Page	Three	<p>One copy shall be retained by the shipper unless an automated capability is available to track the serialized contents of the shipment.</p> <p>Two original copies shall accompany the DD Form 1348-1A (or DD Form 1348-2) for all shipments containing serialized items and be attached to the material and shipment IAW MIL-STD-129.</p>

Figure C5.F1. Distribution of DD Form 1348-1A (or DD Form 1348-2), Issue Release/Receipt Document, and **Continuation Page** Automated Packing List to all **Consignees other than DLA Disposition Services** Defense Reutilization and Marketing Offices and Security Assistance¹

<i>TRANSACTION</i>	<i>NO. OF COPIES</i>	<i>DISTRIBUTION</i>
DD Form 1348-1A (or DD Form 1348-2)	Four	<p>Four copies shall accompany all shipments of materiel to the DLA Disposition Services Field Office DRMO. When the DD Form 1348-1A (or DD Form 1348-2) contains bar coding, the original copy will accompany the shipment. These copies shall be used as follows:</p> <ol style="list-style-type: none"> (1) Source document file copy. (2) Return to originator with signature of receiver. (3) Remains attached to property at DLA Disposition Services Field Office DRMO. (4) Used by personnel screening property for

¹For Security Assistance shipments, see Figure **C6.F1**.

potential reutilization, transfer, or donation.

Continuation Page

Three

Since the document contains bar coding, three original copies shall be produced for all serialized shipments of materiel to the DLA Disposition Services Field Office ~~DRMO~~. These copies will be used as follows:

(1) Source document file copy, unless an automated capability is available to track the serialized contents of the shipment.

(2) Remains attached to property at DLA Disposition Services Field Office ~~DRMO~~.

(3) Used by personnel screening property for potential reutilization, transfer, or donation.

Figure C5.F2. Distribution of DD Form 1348-1A (or DD Form 1348-2), Issue Release/Receipt Document and **Continuation Page** for Shipments to **DLA Disposition Services**~~Defense Reutilization and Marketing Offices~~

RECORD POSITION(S)	ENTRY AND INSTRUCTIONS
1-3	Perpetuate from source document or blank.
4-7	Leave blank.
8-22	Enter the stock or part number.
23-24	Enter the U/I.
25-29	Enter the quantity.
30-43	Enter the document number of the consignor (shipper.)
44-73	Leave blank.
74-80	Enter the unit price ² .

²Unit prices obtained via electronic interfaces which are not constrained by the MILSTRIP field size will reflect the unit price as 9 digits for dollars and 2 digits for cents. If total price exceeds

- Blocks 3 and 27 Enter DoDAAC of the activity to which the materiel is directed. The in-the-clear name, number, and address may be in Block 27.
- Block 27 Enter the supply condition code reflecting the condition of the materiel. (See DoD 4000.25-2-M (MILSTRAP).)
- Block 27 Enter activity account number of the activity to be credited (if applicable) and the appropriate fund code (if applicable). See DoD 4000.25-7-M (MILSBILLS). **For single quantity item, enter** applicable IUID content in conjunction with application of a 2D symbol as listed in AP1.1 and as illustrated in AP1.35.³

Figure C5.F3. Instructions for completion of DD Form 1348-1A (or DD Form 1348-2), used for Returns to Stock Transfers (excluding Transfers to **DLA Disposition Services**)~~Defense Reutilization and Marketing Offices~~

available space for display on the printed form, the generating application may leave blank. Refer to ADC 221

³ See footnote 1.

AP1.35. APPENDIX 1.35

ISSUE RELEASE/RECEIPT DOCUMENT (IRRD) (DD FORM 1348-1A) WITH CODE 39 (THREE-OF-NINE) BAR CODING AND PDF417 TWO-DIMENSIONAL SYMBOL¹

L 1	Z 2	S 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	0 0	1 1	2 2	3 3	4 4	5 5	6 6	7 7
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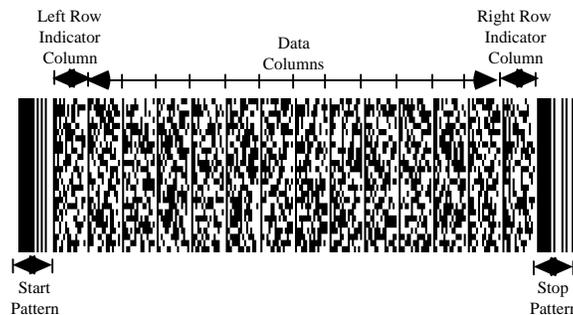
2. For shipment quantities of two or more serialized items, in lieu of printing the PDF417 symbol in Block 27 of the DD Form 1348-1A, the continuation page will contain a single PDF417 symbol or multiple Macro PDF417 symbols (as required by data volume) for the included data (see AP1.36).

3. Unit prices obtained via electronic interfaces that are not constrained by the MILSTRIP field size will reflect the unit price as 9 digits for dollars and 2 digits for cents. If total price exceeds available space for display on the printed form, the generating application may leave blank. Refer to ADC 221.

AP1.35.1. Programmer's Technical Summary for 2D (PDF417 and Macro PDF417) Symbology.

AP1.35.1.1. Refer to ISO/IEC 15438 for detailed technical specifications for printing PDF417 and Macro PDF417 symbols. Refer to the ISO/IEC 15434 standard for the message syntax specifications within the 2D symbols. Refer to the MH10.8.2 or ISO/IEC 15418 standards for the data qualifier semantics for message data within the symbols. For DoD assistance concerning the application of these standards contact the DOD AIT Office through the USTRANSCOM web site at <http://www.ustranscom.mil/ait/>.

AP1.35.1.2. The PDF417 symbol used for shipping and receiving should be printed with no more than 12 data columns in width. The use of 13 to 18 data columns is allowed for inventory or supporting documentation applications (identification marking, ammunition/explosive marking, packing list, etc.) if smaller symbols cannot accommodate the increased data requirements. 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.



AP1.35.1.3. The symbol shall not exceed 2.4 inches (61 mm) in height to include the surrounding minimum quiet zone.

AP1.35.1.4. The symbol shall have a minimum quiet zone of 0.04 inches (1 mm) above, below, to the left, and to the right.

AP1.35.1.5. The minimum narrow element dimension (X-dimension) shall not be less than 0.01 inches (10 mils/.254 mm). For symbols up to 12 data columns, the X-

dimension shall not exceed 0.017 inches (17 mils/.432 mm). For 13 to 18 data columns, the X-dimension will not exceed 0.01 inches.

API.35.1.6. The symbol shall have a minimum row height of three times the width of the narrow element (X-dimension).

API.35.1.7. The symbol shall use error correction level 5.

API.35.1.8. The label should be designed so that two bar codes and/or symbols are not next to each other in the same horizontal plane unless the label is wide enough to reduce the possibility of interference with successful bar code and/or symbol scanning.

API.35.1.9. Data identifiers, that contain no information, should not be encoded in the symbol.

API.35.1.10. The quality of the printed symbol shall meet a grade requirement of 2.5 (B) at the point of production when measured in accordance with ISO/IEC 15438 with a measurement aperture of 0.25 mm and an inspection wavelength of 660 ± 10 nm.

API.35.2. The following table provides examples and explanations of the data stream for a PDF417 2D symbol.

API.35.2.1. Compliance Indicator (Column 1): Shows the special formatting characters associated with the ISO/IEC 15434 data format. The Compliance Indicator shall be the first three characters in the Message Header. The Compliance Indicator shall be [] > (left bracket, right parenthesis, and greater than).

API.35.2.2. Separator/Trailer Characters (Column 2), which are non-printing ASCII control characters, show 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.

API.35.2.3. Format Header (Column 3) is a two-digit numeric identifier "06" or "07" that identifies the rules governing the message format for the data elements that follow.

API.35.2.4. Data Qualifiers (DIs or DEIs in Column 4), that define data content within the message. Data Identifiers (DI), for Format Header 06, pertain to American National Standards Institute (ANSI) authorized data elements. Refer to ANSI MH10.8.2, American National Standard for Material Handling, for additional information. Data Element Identifiers (DEI), for Format Header 07 pertain to DoD authorized data elements.

API.35.2.5. Data Field (Column 5) contains an abbreviated description of the data field.

API.35.2.6. Data Format Type/Length (Column 6) 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. Variable length fields are not zero-filled unless the information is extracted from an external data source that requires leading zeros. If a DI or DEI is used to encode data for multiple applications, several data formats may be described.

API.35.2.7. Sample Data (Column 7) contains sample data for the field indicated.

API.35.2.8. Total Characters (Column 8) reflects length of the data element separator + header/data element identifier + data field.

Compliance Indicator	Separator / Trailer Characters	Format Header	ANSI MH10.8.2 Format 06 Data Identifier (DI)/ Category/Description or Format 07 Data Element Identifier (DEI)	Data Field (DoD Usage)	Data Format (Type/Length)	Sample Data (Compliance, Header, Identifier and Data Field)	Total Characters
D>				Message Header Compliance indicator		D>	4
	R S	06		Data Identifier Format (ANSI Standard)		06	3
	G S		12S Category 19, Traceability Number for an Entity: Document Number (internally assigned or mutually defined)	Document Number Includes Suffix Code when applicable	an14..15	12SW90GF88296 20258	19
	G S		N Category 14, Industry Assigned Codes: National/NATO Stock Number (NSN)	National Stock Number (NSN) or Stock Identification Elements May reflect NSN, CAGE Code/part number, FSC, etc., as applicable. May also include associated coding, e.g., Type of Pack, USN Special Material Identification Code (SMIC) or USAF Materiel Management Aggregation Code (MMAC) This data content is analogous to the MILSTRIP stock number field. For unique item tracking/serialized item management, use this identifier for the NSN and use separate identifiers listed below to uniquely identify a specific individual item.	an..15	N5340013145957	17
	G S		7Q Category 17, Measurement: Quantity, Amount, or Number of Pieces in the format: Quantity followed by the two character ANSI X12.3 Data Element Number 355 Unit of Measurement Code	Quantity and Unit of Issue Do not include leading zeros Staffing Note: Original footnote deleted; restricted quantity to 1.	an..5+an2	7Q1EA	10
	G S		V Category 22, Party to the Transaction:	Routing Identifier Code – Shipping Activity Identifies the RIC of the source of supply	an3	V\$9I	5

Compliance Indicator	Separator / Trailer Characters	Format Header	ANSI MH10.8.2 Format 06 Data Identifier (DI)/ Category/Description or Format 07 Data Element Identifier (DEI)	Data Field (DoD Usage)	Data Format (Type/Length)	Sample Data (Compliance, Header, Identifier and Data Field)	Total Characters
			Supplier Code assigned by Customer	(MILSTRIP transaction rp 4-6).			
	G S		7V Category 22, Party to the Transaction: Code assigned to a party which has financial liability for an entity or group of entities (e.g., owner of inventory) (mutually defined)	Routing Identifier Code – ICP/IMM Identifies the RIC of the activity originating the MRO/LRO/DRO (MILSTRIP transaction rp 67-69).	an3	7VN32	6
	G S		8V Category 22, Party to the Transaction: Customer Code assigned by Customer	Distribution Cognizance Code Last two positions of DoD Distribution Code used for DD Form 1348-1A linear bar code data.	an2	8V7V	5
	G S		2R Category 18, Miscellaneous: Return code assigned by the Customer	Condition Code	an1	2RA	4
	G S		12Q Category 17, Measurement: Monetary Value established by the Supplier in the format of: the value followed by an ISO 4217 data element code for representing unit of value of currencies and funds (e.g., 12Q2.50USD) (2.50 Monetary Value in USA Dollars) significance mutually defined	Unit Price Configured as 9 digits whole dollars, decimal, and 2 digits cents followed by “USD” indicating U.S. dollars. Do not include leading blanks.	n..9.n2+an3	12Q 050.20 USD	19
	G S		5P Category 16, Item Information: Freight Classification Item Number assigned by Carrier for purposes of rating hazardous materials (e.g., Motor Freight, Air, Boat, Rail Classification)	National Motor Freight Classification Commodity Number	n6	5P999912	9
	G S		25S Category 19, Traceability Number for an Entity: Identification of a party to a transaction as identified in DI 18V, followed by the supplier assigned serial number	Unique Item Identifier (UII). The unique identification assigned by the supplier or DoD to an entity for its lifetime	an..50 Decreased to 50 to match UII registry	25SD12345123TS 001100223	54
	G S		S Category 19, Traceability Number for an Entity: Serial number or code assigned by the Supplier to an entity for its lifetime, (e.g., computer serial number, traceability number, contract tool identification)	Serial Number The unique item identifier (UII) assigned by the supplier (or DoD) to an entity for its lifetime.	an..30	S123TS00110022 3	32

Compliance Indicator	Separator / Trailer Characters	Format Header	ANSI MH10.8.2 Format 06 Data Identifier (DI)/ Category/Description or Format 07 Data Element Identifier (DEI)	Data Field (DoD Usage)	Data Format (Type/Length)	Sample Data (Compliance, Header, Identifier and Data Field)	Total Characters
	G S		42S Category 19, Traceability Number for an Entity: Groups of Entities: Unique item identifier (UII) and Serial Number association. Unique item identifier followed by a plus (+) character followed by the associated serial number	Unique Item Identifier (UII) and Serial Number Associates Links the item UII with its respective Serial Number. The format for DI 42S is nnUII where the complete UII number is preceded by two digits "nn" that represent the number of characters (01-30) for the Serial Number embedded at the end of the UII	n2+an..50	42S08UN077991 289674B36ABUN 077997889123TS 001100223+123T S001100223	56
	G S		1T Category 20, Traceability Number for Groups of Entities: Traceability Number assigned by the Supplier to identify/trace a unique group of entities (e.g., lot , batch , heat)	Traceability Number Assigned by the supplier (or DoD) to identify/trace a unique group of entities (e.g. lot, batch, etc.). May be used separately or in conjunction with UII.	an..25	ITMGU12345	28
	G S		17V Category 22, Party to the Transaction: U.S. DoD CAGE Code	Manufacturer ID Commercial and Government Entity Code (CAGE) The manufacturer's CAGE for the identified item. [Optional alternative manufacturer identification may be used by Component agreement only. If Dun & Bradstreet Data Universal Numbering System (DUNS) number, use identifier 12V. If GS1 Company Prefix code, use identifier 3V.]	an5 [n9] [an7..10]	17V1AAA9 [12V123456789] [3V0614141]	14
	G S		1P Category 16, Item Information: Item Identification Code assigned by Customer	Part Number The part number currently used to identify this item.	an..16	1P9988771212SP	19
	R S	07		Format Indicator (ANSI Free Text)	n2	07	3
	G S		03	Project Code	an3	03ZCN	6
	G S		B6	DoD Distribution Code Three-position field must reflect blanks as applicable. Blanks may be located in any position.	an3	B6_7V	6
	G S		27	Consignee DoDAAC Reflects ship-to DoDAAC (Block 3)	an6	27WK4FV9	9
	G S		38	Nomenclature	an..20	38LOOP, STRAP	23

Compliance Indicator	Separator / Trailer Characters	Format Header	ANSI MH10.8.2 Format 06 Data Identifier (DI)/ Category/Description or Format 07 Data Element Identifier (DEI)	Data Field (DoD Usage)	Data Format (Type/Length)	Sample Data (Compliance, Header, Identifier and Data Field)	Total Characters
	G S		32	Required Delivery Date (RDD) May reflect RDD in DDD format or special codes, e.g., expedited shipment and handling (Code 999), Not Mission Capable Supply (NMCS) (Code N__), etc.	an..3	32999	6
	G S		B7	Requisition Priority Designator (PD)	n2	B703	5
	G S		B8	Partial Shipment Indicator	a1	B8P	4
	G S		81	Supplementary Address Derived from rp 45-50 of the requisition	an6	81WK4FV91	9
	R S EOT						2

API.35.3. The following table shows the encode values that can be used for the non-printing ASCII control characters used as Element Separators.

Table of Hexadecimal and Decimal Values

ASCII / ISO 646	HEX	DEC
RS	1E	30
GS	1D	29
EOT	04	04

API.35.4. Two-Dimensional (PDF-417) **Symbol** Label Format

All data identifiers are alphanumeric characters.

- a = Alphabetic Data
- an = Alphanumeric Data. May include special characters.
- n = Numeric Data
- .. = Variable Length (up to maximum shown)

- G_s = Nonprintable hexadecimal code separates data elements within each format series of the data table
- R_s = Nonprintable hexadecimal code indicating next entry is a new compliance character indicating a new data identifier format follows or the end of a data format envelope
- EOT = Nonprintable hexadecimal code indicating end of transmission
- _ = Denotes a blank in sample data above

Sample data stream:

D> R_s06G_s12 SW90GF8829620258 $G_sN5340013145957G_s7Q1EA$ G_sVS9I $G_s7VN32G_s2RA$
 $G_s12Q050.20USD$ $G_s5P999912G_s25SD12345123TS001100223G_sS123TS001100223G_s1TMGU12345$
 $G_s17VIAAAA9G_s1P9988771212SP$ R_s07G_s03ZCN G_sB67V $G_s27WK4FV9$
 $G_s38LOOP, STRAP$ $G_s32999G_sB702G_sB8P$ $G_s81WK4FV9R_sEOT$

Sample PDF417 symbol:(contents do not match above data stream — for illustrative purpose only):



(Estimated Size)

API.35.5. DI 42S -- Data Identifier (DI) for Serially Managed Items with a UII and Serial Number. DI 42S is used to associate a Unique Item Identifier (UII) with its respective Serial Number, which allows each data element to be used as part of a paired data set for systems storing one or both elements. The UII to Serial Number association will only be required when multiple UIIs are associated with multiple Serial Numbers in the same 2D symbol. The format for DI 42S is nnUII where the complete UII number is preceded by two digits "nn" that represent the number of characters (01-30) for the Serial Number embedded at the end of the UII. The below example shows the syntax data string for associating Serial Numbers 674B36AB and 674B36AC to their respective UIIs:

... $G_s42S08UN077991289674B36AB$ $G_s42S08UN077991289674B36AC$ $G_s...$

API.35.6. Macro PDF417 Symbols. See Appendix API.36 for an example of Macro PDF417 symbols where multiple UIIs are associated with their respective serial numbers in a single encoded message.

API.35.6.1. Macro PDF417 symbols will be used when the encoded data message file exceeds the capacity of a single PDF417 symbol. A full size 18 data column symbol (PDF417 or Macro PDF417) can encode approximately 1100 characters at Error Level 5. The character capacity of the symbol is based on a symbol limit of 925 codewords, the compaction algorithm used to encode data in a codeword, and the symbol's error correction level.

API.35.6.2. Macro PDF417 symbols will be encoded and printed in accordance with ISO/IEC 15438.

API.35.6.3. Each Macro PDF417 symbol represents a segment of the whole file. To reconstruct the whole file, the segments need to be placed in the correct order. Each Macro PDF417 symbol is encoded with a Control Block of codewords that facilitates this reassembly process after all the symbols have been scanned at least once in any sequence order.

API.35.6.4. Each receiving system used to scan Macro PDF417 symbols will need to determine if the system scanner will operate in a buffered or unbuffered mode. As the Macro PDF417 symbols are scanned, the de-packetizing function reconstructs the original message. If operating in buffered mode, the symbol codeword de-packetizing function is in the scanner's decoder; if operating in unbuffered mode, it is in the receiving system decoder.

API.35.6.5. Decoders should provide a specific means whereby the processing of a given Macro PDF417 symbol Control Block file ID may be aborted, thus allowing the decoder to begin processing a different set of Macro PDF417 symbols. This is necessary to prevent a deadlock condition should one or more symbols of a given file ID be missing or undecodable.

API.35.6.6. To accommodate potentially unbuffered operations by some receiving systems, the Segment Count field in the Control Block shall be encoded in each symbol to facilitate checking that all segments in a set of Macro PDF417 symbols are received. The Segment Count field identifies the total number of Macro PDF417 symbols in the distributed file.

API.35.6.7. The following is provided to describe the Macro PDF417 symbol Control Block used for API.36 Continuation Page symbols. The codewords are encoded by software suites using different schemes; thus, the example only shows the numeric value of each codeword and not the actual syntax of how it is encoded.

- Continuation page example first symbol Control Block codewords within the symbol's segment data structure are:**

(928) (111)(100) (129) (923)(001) (111)(002)

- Continuation page example second symbol Control Block codewords are:**

(928) (111)(101) (129) (923)(001) (111)(002) (922)

- The codewords represent the following controls:**

(928) = the tag identifier for the start of a macro control block

(111)(100) = the modular math base 900 value for the 1st segment (00000)

(111)(101) = the modular base 900 value for the 2nd segment (00001)

(129) = the file ID assigned by the user for the set of macro symbols

(923)(001) = the tag and field designator for the Segment Count field

(111)(002) = the modular base 900 value for the Segment Count (00002)

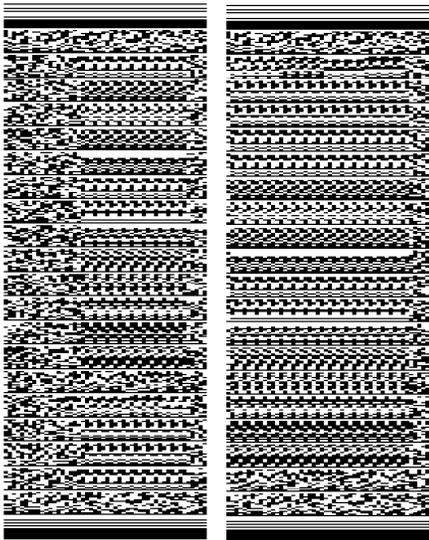
(922) = the tag identifier for the end of the macro Control Block

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ISSUE RELEASE/RECEIPT DOCUMENT (IRRD)

(DD FORM 1348-1A or DD Form 1348-2)

CONTINUATION PAGE

27. Additional Data	CONTINUATION PAGE	PAGE: 1 OF 4
DOCUMENT NO. & SUFFIX: W90GF8829620258		QUANTITY & U/I: 00081EA
<p style="font-size: small;">ID DATA INCLUDES UIIs (IF APPLICABLE) Scan/rescan the Macro PDF417 symbols in any order to decode message</p> 	<p style="text-align: center;">SERIAL NUMBERS</p> <p style="font-size: x-small; text-align: center;">30-CHARACTER SERIAL NO EXAMPLE</p>  <p style="font-size: x-small;">A1B2C3112345678</p>  <p style="font-size: x-small;">A1B2C3234567890</p>  <p style="font-size: x-small;">A1B2C33</p>  <p style="font-size: x-small;">A1B2C34</p>  <p style="font-size: x-small;">A1B2C35</p>  <p style="font-size: x-small;">A1B2C36</p>  <p style="font-size: x-small;">A1B2C37</p>  <p style="font-size: x-small;">A1B2C38</p>  <p style="font-size: x-small;">A1B2C39</p>  <p style="font-size: x-small;">A1B2C310</p>	

Note: Above sample is for illustration only and is not actual size. The sample shows only the first page of a multi-page set; the follow-on pages would show the listed serial number linear bar code information for the remaining items in the shipment.

AP1.36.1. IRRD (DD 1348-1A or DD Form 1348-2) Continuation Page. When the continuation page is used as an extension of the IRRD Block 27, it will contain the following minimum data:

AP1.36.1.1. Continuation Page (Title).

AP1.36.1.2. Document Number and suffix (from requisition/shipment).

AP1.36.1.3. Quantity Shipped and Unit of Issue (processed for shipment).

AP1.36.1.4. Page number and total number of continuation pages.

AP1.36.1.5. PDF417 symbol or Macro PDF417 symbols. See AP1.35 for included data elements, their respective data identifiers, and print quality requirements. The data common to all items of the shipment should be in the first PDF417 symbol followed by data elements of stand-alone serial numbers (that have no associated UIIs) and/or followed by data elements identifying UIIs and their associated serial numbers.

When space is exhausted in a symbol's data capacity, move on to next Macro PDF417 symbol to encode additional data elements. There is no "rule" requiring when a new symbol is begun. Space within a symbol's format is the determining factor; there is no need to repeat shipment-related data in the next Macro PDF417 symbol. If different manufactures where involved to make up the NSN quantity shipped, the secondary information identifying the CAGE/part number should not be included.

AP1.36.1.5.1. If only one PDF417 symbol is required to encode the information, it will be a standard PDF417 symbol and not a Macro PDF417 symbol.

AP1.36.1.5.2. If two or more symbols are required, they must be Macro PDF417 symbols. The symbols shall be on the first page(s) of the continuation page to be followed by the listed serial numbers encoded with Code 39 linear bar codes.

AP1.36.1.6. Serial number(s) listed as human readable text and encoded in Code 39 linear bar codes meeting MIL-STD-129 requirements, which references ISO/IEC 16388 and MH10.8.1. Exceptions and conditions cited for DOD Form 1348-1A and its continuation page applications are:

AP1.36.1.6.1. The minimum bar height should be at least 0.50 inches (12.7 mm), but shall not be less than 0.25 inches (6.3 mm.).

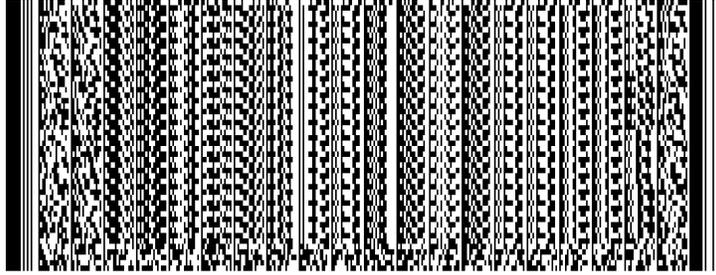
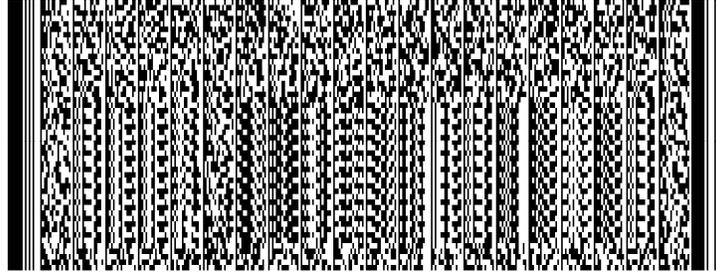
AP1.36.1.6.2. The space provided on the continuation page must be able to encode up to 30 characters for the serial number and the bar code should not exceed 4 inches in length.

AP1.36.1.6.3. The narrow element X-dimension should be at least 0.010 inches (0.25 mm) but shall not be less than 0.007 inches (0.18 mm) for these high density bar codes. The wide to narrow ratio should be 3 to 1 but shall not be less than 2 to 1.

AP1.36.1.6.4. The quality of the printed bar code shall meet a grade requirement of 1.5(C) at the point of production when measured in accordance with ISO/IEC 15416 with a measurement aperture of 0.25 mm and an inspection wavelength of 660 ± 10 nm.

AP1.36.1.6.5. The ASCII characters encoded shall consist of the standard uppercase characters, numbers, and symbols identified ISO/IEC 16388, Table 1. The full ASCII 128 character set will not be used.

AP1.36.2. The following two Macro PDF417 symbols from the continuation sample page are printed full size for system developer review. The two Macro PDF417 symbols contain all of the linear bar coded information from the parent DD Form 1348-1A or DD Form 1348-2, additional item identification detail, and the included UIIs and/or serial numbers.



Macro PDF417 Samples (actual size) from Continuation Page

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PDC Staffing Comment Resolution

#	Submitter	Comment	Response
1.	DLA (J6) DLA AIT Team	<p>1. On enclosure 2 Page 6 Line 1 The Data Identifier 42S in the last column, shouldn't the identifier start with 42SUN077997889123TS001100223+... ?</p> <p>2. If I understand a UII is a mechanism to create a unique serial number across all vendors. So by definition a 42S in the PDF417 is the unique serial number and redundant to what follows behind the "+" sign, unless the intention is to provide or display to the operator/user what the engraved serial, stamped serial number by vendor is. A quick way for a programmer to display the serial number.</p> <p>3. On Enclosure 2, Page 8: AP1.35.5 The sentence: "The Serial Number link to a UII will only be required when multiple Serial Numbers are in the same 2D symbol with multiple UII's".... If that is assuming an item is a parent unit with a UII (Example an aircraft engine), and has sub UII (parts of that engine that have UII), does that relate to the sub assemblies? If so, that isn't clear. If not, isn't that in error; multiple serial numbers in 1 UII should not be possible unless they are sub-assemblies.</p> <p>4. The page 9 lost me.</p> <p>5. Enclosure 3, page 2. AP1.36.1.65. " The ASCII characters encoded shall consist of the standard uppercase characters, numbers, and symbols identified ISO/IEC 16388, Table 1." Since there is only 0-9 and A-Z plus I believe "-" and "/" (again I can't find my MIL130) allowed in a UII regardless of symbology, "The full ASCII 128 character set will not be allowed" is a bit misleading. Also as an IRRD is produced by DOD and a UII should be properly calculated well before it is printed on an IRRD, isn't this item a bit superfluous.</p> <p>6. I have the J6IU programmers checking to see if our current print plant can produce a UII in a laser printer (IRRD printers). It can't do data matrix, but not a MACRO PDF-417 which I (and our scanner vendors) never heard of until this document.</p>	<p>1. Yes, it should start with 42S. Updated in ADC for current format.</p> <p>2. The UII is not a serial number by definition, but nothing precludes the UII from being a serial number or vice versa. An item's legacy serial number may change when a UII is assigned by an activity that did not assign the original serial number. To accommodate MILSTRIP systems and other serialized-item tracking systems both the UII and serial number used to create the UII will be included in the IRRD. DI 42S will allow a serial number to be linked to its respective UII.</p> <p>3. There is no intention to use the DD 1348-1A continuation sheet with AIT to link the end item UII with the UIIs associated with component/embedded parts. The linkage is only to provide an association between the separate data elements of UII and serial number for each item identified by the NSN shipped. For example, if the shipment was for three engines and each engine was identified by a UII and a serial number there would be 3 pairs of data. DLRs are usually shipped separately; but we could see the multiple UIIs with corresponding serial number for other types of items, (small arms, for example). Component parts are not identified on this type of document.</p> <p>4. The content of page 9 is part of Appendix 1.35 which is intended to be a technical description for programmers. The section title has been modified. The PDF417 control block information on Enclosure 2, Page 9 will be needed by programmers just like the information in AP1.35.2 is required by programmers to encode the PDF417 symbol so that all</p>

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			<p>systems may read and interpret the data in the same way.</p> <p>5. It is not superfluous. Code 39 bar codes may be encoded using several font sets. The full ASCII font set is optionally allowed (but not recommended for use) by ISO/IEC 16388 but the font set encodes the dash (-) sign as a “/M”, which some scanners may read as “/M” instead of a “-“. Thus, the Code 39 specifications for each application must state which font set is specified for use to preclude use of the full ASCII font set. DOD experienced military shipping label scan failures because the font set was not specified in the original documentation.</p> <p>6. If a print plant can produce a PDF417 as required by the current DOD 4000.25-1-M, it will be able to print a macro PDF417. The only difference is the additional data encoded in the symbol. The additional data is as explained in AP1.35.6.7.</p>
2.	USA	<p>1. The Army (National Community) concurs with PDC 377.</p> <p>2. Army detail comments are:</p> <ul style="list-style-type: none"> a. SCE-BTL - Concur. b. LOGSA - No impact to LOGSA. c. JMC - Coordination has occurred in JMC. Concur with comment. <p>Phased implementation must be pursued as there will be required changes to ammunition community business processes and policies, AIS system changes, changes with supply chain interface partners, and the programming and budgeting of required funding. This will take considerable time and dollars. We understand the JOCG briefed these coming mandates this week in Washington.</p>	Noted.
3.	USN	<p>The Navy concurs with PDC 377 as written and submits no additional changes or amendments.</p> <p>Depending upon the implementation date of PDC 377,</p>	Noted.

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		legacy systems such as the Navy Enterprise Maintenance Automated Information System will continue to only read and create 3-of-9 bar codes. Enhancement upgrades for Navy legacy systems to read 2-D barcodes are permanently suspended since software changes in Navy legacy systems that are scheduled for replacement through Navy Enterprise Resource Project are prohibited.	
4.	USAF	Air Force concurs with PDC 377 without comments.	None required.
5.	USMC	Concurs	None required.
6.	USTRANSCOM	Abstains	None required.
7.	Staffing via OSD-led IUID Workshop (Ernest Howard, Dept of Navy, DASN A&LM)	<p>I don't read anything in the PDC 377 (see below) that doesn't seem logical and required from the perspective of the policy mandate and the DoD evolution to IUID implementation.</p> <p>The Advantages and Disadvantages section leaves a ton to be desired - I think that the Disadvantages section should have much more quantitative information (similar to the Advantages section) and should attempt to quantify the potential "RISKS" or "IMPACT" of the two disadvantages that are listed - i.e.; are these really "disadvantages"?</p>	Further quantitative analysis is not available at this time, however, since the transition to IUID is mandated, each Component may assess the impact to serial number-based system processing in their IUID implementation plan.