



DEFENSE LOGISTICS AGENCY
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IN REPLY
REFER TO

October 11, 2012

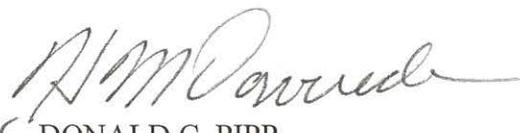
MEMORANDUM FOR SUPPLY PROCESS REVIEW COMMITTEE (PRC) MEMBERS

SUBJECT: Proposed Addendum to Approved Defense Logistics Management System (DLMS) Change 399 (Staffed as PDC 399A), 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 (Supply/MILSTRIP)

The attached proposed change to Defense Logistics Manual (DLM) 4000.25, Defense Logistics Management System (DLMS) and DLM 4000.25-1, Military Standard Requisitioning and Issue Procedures (MILSTRIP), is forwarded for evaluation and submission of a single coordinated position. The interface requirement relating to this proposed change is shown to assist in your internal coordination. However, omission of such a requirement does not relieve you of the responsibility to ensure full coordination of the proposal within your Component.

Request you review the attached proposed change and provide your comments/concurrence to DLA Logistics Management Standards Office no later than 30 days from the date of this memorandum. If non-concurrence is provided, please provide an alternate method to meet the requirement being addressed.

Addressees may direct questions to Ms. Ellen Hilert, DOD MILSTRIP Administrator, 703-767-0676 or DSN 427-0676, e-mail: ellen.hilert@dla.mil, or Ms. Heidi Daverede, DOD MILSTRIP Alternate, 703-767-5111; DSN 427-5111, e-mail: heidi.daverede@dla.mil. Others may direct questions to their Service or Agency designated Supply PRC representative.

for 
DONALD C. PIPP
Director
DLA Logistics Management
Standards Office

Attachment
As stated

cc:
ODASD(SCI)
IUID Working Group
Joint Small Arms/Light Weapons Coordinating Group

Attachment to PDC 399A
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

1. ORIGINATOR:

a. Service/Agency: ODASD(SCI), USTRANSCOM, and DLA Logistics Management Standards Office

b. POC INFORMATION: Ms. Ellen Hilert, DOD MILSTRIP Administrator, 703-767-0676; DSN 427-0676; e-mail: Ellen.Hilert@dla.mil

2. FUNCTIONAL AREA:

a. Supply

b. Transportation

3. REFERENCES:

a. Approved DLMS Change (ADC) 44, Two-Dimensional Symbol on the Issue Release/Receipt Document (IRRD) (DD Form 1348-1A), dated December 5, 2001

b. 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) dated January 3, 2003

c. 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)

d. ADC 195, DLMS Unique Item Tracking (UIT) Procedures dated April 10, 2006

e. 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, dated March 18, 2010

f. Department of Defense Standard Practice, Military Marking for Shipment and Storage, MIL-STD-129P with Change 4, September 19, 2007

g. American National Standard (ANS) Data Identifier and Application Identifier Standard, American Standards Committee, MH10.8.2 CM 20120623, as of June 20, 2012. 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. Overview:

(1) The original ADC 399 provided clarification and enhanced procedures supporting automated data capture in association with the preparation of the DD Form 1348-1A or DD Form 1348-2. This proposed addendum updates the guidance applicable to the DD Form 1348-1A or DD Form 1348-2 and the IRRD Continuation Page data encoding procedures.

(2) This addendum specifically requires that unique item identifiers (UIIs) and serial numbers used for tracking under a UIT program or in support of DOD supply policy for serialized item management be encoded and linked together, when they are machine readable and readily available, or when retrievable from the system generating the form. In order to establish the relationship between a specific UII with its associated serial number, this addendum uses ISO/IEC 15434 Format 06 envelopes to “bracket” line UII and serial for a specific item within the (Portable Data File 417 (PDF417) two dimensional (2D) bar code(s). It removes the ADC 399 requirement to link a UII to the serial number used to derive the UII using data identifier (DI) 42S.

(3) This addendum clarifies Code 39 linear bar code data format requirements in DLM 4000.25-1 Appendices AP 1.1 and AP 1.35.

(4) This addendum updates terminology including references to the PDF417 2D bar code (vice 2D symbol).

b. Background:

(1) The original ADC 44 provided specifications for the 2D bar code 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 PDF417 2D bar code or a set of linked PDF417 2D bar codes versus three Code 39 linear bar codes.

(2) Guidance applicable to supplemental data fields to the PDF417 2D bar code 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 DIs. However, this change allowed for only one item per IRRD.

(3) ADC 399 provided functional process improvements that significantly enhanced end-to-end logistics chain visibility and assisted automated receipt processing and overall inventory management throughout processes at all levels. ADC 399 directed organizations processing serialized shipments, to use a PDF417 2D bar code enabled continuation page to the DD Form 1348-1A or DD Form 1348-2. This addendum updates that guidance and provides a technical capability to link associated information together in a non-hierarchical relationship.

(4) While the addition of the UII information in the IRRD PDF417 2D bar code assisted the UIT for the Navy with Navy-managed depot-level reparable (DLR) items returned and inducted for repair (Addendum 44B), it only addressed individual item shipments. ADC 399 and this addendum address the requirement to provide automated data capture of multiple uniquely identified items to support tracking requirements using serial numbers and/or UII in support UIT programs and DOD supply policy for serialized item management.

(5) For NSNs with an IUID Indicator Y, UII and/or serial number is a desired entry but is not mandatory at this time. The long-term end state goal is to eliminate reliance on serial number and only pass the UII when the IUID Indicator is Y. The overriding vision is that, pending full transition to the DOD IUID supply policy using the UII, processing of outgoing shipments does not stop due to lack of a viable UII and/or serial number when the NSN is identified by IUID Indicator Y but is not associated with a UIT program.

c. Revisions to DLM 4000.25-1, MILSTRIP:

(1) Modify the Table of Contents to change the title of AP1.35 to be consistent with Enclosure 2.

(2) Modify References to delete MIL-STD-1189B, which was cancelled June 18, 1997.

(3) Modify Chapter 5, Release and Receipt of Materiel, as shown in Enclosure 1. Comparable changes are required for DLM 4000.25, DLMS.

(4) Modify Appendix 1 Index to change the title of AP1.35 to be consistent with Enclosure 2

(5) Modify Appendix 1.1 Forms/Message Formats (Introduction) as follows:

“AP1.1.6.6.1. Non-Preprinted Issue Release/Receipt Document. A single line item, single part form produced on plain stock paper (see example, AP1.25). The size may vary within a range of 7-3/4 to 9 inches long (side to side) and 4 to 5 inches high (top to bottom) (see Chapter C5). Data to be entered in the data blocks are shown in Appendices AP3.48 and AP3.49. Blocks 24, 25, and 26 **must** contain bar coded data except for DLA Disposition Services Field Office documents. DLA Disposition Services Field Office documents **will** not contain bar coding in Block 26. Block 27 **must** contain a two-dimensional (2D) ~~symbol~~ **bar code** (Portable Data File (PDF) 417) encompassing the linear bar code data elements plus additional elements to improve automatic identification technology (AIT) efficiencies and to facilitate ~~unique~~ item **unique** identification (IUID) when applicable.”

AP1.1.6.6.2. Footnote 15: “ Capability to support IUID data content within the **PDF417** 2D ~~symbol~~ **bar code** has been approved for staggered and phased implementation under

ADC 44B *and ADC 399/PDC 399A*. Components have not reported implementation at this time.”

AP1.1.6.6.2 Block 26:

<u>“BLOCK ELEMENT NAME</u>	<u>BLOCK SIZE/ NO. OF CHARACTERS</u>	<u>BLOCK NUMBER</u>
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For other than Security Assistance:

RIC (4-6) UI (23-24) QTY (25-29) COND Code (71) <i>DIST</i> (55-56) UP (74-80) ¹⁴	80 <i>Variable</i>	26
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If Security Assistance:

*RIC (4-6) UI (23-24) QTY (25-29) COND (71) UP (74-80)¹⁵
SUPADD (45, 48-50)*

¹⁴ Unit 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. Refer to ADC 221

¹⁵ *Ibid*”

“AP1.1.8. IRRD (DD Form 1348-1A or DD Form 1348-2) Continuation Page. This is a mandatory document for serialized *item* shipments containing machine-readable ~~symbol~~ *bar codes* for the encoded content information to include the serial numbers and/or unique item identifiers (UII) as required ~~by~~ *for tracking under a UIT program or in support of DoD supply policy for serialized item management* ~~DoD or intra-Component policy or for 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.”

(6) Modify Appendix 1.6, DD Form 1348-6, DOD Single Line Item Requisition System Document (Manual-Long Form), to change the instructions for Block 9e.

Serial Number	9e	Enter the manufacturer's serial number of the end item, if known. <i>If UII is available, enter in Block 11.</i>
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(7) Modify Appendix 1.35, Issue Release/Receipt Document (IRRD) (DD Form 1348-1A) with Three-of-Nine Coding and Two-Dimensional (PDF417) Bar Code, as shown in

Enclosure 2.

(8) Modify Appendix 1.36, Continuation Page, as shown in Enclosure 3. Sample PDF version attached in Enclosure 3.

(9) Modify Appendix 3.48, Materiel Release Document DD Form 1348-1A or DD Form 1348-2, Blocks 27 and the footnote to state:

FOR OTHER THAN FMS SHIPMENTS

“This block may contain additional data including bar coding for internal use. This block may contain a **PDF417 2D ~~symbol~~ bar code** 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~~ **bar code** format information. See Appendix 1.36 for the Block 27 continuation page requirements.”

FOR FMS SHIPMENTS

“This block may contain additional data including bar coding for internal use. This block may contain a **PDF417 2D ~~symbol~~ bar code** 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~~ **bar code** format information. See Appendix 1.36 for the Block 27 continuation page requirements.”

Footnote 19:

“Capability to support IUID data content within the **PDF417 2D ~~symbol~~ bar code** has been approved for staggered and phased implementation under ADC 44B. Components have not reported implementation at this time.”

(10) Modify Appendix 3.49, Transfers to DLA Distribution Services on DD Form 1348-1A or DD Form 1348-2, Block 27 and the footnote to state:

“This block may contain additional data including bar coding for internal use. This block may contain a **PDF417 2D ~~symbol~~ bar code** 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 DLA Distribution Services site 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~~ **bar code** format information. See Appendix 1.36 for the Block 27 continuation page requirements.”

Footnote 6:

“Capability to support IUID data content within the **PDF417 2D symbol bar code** has been approved for staggered and phased implementation under ADC 44B **and ADC 399/PDC 399A**. Components have not reported implementation at this time.”

5. REASON FOR CHANGE: ADC 399 established the basic requirement for the use of a PDF417 bar code when multiple items require tracking under a UIT program or DOD supply policy. However, the encoded data could not adequately support current requirements. ADC 399 allowed for the association of the serial number used for construction of the UII with the UII itself, but could not retain the UII/serial number relationship if the desired serial number used in DOD business processes was not that used in construction of the UII. This addendum removes the guidance for encoding of the serial number used in the UII and establishes a new “enveloping” technique that allows for the UII and an associated serial number to retain their relationship when both are provided. It specifically indicates that the encoded serial number be the value used for tracking under a UIT program or DOD supply policy. Additionally, this change clarifies procedures for the encoding procedures for the linear bar codes used on the IRRD.

6. ADVANTAGES AND DISADVANTAGES:

a. Advantages: All the advantages listed in ADC 399 are still valid. Additionally, the new “enveloping” technique for encoding of data in the PDF417 bar code supports current requirements to identify a serial number other than that used for the creation of the UII and provides the flexibility to associate other information with the specific item if that is needed in the future.

b. Disadvantages: AISs currently being populated with serial numbers for tracking under a UIT program or in support of DOD supply policy for serialized item management may require modification to work using portable data terminals configured to read Macro PDF417 2D bar codes.

7. ASSUMPTIONS USED OR WILL BE USED IN THE CHANGE OR NEW DEVELOPMENT:

a. There will be no PDF417 2D bar code 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 (i.e., the PDF417 2D bar code will be on the continuation sheet).

b. There may be a single PDF417 2D bar code or multiple Macro PDF417 2D bar codes on the continuation page.

c. If a Macro PDF417 2D bar code is shown on the continuation page, the data common to all items of the shipment should be in the first PDF417 2D bar code. **If both serial number and UII are available for multiple items, item-unique information for each serialized item must be encoded in a separate ISO/IEC 15434 Format 06 envelope for each item in order to**

retain the association between the serial number and the UII. If multiple serial numbers (DI S) or multiple UIIs (DI 25S) are identified within a Format 06 envelope, the system will assume there is no associated relationship between the serialization numbers. When space is exhausted in a PDF417 2D bar code's data capacity, the application program must begin using Macro PDF417 2D bar codes to encode the data content in multiple bar codes. There is no requirement to repeat shipment-related data in the next or following Macro PDF417 2D bar code. The Macro PDF417 2D bar codes are linked with code words to derive a single transaction message per AP1.36.

d. If a single item is shipped, there is no need for a continuation page and the PDF417 2D bar code 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).

e. The current PDF417 2D bar code 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 manufacturers were involved to make up the NSN quantity, in which case the CAGE/PN may be left off, or encoded as unique information for a serialized item. The IUID registry may be used to retrieve CAGE/PN information based upon the UII.

8. ADDITIONAL FUNCTIONAL REQUIREMENTS: It is possible to expand the available information contained in the Format 06 envelope in association with the UII and serial number, so that more information about a particular item can be communicated. During review of this PDC, Services/Agencies should consider this opportunity to formally add the batch/lot number to the information within the envelope as a mechanism to tie together specific items with their associated batch/lot number when this would be appropriate operationally. This would supplement the already available capability to identify the batch/lot number(s) applicable to the shipment independent of the specific item identification. The shipment status (DLMS 856S) transaction has a comparable DLMS enhancement capability.

Staffing Note: Services/Agencies should evaluate their requirement for identification of the batch/lot number and provide feedback on this approach with the Service/Agency staffing response.

9. ESTIMATED TIME LINE/IMPLEMENTATION TARGET: Phased implementation is authorized. Components are required to report implementation schedules to DLA Logistics Management Standards Office.

10. ESTIMATED SAVINGS/COST AVOIDANCE ASSOCIATED WITH IMPLEMENTATION OF THIS CHANGE: Not available.

11. IMPACT:

a. DLMS Data: There are no new or revised DLMS data elements associated with this change.

b. Non-DLA Logistics Management Standards Publications:

- (1) DTR 4500.9-R, Defense Transportation Regulation (DTR)
- (2) MIL-STD-129, Military Marking for Shipment and Storage
- (3) DOD 4160.21-M, Defense Materiel Disposition Manual may require comparable changes.
- (4) DOD 4140.1-R, DOD Supply Chain Materiel Management Regulation

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 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 foreign military sales (FMS) and contractors, from DoD and General Services Administration (GSA) shipping activities. Additionally, the continuation page is a mandatory document to assist the processing of serialized items (see Appendix 1.36).

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. Mechanically prepared DD Form 1348-1A (or DD Form 1348-2) must contain all required bar codes as outlined in C5.1.5, ~~and~~ C5.1.6, **and C5.1.9**.

C5.1.5. For transfers to DLA Disposition Services Field Offices, at least one copy of DD Form 1348-1A (or DD Form 1348-2) must accompany the property and be in a legible, easy-to-read format.

C5.1.6. For the DD Form 1348-1A, see Appendices AP1.25 through AP1.29, AP1.31, and AP1.35. There are two methods for generating the form:

C5.1.6.1. Preprinted form. Data entries will be made by automated printer, typewriter, or hand scribed.

C5.1.6.2. Non-preprinted form. When this method is used, the form and data are printed simultaneously and will contain the prescribed data elements.

C5.1.7. 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 provided the DD form number remains readable. When printing three per 8-1/2- by 14-inch sheet of sheet of paper, the originator of the form, *must* ensure that the form, spacing, size, and data entered thereon are legible and capable of being interpreted by a Logistics Applications of Automated Marking and Reading Symbols (LOGMARS) scanning device.

C5.1.7.1 Block numbers are provided for data entry. Data to be entered in the data blocks are shown in Appendices AP3.48 and AP3.49. Block 27 will contain 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~~ *bar code* as illustrated in Appendices AP1.35 *and API.36*. For a single item shipment, include the clear-text, concatenated/single value unique item identifier (UII). Phased implementation is authorized pending DoD implementation of IUID policy. As an interim approach, identification of the item on the Issue Release/Receipt Document (IRRD) by serial number alone is authorized. Additional optional information may include the item manufacturer's contractor and Government entity (CAGE) code, 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 information for those activities possessing bar coding capability.

C5.1.7.2 The paper may be any color that provides a minimum bar code ~~symbol~~ contrast as specified in International Organization for Standardization (ISO) and ~~by the~~ International Electrotechnical Commission (IEC) (ISO/IEC) 15415, Information Technology - Automatic Identification and Data Capture Techniques - Bar Code Print Quality Test Specification - Two-dimensional Symbols and in ISO/IEC 15416, Information Technology - Automated Identification and Data Capture Techniques - Bar Code Symbology Specification - Linear Symbols.

C5.1.8. The Code 39 (three-of-nine) linear bar code, and PDF417 *2D symbol bar code*, and Macro PDF417 *2D symbol bar code*, as defined in ISO/IEC 16388:1999 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 *2D* bar code symbology specification, 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 codes are printed on DD Form 1348-1A (or DD Form 1348-2), all record positions of data elements that will be encoded, will contain a bar code character even if the position was blank on the source document.

C5.1.9. IRRD (DD 1348-1A or DD Form 1348-2) Continuation Page. For shipment quantities of two or more serialized items, the responsible activity *will* prepare a continuation page to facilitate automatic data capture.

C5.1.9.1. In lieu of printing the PDF417 ~~2D symbol~~ *bar code* in Block 27 of the DD Form 1348-1A (or DD Form 1348-2), the continuation page will contain a single PDF417 ~~2D symbol~~ *bar code* or multiple Macro PDF417 ~~2D symbols~~ *bar codes* (as required by data volume) for the included data.

C5.1.9.2. The continuation page *will* contain, at a minimum, the prescribed data elements outlined in Appendix 1.36. For systems capable of printing *PDF417 2D bar codes*, see Appendix 1.35 for a listing of encoded MH10.8.2 standard data identifiers for the data elements.

C5.1.9.3. The continuation page *will* also contain *Code 39* 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 Tables C5.T1 and C5.T2 for the distribution of the transactions.

C5.2.2. For transfers to DLA Disposition Services Field Offices, if all DD 1348-1A data is provided in automated transactions and/or available via digital image, one copy of the printed document *must* accompany the shipment; in accordance with the Paperwork Reduction Act, additional paper copies are not required including verification of receipt copies.

Table C5.T1. Distribution of DD Form 1348-1A (or DD Form 1348-2), Issue Release/Receipt Document, and Continuation Page to all Consignees other than DLA Disposition Services and Security Assistance¹

TRANSACTION	NO. OF COPIES	DISTRIBUTION
DD Form 1348-1A (or DD Form 1348-2)	One (Automated) or Two (Manual)	<p>One copy will accompany all shipments on the outside of the shipping container if not in conflict with other applicable directives. When the DD Form 1348-1A (or DD Form 1348-2) contains bar coding, the copy accompanying the shipment <i>will</i> contain the bar coding.</p> <p>For manually generated copies, one <i>copy will</i> be retained by the shipper unless an automated capability is available to prove that a shipment has been made.</p> <p>Copies <i>must</i> be attached IAW MIL-STD-129.</p>
Continuation Page	One (Automated) <i>or</i> Two (Manual)	<p>One copy <i>will</i> 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> <p>For manually generated copies, one copy <i>will</i> be retained by the shipper unless an automated capability is available to track the serialized contents of the shipment.</p>

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

Table C5.T2. Distribution of DD Form 1348-1A (or DD Form 1348-2), Issue Release/Receipt Document and Continuation Page for Shipments to DLA Disposition Services Field Office

TRANSACTION	NO. OF COPIES	DISTRIBUTION
DD Form 1348-1A (or DD Form 1348-2)	One (Automated) or Two (Manual)	<p>One copy will accompany all shipments of materiel and remain attached to the property at the DLA Disposition Services Field Office. When the DD Form 1348-1A (or DD Form 1348-2) contains bar coding, the copy accompanying the shipment will contain the bar coding.</p> <p>For manually generated copies, one copy will be produced and retained by the shipper unless an automated capability is available to prove a shipment has been made.</p>
Continuation Page	One (Automated) or Two (Manual)	<p>One copy will accompany the DD Form 1348-1A (or DD Form 1348-2) for all shipments containing serialized items and be attached to the material. Upon receipt at the DLA Disposition Services Field Office, the copy will be used by personnel screening property for potential reutilization, transfer, or donation. It will remain attached to the property at the DLA Disposition Services Field Office.</p> <p>For manually generated copies, one copy will be produced and retained by the shipper unless an automated capability is available to track the serialized contents of the shipment and prove a shipment has been made.</p>

C5.3 ISSUES FROM SUPPLY SYSTEM STOCK OR FROM DLA DISPOSITION SERVICES FIELD OFFICES; REQUISITIONS FOR LOCAL ISSUE FROM DLA DISPOSITION SERVICES FIELD OFFICES

C5.3.1. The DD Form 1348-1A (or DD Form 1348-2) **will** be prepared as a release document by the shipping activity (issues from supply system stock) or by the shipping DLA Disposition Services Field Office (DLA Disposition Services-directed issues from the local DLA Disposition Services Field Office). The requisitioner may also use this format when hand carrying requisitions for local issue from DLA Disposition Services Field Office. Minimum data entries are outlined in Appendix ~~AP~~3.48 for the DD Form 1348-1A (or DD Form 1348-2).

C5.3.2. To accommodate the various distribution systems and equipment, DD Form 1348-1A (or DD Form 1348-2) provides blocks for data entry. With the exception of Blocks 9, and 15, use of these blocks is optional, but when used, will contain information shown in Appendix ~~AP~~3.48.

C5.3.3. The continuation page **will** accompany the DD Form 1348-1A (or DD Form 1348-2) and **must** 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. Minimum data entries are outlined in Appendix AP1.36.

C5.4. RETURNS TO STOCK AND TRANSFERS (EXCLUDING TRANSFERS TO DLA DISPOSITION SERVICES FIELD OFFICES)

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

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 documentation copy and distribution requirements prescribed in Tables C5.T1 or C5.T2 **will** be used to effect returns and transfers. Entries will be as shown in Figure C5.F1 for all DLA and inter-Service/Agency (S/A) transactions.

C5.4.3. For intra-S/A use, the data prescribed in Figures C5.F1 must be entered. Other entries may be prescribed by concerned S/As; however, any such entries must relate to the columnar and/or block headings indicated in the form.

Figure C5.F1. 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 Field 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 .
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 DLM 4000.25-2 (MILSTRAP).)
Block 27	Enter activity account number of the activity to be credited (if applicable) and the appropriate fund code (if applicable). (See DLM 4000.25, Volume 4 Finance). For single quantity item, enter applicable UID <i>serial number and/or UII</i> content in conjunction with application of a <i>PDF417 2D symbol bar code</i> as listed in Appendix AP 1.1 and as illustrated in Appendix AP 1.35. <i>For multiple uniquely identified items, use the continuation page per Appendix 1.36.</i> ³

C5.5. TRANSFERS TO DLA DISPOSITION SERVICES FIELD OFFICES

~~C5.5.1.~~ Use DD Form 1348-1A (or DD Form 1348-2) as the disposal turn-in document (DTID) for all transfers to DLA Disposition Services Field Offices. See C5.2.2. for criteria to use automated distribution of DD Form 1348-1A (or DD Form 1348-2). Appendix ~~AP~~3.49 shows required entries required for single line item turn-ins. See Appendix ~~AP~~1.35 for *PDF417 2D symbol bar code* content. A continuation page *will* accompany the DD Form 1348-1A (or

² Unit 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 available space for display on the printed form, the generating application may leave blank. Refer to ADC 221.

³ For Security Assistance shipments, see Figure C6-F1.

DD Form 1348-2) for all shipments of two or more items *that* are serially tracked in accordance with DoD policy or by Component agreement. See Appendices AP1.35 for PDF417 *2D symbol* *bar code* content and AP1.36 for the continuation page content.

API.35.1. Code 39 Linear Bar Code Requirements. The following encoded data are required on the DD Form 1348-1A.

API.35.1.1. Code 39 linear bar coded data with human-readable interpretation for issue to services/agencies.

API.35.1.1.1. Document number and suffix assigned to the requisition for a maximum fifteen characters should be bar coded in Block 24.

API.35.1.1.2. Thirteen-digit national stock number (NSN) and two additional code values, as applicable, per Appendix 2.5.2, should be bar coded in Block 25. In the absence of the NSN, the manufacturer's CAGE and Part Number will be used for a maximum of 15 characters.

API.35.1.1.3. Three character routing identifier code (RIC), two character unit of issue (UI) code, five digit zero filled quantity (QTY), one character supply condition code (COND), blank or last two characters of the distribution code field (DIST), and a seven digit or eleven digit zero filled unit price (UP) showing dollars and cents with no decimal bar coded in block 26. The bar code will have a fixed length of 20 or 24 characters to include leading zeros and spaces depending on the implemented version of the unit price annotation noted in Appendix 3.48. For transfers to DLA Disposition Services, Block 26 will not contain bar code data in accordance with Appendix 3.49.

API.35.1.2. Code 39 linear bar coded data, with human-readable interpretation requirements, for issue to FMS/Grant Aid customers.

API.35.1.2.1. Block 24. The document number and suffix assigned to the requisition for a maximum fifteen characters should be bar coded.

API.35.1.2.2. Block 25. The thirteen digit national stock number (NSN) and two additional code values, as applicable, per Appendix 2.5.2, should be bar coded. In the absence of the NSN, the manufacturer's CAGE and part number will be used for a maximum of 15 characters.

API.35.1.2.3. Block 26. The two character unit of issue (UI) code, five digit zero filled quantity (QTY), one character condition code (COND), a seven digit or eleven digit zero filled unit price (UP) showing dollars and cents with no decimal, and the first position and last 3 positions of supplementary address (SUPADD) should be bar coded. The bar code will have a fixed length of 19 or 23 characters to include leading zeros and spaces depending on the implemented version of the unit price annotation noted in Appendix 3.48.

API.35.1.3. The application of Code 39 linear bar codes on the DD Form 1348-1A should be in accordance with MHIA MH10.8.1, Annex A and MIL-STD-129, paragraph 4.4.1.6. A data check character is not used. The following requirements and exceptions apply:

API.35.1.3.1. The height of the bar code should be at least 0.50 inches and must be no less than 0.25 inches, regardless of the density (characters per inch).

API.35.1.3.2. Blocks 24 and 25. The length of the bar code must not be greater than 4.0 inches. Each bar code must have 15 characters. When there is an absence of any character(s) (less than 15) within these two bar codes, encoded spaces will be used as fillers (based upon specific encoded data element).

API.35.1.3.3. Block 26. The length of the bar code must not be greater than 4.5 inches. Encoded spaces will be used as fillers for any unknown, or unencoded, data characters.

API.35.1.3.4. Block 27. The length of the bar codes must not be greater than 4.00 inches for serial numbers that may have up to 30 characters. The narrow element X-dimension should be at least 0.010 inches but will not be less than 0.007 inches for these high-density bar codes. The wide to narrow ratio should be 3 to 1 but must not be less than 2 to 1.

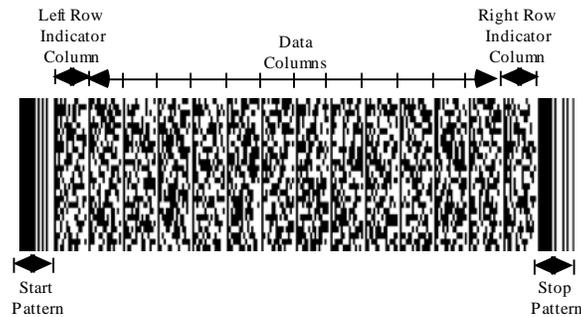
API.35.1.3.5. The ASCII characters encoded will consist of the standard uppercase characters, numbers, and symbols identified in ISO/IEC 16388, Table 1 (i.e.[A to Z][1 to 9][hyphen][period][space][\$][/][+][%][stop/start ()]. The full ASCII 128 character set will not be used to encode information. Also, scanners and imagers will not be configured to decode the full ASCII 128 character set for linear (Code 39) bar codes.*

API.35.1.4. The application of Code 39 linear bar codes must be in accordance with ISO/IEC 16388. Print quality, element width, and wide to narrow ratios must comply with ISO/IEC 15416 and MHIA MH10.8.1. The standard linear (Code 39) bar code density range should be from 3.0 to 9.4 characters per inch (CPI).

API.35.2. Programmer's Technical Summary for ~~2D (PDF417 2D Bar Code and Macro PDF417) Symbol~~ Symbology.

API.35.2.1. Refer to ISO/IEC 15438 for detailed technical specifications for printing PDF417 ~~2D and Macro PDF417 symbols~~ **bar codes**. Refer to the ISO/IEC 15434 standard for the message syntax specifications within the ~~PDF417 2D symbols~~ **bar codes**. Refer to the MH10.8.2 or ISO/IEC 15418 standards for the data qualifier semantics for message data within the ~~symbols~~ **PDF417 2D bar codes**. 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>.

API.35.2.2. The PDF417 ~~symbol~~ **bar code** 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~~ **PDF417 2D bar codes** cannot accommodate the increased data requirements. A PDF417 ~~symbol~~ **bar code** includes a start pattern, a left row indicator column, one or more data columns, a right row indicator column, and a stop pattern.



AP1.35.2.3. The **PDF417 2D bar code symbol** **must** not exceed 2.4 inches (61 mm) in height to include the surrounding minimum quiet zone.

AP1.35.2.4. The **PDF417 2D bar code symbol** **must** have a minimum quiet zone of 0.04 inches (1 mm) above, below, to the left, and to the right.

AP1.35.2.5. The minimum narrow element dimension (X-dimension) **must** not be less than 0.01 inches (10 mils/.254 mm). For **PDF417 2D bar codes symbols** up to 12 data columns, the X-dimension **must** not exceed 0.017 inches (17 mils/.432 mm). For 13 to 18 data columns, the X-dimension will not exceed 0.01 inches.

AP1.35.2.6. The **PDF417 2D bar code symbol** **must** have a minimum row height of three times the width of the narrow element (X-dimension).

AP1.35.2.7. The **PDF417 2D bar code symbol** **will** use error correction level 5.

AP1.35.2.8. 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.

AP1.35.2.9. Data identifiers, that contain no information, should not be encoded in the **PDF417 2D bar code symbol**.

AP1.35.2.10. The quality of the printed **PDF417 2D bar code symbol** **must** 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.

AP1.35.3. **Data Format**. The following table provides examples and explanations of the data stream for a PDF417 2D ~~symbol~~ **bar code**.

AP1.35.3.1. Compliance Indicator (Column 1): Shows the special formatting characters associated with the ISO/IEC 15434 data format. The Compliance Indicator **will** be the first three characters in the Message Header. The Compliance Indicator **will** be [] > (left bracket, right parenthesis, and greater than).

AP1.35.3.2. 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.

AP1.35.3.3. 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.

AP1.35.3.4. ~~Data Qualifiers~~ (*Data Identifiers* (DIs) or *Data Element Identifiers* (DEIs) in (Column 4), ~~that~~ define data content within the message. ~~Data Identifiers (DIs)~~, 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 (DEIs)~~, for Format Header 07, pertain to DoD authorized data elements.

AP1.35.3.5. Data Field (Column 5) contains an abbreviated description of the data field.

AP1.35.3.6. 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.

AP1.35.3.7. Sample Data (Column 7) contains sample data for the field indicated.

AP1.35.3.8. 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>	43
	RS	06		Data Identifier Format (ANSI Standard)		06	3
	GS		12S Category 19, Traceability Number for an Entity: Document Number (internally assigned or mutually defined)	Document Number Includes Suffix Code when applicable	an14..15	12SW90GF8829620258	19
	GS		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
	GS		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
	GS		V Category 22, Party to the Transaction: Supplier Code assigned by Customer	Routing Identifier Code – Shipping Activity Identifies the RIC of the source of supply (MILSTRIP transaction rp 4-6).	an3	VS9I	5
	GS		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
	GS		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
	GS		2R Category 18, Miscellaneous: Return code assigned by the Customer	Condition Code	an1	2RA	4
	GS		12Q Category 17, Measurement: Monetary Entry Value established by the Supplier in the format of: the value followed by an	Unit Price Configured as 9 digits (whole dollars, decimal, and 2 digits cents followed by “USD” indicating U.S. dollars). Do not include	n..9.n2+an3	12Q050.20USD	19

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
			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	leading blanks.			
	GS		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
	GS		25S Category 19, Traceability Number for an Entity: Identification of a party to a transaction <i>assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by the supplier assigned serial number that is unique within the CIN holder's domain (See MH10.8.2 Annex C.11) followed by the supplier assigned serial number</i>	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	25SD12345123TS001100223	54
	GS		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. <i>The item's serial number used for tracking under a UIT program or in support of DoD supply policy for serialized item management.</i>	an..30	S123TS001100223	32
	GS		42S Category 19, Traceability Number for an Entity: Unique item identifier (UII) and Serial Number association.	Unique Item Identifier (UII) and Serial Number Associates the item UII with its respective Serial Number. The format for DI 42S is an UII 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	42S08UN077991289674B36AB	56
	GS		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 Batch/Lot Number Assigned by the supplier (or DoD) to identify/trace a unique group of entities (e.g. lot, batch, etc <i>or production run</i>). May be used separately or in conjunction with UII.	an..25	ITMGU12345	28
	GS		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	an5 [n9] [an7..10]	17V1AAA9 [12V123456789] [3V0614141]	14

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
				identifier 12V. If GS1 Company Prefix code, use identifier 3V.]			
	GS		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
	RS	07		Format Indicator (ANSI Free Text)	n2	07	3
	GS		03	Project Code	an3	03ZCN	6
	GS		B6	DoD Distribution Code Three-position field must reflect blanks as applicable. Blanks may be located in any position.	an3	B6_7V	6
	GS		27	Consignee DoDAAC Reflects ship-to DoDAAC (Block 3)	an6	27WK4FV9	9
	GS		38	Nomenclature	an..20	38LOOP, STRAP	23
	GS		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
	GS		B7	Requisition Priority Designator (PD)	n2	B703	5
	GS		B8	Partial Shipment Indicator	a1	B8P	4
	GS		81	Supplementary Address Derived from rp 45-50 of the requisition	an6	81WK4FV91	9
	RS EOT						2

AP1.35.4. **Encoding the Separator/Trailer Characters.** 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 <i>646</i>	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 the end of a data format envelope
EOT	== Nonprintable hexadecimal code indicating end of transmission
==	== Denotes a blank in sample data above

API.35.5. PDF417 2D Bar Code Data Syntax

API.35.5.1. Common data for the IRRD item will be encoded in the ISO/IEC 15434 Format 06 and Format 07 syntax envelopes, as applicable.

API.35.5.2. For an IRRD quantity of one item, the Format 06 envelope may also be used to associate the format applicable item-specific data (e.g. serial number, UII, etc.) for the uniquely identified item. A single data qualifier or paired data qualifiers (DI S, or DI 25S, or DI S and DI 25S) may be used with the Format 06 envelope to identify and associate the serialized data for an item. The UII and serial number (used for tracking under a UIT program or in support of DoD supply policy for serialized item management) will be encoded to support DoD supply policy based upon IUID Indicator Y when they are when machine readable and readily available, or when retrievable from the system generating the form. However, at a minimum, the serial number is required for a NSNs falling under a UIT program.

API.35.5.3. For IRDD quantities of two or more items, use the DD Form 1348-1A Continuation Page (see API.36).

Sample **PDF417 2D bar code** data stream:

~~[]>^{RS}06^{GS}12SW90GF8829620258^{GS}N5340013145957^{GS}7Q1EA^{GS}VS9I^{GS}7VN32^{GS}2RA^{GS}
^{GS}12Q050.20USD^{GS}5P999912^{GS}25SUN077991289674B36AB^{GS}S123TS001100223^{GS}ITMGU12345^{GS}
^{GS}17VIAAA9^{GS}1P9988771212SP^{RS}07^{GS}03ZCN^{GS}B6 7V^{GS}27WK4FV9^{GS}
^{GS}38LOOP, STRAP^{GS}32999^{GS}B702^{GS}B8P^{GS}81WK4FV9^{RS} EOT~~



Sample PDF417 **2D Bar Code** symbol

Staffing Note: The image was replaced.

~~API.35.5. DI 42S – Data Identifier (DI) for Serially Managed Items with a UH 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.~~

~~AP1.35.6.5. 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.~~

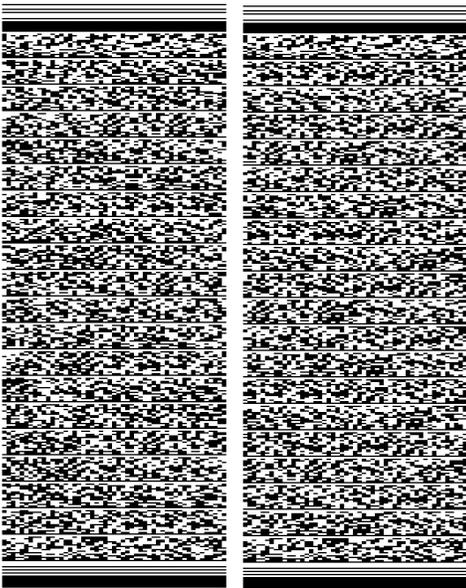
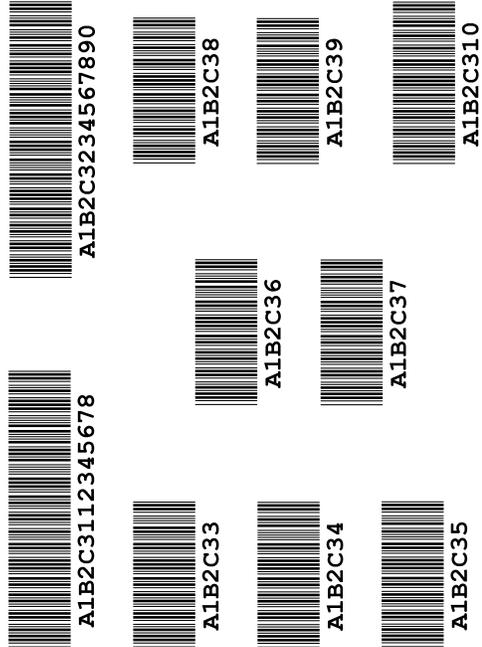
~~AP1.35.6.6. To accommodate potentially unbuffered operations by some receiving systems, the Segment Count field in the Control Block shall be encoded in each symbol to facilitate checking that all segments in a set of Macro PDF417 symbols are received. The Segment Count field identifies the total number of Macro PDF417 symbols in the distributed file.~~

~~AP1.35.6.7. The following is provided to describe the Macro PDF417 symbol Control Block used for AP1.36 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~~

AP1.36. APPENDIX 1.36

ISSUE RELEASE/RECEIPT DOCUMENT (IRRD) (DD FORM 1348-1A or DD FORM 1348-2) CONTINUATION PAGE

27. Additional Data	CONTINUATION PAGE	PAGE: 1 OF 3
DOCUMENT NO. & SUFFIX: W90GF8829620258		QUANTITY & U/I: 00060EA
ID DATA INCLUDES Ulls (IF APPLICABLE) Scan/rescan the Macro PDF417 symbols in any order to decode message		SERIAL NUMBERS
	30-CHARACTER SERIAL NO EXAMPLE	 <p>A1B2C3112345678</p> <p>A1B2C3234567890</p> <p>A1B2C33</p> <p>A1B2C34</p> <p>A1B2C35</p> <p>A1B2C36</p> <p>A1B2C37</p> <p>A1B2C38</p> <p>A1B2C39</p> <p>A1B2C310</p>
<u>WAREHOUSE/SHIPPING INSTRUCTIONS:</u>		
<u>OTHER INSTRUCTIONS:</u>		

Staffing Note: The image was replaced.

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 **2D bar code** symbol or Macro PDF417 **2D symbols bar codes**. See Appendix ~~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 manufacturers were 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. **Code 39 linear bar codes with human-readable information. Each item's serial number used for tracking under a UIT program or in support of DoD supply policy for serialized item management, as applicable, will be printed and encoded with a Code 39 linear bar code. This requirement provides backward compatibility for distribution systems unable to decode the PDF417 2D bar code information. Each item will have no more than one encoded serial number; some items may not have a serial number (i.e., the item only has a UII or the item is not serialized). See AP1.36.4 for implementation business rules.** ~~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).~~

~~API.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.~~

~~API.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.~~

~~API.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.~~

~~API.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.~~

~~API.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~~

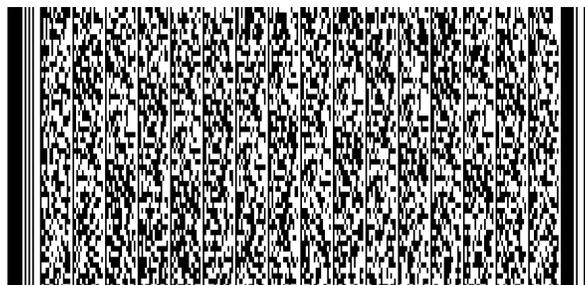
API.36.2. Common data for all of the IRDD items will be encoded in the first ISO/IEC 15434 Format 06 and Format 07 envelopes, as applicable.

API.36.3. UIIs and serial numbers will be encoded and linked together to support DoD supply policy based upon IUID Indicator Y when they are machine readable and readily available, or when retrievable from the AIS generating the form. However, at a minimum, the serial number is required for NSNs falling under a UIT program.

API.36.3.1. One item. If the continuation page is used for an IRDD quantity of one serialized item, the first Format 06 envelope may also be used to associate item-specific data (e.g. UII, serial number, etc.) for the uniquely identified item. A single data qualifier or a single pair of data qualifiers (DI S, or DI 25S, or DI S and DI 25S) may be used with the Format 06 envelope to identify and associate the serialized data for an item.

API.36.3.2 Two or more items. For an IRDD quantity of two or more serialized items, an additional Format 06 envelope (one per item) will be used for each item to encode item-specific data (e.g. UII (DI 25S), serial number (DI S), etc.) for the uniquely identified item.

API.36.3.3. The example is for 40 items in an IRDD.



*Sample PDF417 2D bar code (actual size)***Staffing Note:** The image was replaced.

*]>^{RS}06^{GS}12SW90GF8829620258^{GS}N5340013145957^{GS}7Q40EA^{GS}VS9I^{GS}7VN32^{GS}2RA^{GS}12Q050.20USD^{GS}5P9999
12^{GS}ITMGU12345^{GS}17VIAAA9^{GS}IP9988771212SP^{RS}07^{GS}03ZCN^{GS}B6 7V^{GS}27WK4FV9^{GS}38LOOP,
STRAP^{GS}32999^{GS}B702^{GS}B8P^{GS}81WK4FV9^{RS}06^{GS}SVT45645^{RS}06^{GS}SVT45646^{RS}06^{GS}SVT45647^{RS}06^{GS}SVT45648^{RS}
06^{GS}SVT45649^{RS}06^{GS}SVT45651^{RS}06^{GS}SVT45652^{RS}06^{GS}SVT45653^{RS}06^{GS}SVT45654^{RS}06^{GS}SVT45655^{RS}06^{GS}SVT45
656^{RS}06^{GS}SVT45657^{RS}06^{GS}SVT45658^{RS}06^{GS}SVT45659^{RS}06^{GS}SVT45660^{RS}06^{GS}SVT45661^{RS}06^{GS}SVT45662^{RS}06^{GS}S
VT45663^{RS}06^{GS}SVT45664^{RS}06^{GS}SVT45665^{RS}06^{GS}SVT45666^{RS}06^{GS}SVT45667^{RS}06^{GS}SVT45668^{RS}06^{GS}SVT45669^{RS}
06^{GS}SVT45670^{RS}06^{GS}SVT45671^{RS}06^{GS}SVT45672^{RS}06^{GS}SVT45673^{RS}06^{GS}SVT45674^{RS}06^{GS}SVT45675^{RS}06^{GS}VT456
76^{RS}06^{GS}S674A3604^{RS}06^{GS}SVT45677^{RS}06^{GS}25S06141411A0B9C3D7^{RS}06^{GS}25SUN077991289674B36AA^{RS}06^{GS}25
SUN077991289674B36AB^{RS}06^{GS}SVT45678^{GS}25SUN077991289674B36AC^{RS}06^{GS}S674A3605^{GS}25S06141411A0B
9C3D8^{RS}06^{GS}SMK98765^{GS}25SUN077991289674B36AD^{RS} EOT*

API.36.4. PDF417 2D Bar Code Business Rules. If only one PDF417 2D bar code is required to encode the information, it will be a standard PDF417 2D bar code and not a Macro PDF417 2D bar code. If two or more PDF417 2D bar codes are required, they must be Macro PDF417 2D bar codes. The PDF417 2D bar codes will be on the first page(s) of the continuation page to be followed by each item's serial number encoded with Code 39 linear bar codes.

API.36.4.1. Macro PDF417 2D bar codes will be used when the encoded data message file exceeds the capacity of a single PDF417 2D bar code. When space is exhausted in a PDF417 2D bar code's data capacity, the application program must begin using Macro PDF417 2D bar codes to encode the data content in multiple bar codes. There is no requirement to repeat shipment-related data in the next Macro PDF417 2D bar code; the Macro PDF417 2D bar codes are linked with codewords to derive a single transaction file. A full size 18 data column 2D bar code (PDF417 or Macro PDF417) can encode approximately 1100 characters at Error Level 5. The character capacity of the PDF417 2D bar code is based on a PDF417 2D bar code limit of 925 codewords, the compaction algorithm used to encode data in a codeword, and the PDF417 2D bar code's error correction level.

API.36.4.2. Macro PDF417 2D bar codes will be encoded and printed in accordance with ISO/IEC 15438.

API.36.4.3. Each Macro PDF417 2D bar code 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 2D bar code is encoded with a control block of codewords that facilitates this reassembly process after all the PDF417 2D bar codes have been scanned at least once in any sequence order.

API.36.4.4. Each receiving system used to scan Macro PDF417 2D bar codes will need to

determine if the system scanner will operate in a buffered or unbuffered mode. As the Macro PDF417 2D bar codes are scanned, the de-packetizing function reconstructs the original message. If operating in buffered mode, the PDF417 2D bar code codeword de-packetizing function is in the scanner's decoder; if operating in unbuffered mode, it is in the receiving system decoder.

API.36.4.5. Decoders should provide a specific means whereby the processing of a given Macro PDF417 2D bar code control block file ID may be aborted, thus allowing the decoder to begin processing a different set of Macro PDF417 2D bar codes. This is necessary to prevent a deadlock condition should one or more Macro PDF417 2D bar codes of a given file ID be missing or undecodable.

API.36.4.6. To accommodate potentially unbuffered operations by some receiving systems, the segment count field in the control block will be encoded in each Macro PDF417 2D bar code to facilitate checking that all segments in a set of Macro PDF417 2D bar codes are received. The segment count field identifies the total number of Macro PDF417 2D bar codes in the distributed file.

- *API.36.4.7. The following is provided to describe the Macro PDF417 2D bar code control block used for continuation page Macro PDF417 2D bar codes. 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 Macro PDF417 2D bar code Control Block code words within the Macro PDF417 2D bar code's segment data structure are:*

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

- *Continuation page example second Macro PDF417 2D bar code Control Block codewords are:*

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

- *The code words 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 for the set of Macro PDF417 2D bar codes

- (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 last macro Control Block*

API.36.5. Code 39 Linear Bar Code Business Rules. Format requirements for the DD Form 1348-1A Continuation Page applications are:

API.36.5.1. The minimum bar height should be at least 0.50 inches (12.7 mm), but must not be less than 0.25 inches (6.3 mm.).

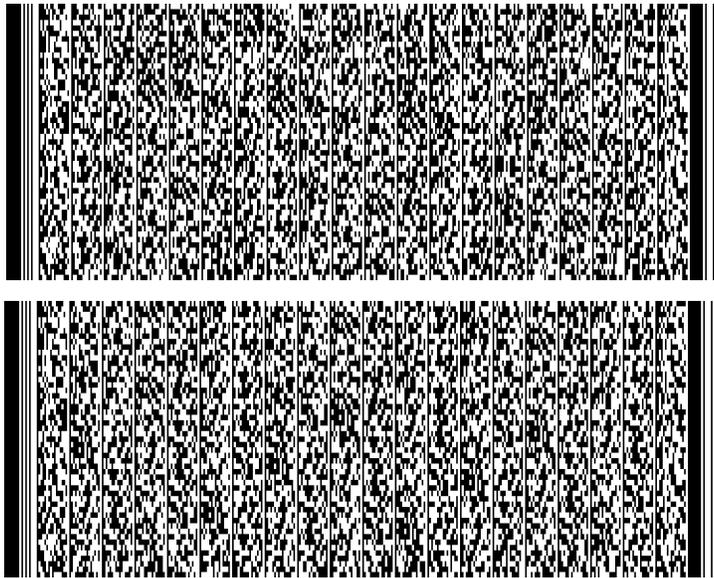
API.36.5.2. The space provided on the continuation page must be able to encode up to 30 characters for the serial number and the bar code should not exceed 4 inches in length.

API.36.5.3. The narrow element X-dimension should be at least 0.010 inches (0.25 mm) but must 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 must not be less than 2 to 1.

API.36.5.4. The quality of the printed bar code must 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.

API.36.5.5. The ASCII characters encoded will 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.

API.36.6. Example Macro PDF417 2D Bar Codes. The following two Macro PDF417 2D bar codes from the continuation sample page are printed full size for system developer review. The two Macro PDF417 2D bar codes 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. The annotations of $\wedge(nnn)$ in the encoded strings below denote Macro PDF417 code words.



Macro PDF417 2D Bar Code Samples (actual size) from Continuation Page

Staffing Note: The image was replaced.

^{RS}06^{GS}12SW90GF8829620258^{GS}N5340013145957^{GS}7Q60EA^{GS}VS9I^{GS}7VN32^{GS}2RA^{GS}12Q050.20USD^{GS}5P9999
^{GS}12^{GS}ITMGU12345^{GS}17VIAAA9^{GS}1P9988771212SP^{RS}07^{GS}03ZCN^{GS}B6 7V^{GS}27WK4FV9^{GS}38LOOP,
 STRAP^{GS}32999^{GS}B702^{GS}B8P^{GS}81WK4FV9^{RS}06^{GS}S30-CHARACTER SERIAL NO
 EXAMPLE^{RS}06^{GS}SAIB2C3112345678^{RS}06^{GS}SAIB2C3234567890^{RS}06^{GS}25SDIAAA9AIB2C33^{GS}SAIB2C33^{RS}06^G
^S25SDIAAA9AIB2C34^{GS}SAIB2C34^{RS}06^{GS}25SDIAAA9AIB2C35^{GS}SAIB2C35^{RS}06^{GS}25SDIAAA9AIB2C36^{GS}SAI
 B2C36^{RS}06^{GS}25SDIAAA9AIB2C37^{GS}SAIB2C37^{RS}06^{GS}25SDIAAA9AIB2C38^{GS}SAIB2C38^{RS}06^{GS}25SDIAAA9AI
 B2C39^{GS}SAIB2C39^{RS}06^{GS}25SDIAAA9AIB2C310^{GS}SAIB2C310^{RS}06^{GS}25SDIAAA9AIB2C311^{GS}SAIB2C311^{RS}06
^{GS}25SDIAAA9AIB2C312^{GS}SAIB2C312^{RS}06^{GS}25SDIAAA9AIB2C313^{GS}SAIB2C313^{RS}06^{GS}25SDIAAA9AIB2C31
 4^{GS}SAIB2C314^{RS}06^{GS}25SDIAAA9AIB2C315^{GS}SAIB2C315^{RS}06^{GS}25SDIAAA9AIB2C316^{GS}SAIB2C316^{RS}06^{GS}25
 SDIAAA9AIB2C317^{GS}SAIB2C317^{RS}06^{GS}25SDIAAA9AIB2C318^{GS}SAIB2C318^{RS}06^{GS}25SDIAAA9AIB2C319^{GS}S
 AIB2C319^{RS}06^{GS}25SDIAAA9AIB2C320^{GS}SAIB2C320^{RS}06^{GS}25SDIAAA9AIB2C321^{GS}SAIB2C321^{RS}06^{GS}25SDI
 AAA9AIB2C322^{GS}SAIB2C322^{RS}06^{GS}25SDIAAA9AIB2C323^{GS}SAIB2C323^{RS}^(928)^(111)^(100)^(129)^(923)^(
 001)^(111)^(002)
 06^{GS}25SDIAAA9AIB2C324^{GS}SAIB2C324^{RS}06^{GS}25SDIAAA9AIB2C325^{GS}SAIB2C325^{RS}06^{GS}25SDIAAA9AIB2C
 326^{GS}SAIB2C326^{RS}06^{GS}25SDIAAA9AIB2C327^{GS}SAIB2C327^{RS}06^{GS}25SDIAAA9AIB2C328^{GS}SAIB2C328^{RS}06^{GS}
 25SDIAAA9AIB2C329^{GS}SAIB2C329^{RS}06^{GS}25SDIAAA9AIB2C330^{GS}SAIB2C330^{RS}06^{GS}25SDIAAA9AIB2C331
^{GS}SAIB2C331^{RS}06^{GS}25SDIAAA9AIB2C332^{GS}SAIB2C332^{RS}06^{GS}25SDIAAA9AIB2C333^{GS}SAIB2C333^{RS}06^{GS}25S
 DIAAA9AIB2C334^{GS}SAIB2C334^{RS}06^{GS}25SDIAAA9AIB2C335^{GS}SAIB2C335^{RS}06^{GS}25SDIAAA9AIB2C336^{RS}06
^{GS}25SDIAAA9AIB2C337^{RS}06^{GS}25SDIAAA9AIB2C338^{RS}06^{GS}25SDIAAA9AIB2C339^{RS}06^{GS}25SDIAAA9AIB2C
 340^{RS}06^{GS}25SDIAAA9AIB2C341^{RS}06^{GS}25SDIAAA9AIB2C342^{RS}06^{GS}25SDIAAA9AIB2C343^{RS}06^{GS}25SDIAAA9
 AIB2C344^{RS}06^{GS}25SDIAAA9AIB2C345^{RS}06^{GS}25SDIAAA9AIB2C346^{RS}06^{GS}25SDIAAA9AIB2C347^{RS}06^{GS}25SD
 IAAA9AIB2C348^{RS}06^{GS}25SDIAAA9AIB2C349^{RS}06^{GS}25SDIAAA9AIB2C350^{RS}06^{GS}25SDIAAA9AIB2C351^{RS}06
^{GS}25SDIAAA9AIB2C352^{RS}06^{GS}25SDIAAA9AIB2C353^{RS}06^{GS}25SDIAAA9AIB2C354^{RS}06^{GS}25SDIAAA9AIB2C
 355^{RS}06^{GS}25SDIAAA9AIB2C356^{RS}06^{GS}25SDIAAA9AIB2C357^{RS}06^{GS}25SDIAAA9AIB2C358^{RS}06^{GS}25SDIAAA9
 AIB2C359^{RS}_{EOT}^(928)^(111)^(101)^(129)^(923)^(001)^(111)^(002)^(922)