



## **Nashville ISO Dual Specification**

### **Front-End Dial-Up Interface**

### **For Dual Capture**

**August 9, 2016**

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**DSNS-0008-2.19 (Draft E)**

## **NOTICE**

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## REVISION HISTORY

Section	Brief Description Of Change	Revision
Spec.	Updated the Version number from 2.18 – 2.19	2.19
5.35.2.1	Field 63, Table 'SD' – Other Capabilities (Request) <ul style="list-style-type: none"> <li>Added 'Signature Debit' to position 2.(Other Signature Debit Networks)</li> </ul>	Draft A
5.35.2.2	Field 63, Table 'SD' – Other Indicators (Response) <ul style="list-style-type: none"> <li>Added 'Signature Debit Route Indicator' in Position 3.</li> <li>Added Position 3 ('Signature Debit Route Indicator' ) Subfiled Value '0' – <i>Not routed as Signature Debit or not applicable</i> '1' – <i>Routed as STARAccess Dual Signature Debit</i></li> </ul>	Draft A Draft A
5.35.2	Field 63, Table 'SD' – Tag TY <ul style="list-style-type: none"> <li>Tag 'TY' will only be returned on the response when request includes Tag 'OC', and Signature Debit ( bit 2 ) is set to '1'</li> <li>(Included per NFE Design document by Lee Xu even though Terminal can derive the required values from Table SD Tag RI position 3 )</li> </ul>	Draft A
5.35.2	Field 63, Table 'SD' – Tag DC <ul style="list-style-type: none"> <li>Tag 'DC' will be included in the 0200 request messages only ( per Dave Herbert and Matt Payton Online PIN EMV transactions without Credit Indicator 'C' in Tag 'DC' will be routed to Debit due to the presence of PIN)</li> </ul>	Draft A
5.35.2	Field 63, Table 'SD' – Tag 'OC' <ul style="list-style-type: none"> <li>Tag 'OC' : Changed name and description of position 1 to Alternate Routing Indicator (used for PINLess POS/Common AID) from PINLess POS (Per Frank Lewis: position 1 requires a name change and additional verbiage to describe the flag. Flag indicates Alternate Routing Capability and is currently used for PINLess POS and Common AID transaction routing to Single and Dual networks.).</li> </ul>	Draft B
5.35.2	Field 63, Table 'SD' – Tag 'RI' <ul style="list-style-type: none"> <li>Tag 'RI' : Changed name and description of position 1 to Alternate Routing Indicator (used for PINLess POS/Common AID) from PINLess POS (Per Frank Lewis: position 1 requires a name change and additional verbiage to describe the flag. Flag indicates Alternate Routing Capability and is currently used for PINLess POS and Common AID transaction routing to Single and Dual networks.).</li> </ul>	Draft B
5.35.2	Field 63, Table 'SD' – Tag DC <ul style="list-style-type: none"> <li>Tag 'DC' : Added additional verbiage to comments section (Per Frank Lewis: Additional verbiage is required. Added Credit indicator 'C' is required for Common AID transactions with Online PIN CVM and pre-dispositioned to route to Credit network as final amount is not known (eg: Open Tip and Open Tab transactions where amount will be adjusted after successful authorization)</li> </ul>	Draft B
5.35.4	Field 63, Table 'TH' – Defined new Terminal to Host Packet <ul style="list-style-type: none"> <li>Tag 'IP' will be included in 0800 Initialization Request (PC=930000) when the terminal is notifying the host of a switch from Apriva to Datawire.</li> </ul>	Draft C Draft C
6.10.11	Initialization Request (0800) <ul style="list-style-type: none"> <li>Added 'TH' Packet as required if the terminal is notifying the host of a switch from Apriva to Datawire.</li> </ul>	Draft C
5.33.76	Field 63, Table F1-F5 Added DCC2BIN and DCC2FX to File Identifier	Draft D
5.33.76	Field 63, Table F1-F5 Added additional table for Table Version # '002' and File size AN 7	Draft E

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# 1 NEW FEATURES

The following features are new. **Please check on availability before attempting to implement any of these features.**

Refer to the Revision History for the details of all references to these features in the manual.

- Added Signature Debit Request and Response Indicators (for STAR Access Project)



## 2 INTRODUCTION

### 2.1 OVERVIEW

This specification outlines the manner in which a POS device may perform real-time authorization and draft capture services with the First Data (Nashville) host system. This specification supports interactive dual capture. Interactive capture implies that authorization transactions (and pending offline advice transactions) can be processed real-time at the time of an online authorization with the transactions being captured at the FDC host as well as at the terminal. When interactive or dual capture applies, settlement only requires that the terminal send any remaining pending advice transactions about which the host is unaware (offline sales, offline refunds, offline voids, offline adjustments, offline sale completion's, etc.) rather than uploading the entire batch. Terminal capture implies that all transactions are authorized real-time but only captured at the terminal at the time of authorization. ISO dual can also be used in a terminal capture mode which requires that completed pre-auth transactions be uploaded to the host during settlement processing using 0220 sales completion transactions. Pre-auth (Message 0100) debit transactions are not supported.

#### **Online Authorization and Advice Processing**

For interactive capture, the host will authorize with or without capture based on the first two digits of the ISO Message Type ('01' for authorization only and '02' for authorize and capture). Financial Advice Transactions (offline sales, offline refunds, offline voids, offline adjustments, offline sale completion's, etc.) may be submitted during an authorization session as well but the POS application must manage how many advice transactions can realistically be included during an auth session without causing an unacceptable delay to the customer being serviced (typically only 1 advice per online transaction).

#### **Batch Totals Reconciliation and Out-Of-Balance Batch Uploads**

In the same or a separate dial session, at the terminal system's option and after all financial advice transactions have been submitted, the First Data host may be requested to settle all transactions captured at the host. In its request, the remote system provides transaction details, and counts and amount totals to insure system integrity. If in-balance with (the same as computed by) the FDC host system, the batch is closed. In an out-of-balance condition, the host will require that the POS application upload the entire batch to the host system for subsequent settlement processing before the batch will be considered closed; for terminal capture, if an out-of balance condition occurs, appropriate error text should be displayed to instruct the operator to call the help desk and the session should be aborted without closing the batch.

#### **Integrated Terminal Management**

This specification includes support for integrated terminal management including initialization processing for customizing the setup for a merchant based on parameter option information stored in a global Terminal Management System (TMS) on the FDC Nashville host for each terminal location. Initialization should always take place immediately after a full program download but can also be supported as a user initiated option based on a local terminal function or as a host initiated option on a supported host response (typically the settlement totals or statistics response). See terminal management ISO Dual Addendum A for details.

#### **Batch Download**

Also supported is the capability to download to the POS application all transactions that may exist for an open batch on the FDC Nashville host (typically this would be performed immediately following a full application program download when interactive capture applies).

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## **Security Warning**

**NOTE:** First Data Merchant Services suggests that as a matter of good business practices all merchants and third parties that process, transmit, or store cardholder data should become aware of Visa's Cardholder Information Security Program (CISP) and MasterCard's Site Data Protection (SDP) program. The purpose of these programs is to help protect the integrity of cardholder information via the use of outside-vendor auditing of systems security and server site security. For additional information, please contact your implementation Project Manager or your Relationship Manager. Information is also available at [www.visa.com](http://www.visa.com) and [www.mastercard.com/us/gateway.html](http://www.mastercard.com/us/gateway.html).

## **2.2 DOCUMENT REFERENCES**

In addition to this document, developers should consult:

- 'ISO 8583 — Bank card originated messages — Interchange message specifications — Content for financial transactions, Rev 1987 (E)' as a general reference.
- 'ISO Dual Addendum A – Usage with Integrated Terminal Management' if full terminal management is to be supported by an application.
- 'ISO Dual Addendum B – Usage without Integrated Terminal Management' if full terminal management is not to be supported by an application.
- 'American Express Plural Interface Processing (PIP) Terminal Interface Specifications' if AMEX Reverse PIP is to be supported by an application
- 'American Express Dial-Up Authorization Guide' if AMEX auth only split dial is to be supported by an application.
- 'FDMS Gift Card Merchant Interface Specification (SVDOT Transactions)' if FDMS gift card processing is to be supported.
- 'TeleCheck Electronic Check Acceptance (ECA) Services Retail Terminal Capture Specifications Asynchronous POS Dial Platform' if ECA split dial is to be supported.

## 2.3 TERMINOLOGY

TERMINOLOGY	MEANING
Authorize	Process the transaction online to the host at the time the transaction is entered and capture only if an approval code is received from the host.
Batch Download	Process whereby a terminal requests to restore previously processed transactions from an open batch from the FDCN host.
Batch Upload	Process whereby a terminal uploads detail for an entire batch to FDCN host data capture system. This process is also referred to as an RJE Batch Upload.
CPO ECA	Electronic check acceptance with combined billing through the FDCN host
ECA	Electronic check acceptance
EBT	Electronic Benefit Transfer
FDCN Host	First Data Corporation Nashville front-end host.
Force	Process the transaction without requiring an online approval code from the host. An operator entered auth code or voucher # may be required. A force transaction may be processed online at the time of entry or submitted as an advice on the next online or settlement session.
Integrated Terminal Management (ITM)	Integrated terminal management (ITM) is when merchant specific information is controlled from the FDCN front-end system via the ISO Dual interface.
Online	Process the transaction to the host online at the time the transaction is entered.
Offline/Advice	Store the transaction offline to the terminal's memory at the time the transaction is entered and process to the host as an advice at the time of the next online transaction or settlement session.
Terminal Management	Process whereby a terminal receives merchant specific parameter information from a remote or local terminal management system. The parameter information controls merchant, host and card type specific processing at the terminal.

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## 2.4 BATCH DOWNLOAD PROCESSING

A batch download feature is supported for reloading transactions from the FDMS Nashville host. The batch download is typically performed immediately following a full program download if an open batch exists at the FDMS Nashville host for the merchant terminal/location being downloaded. The transaction flow for a batch download is shown below. *If the FDCN host does not have any transactions to reload, ISO Field 39 will be set to a value of '97' on the 0310 response.*

Transactions exist in an open batch at FDCN host:

POS Application	FDCN Host
<b>Request Batch Record</b> Send Batch Detail Request → (Msg. '0300', Processing Code '000001')	
	<b>Send Batch Records</b> ← Send Batch Detail Response (Msg. '0310', Processing Code '00a001' if more records to load or '00a000' if no more records to load.)
Repeat the above steps until the last position of the '0310' response processing Code '0'.	

Transactions do not exist in an open batch at FDCN host:

POS Application	FDCN Host
<b>Request Batch Record</b> Send Batch Detail Request → (Msg. '0300', Processing Code '000001')	
	<b>Send Error 97</b> ← Send Error Response (Msg. '0310', Field 39 = '97'.)
Process complete – terminal does not send additional 0300 messages.	

## 2.5 ONLINE AUTHORIZATION PROCESSING

At the time a charge transaction is performed at the terminal, the unit should build and transmit an authorization request message and wait for an authorization response. When the authorization response has been received successfully and if there are no pending advice transactions to submit (see below), the terminal should disconnect to terminate the session with the host. The transaction may be either auth only (Message Type '0100') where the Nashville host does not capture the transaction or capture (Message Type '0200') where the transaction is stored at the host as well as at the terminal. For auth only or pre-auth transactions where eventual sales completion applies (terminal capture, lodging check-in, auto rental pickup, direct marketing order, etc.), it is the responsibility of the terminal to store the transaction for possible operator modification or deletion and to submit the final transaction as a financial advice (sales completion) transaction (Message Type '0220') before the batch is settled.

## 2.6 VISA BILL PAYMENT PROCESSING – U.S. MERCHANTS AND ACQUIRERS ONLY

VISA recurring Authorization transactions (i.e., transactions which include a POS Condition Code of 04) will be interpreted by the FDMS Front-End as Bill Payment transactions with a MOTO / Bill Payment / ECI Type Indicator of 02. For all qualified Bill Payment transactions, a Market Specific Indicator (MSI) value of B (Bill Payment) may be returned in Table 20 – Compliance Response Data of the Authorization Response message. If a Market Specific Indicator value of “B” is received in an Authorization Response message, the MSI value *must* be retained and submitted at time of Settlement.

**NOTE:** Bill Payment transaction processing as described above is currently supported for VISA card types only.

## 2.7 ERROR RECOVERY REVERSAL PROCESSING

A reversal transaction (0400) must be generated by the POS terminal application if the response to an online financial transaction request cannot be completed successfully. The reversal is pre-pended at the beginning of the next communication session with the host. If a matching transaction exists at the host, it will be un-posted; otherwise, the request will be ignored by the host. If a Field 39 Response Code other than ‘00’ is received in response to the pre-pended reversal transaction, an error condition should be assumed; the appropriate error text should be displayed and the session aborted. (*Refer to ‘Response Processing’, Page 15.*)

## 2.8 OFFLINE ADVICE PROCESSING

Offline advice transactions are transactions that are captured offline at the terminal and that are, at some later point, transmitted for capture at the host system. Advice transactions (Message Type ‘0220’) include sales/sales completion (force voice approvals, close tab, lodging check-out, auto rental return, and direct marketing sale completion), force refunds, adjustments and final settlement transactions when terminal capture applies. The advice transactions may be piggybacked in an online authorization session, transmitted in an independent session with a single or multiple advice transactions or transmitted as part of a settlement session before the settlement totals are submitted to the host for reconciliation. If multiple advice messages are being submitted together and communications is broken during this sequence, the remote device can re-establish the connection and continue, beginning with the transaction following the one that received the last full Advice Transaction Response.

If an Advice Transaction Request is sent and no response is received or only a portion of a response is received, the transaction should be re-submitted in a subsequent session. In other words, “when in doubt,” the transaction should be re-submitted rather than not. The FDC host will treat as a duplicate (and overwrite) any transaction which has an exact match on account number, transaction amount and invoice number, so that re-submission should not cause an out-of-balance situation if invoice numbers are properly managed by the remote system.

Typically, if an advice transaction is appended to an online authorization and an error occurs, the online authorization should be processed as usual (stored, receipt printed, approval code displayed) without any indication to the operator of the terminal that the advice did not process successfully. The advice should be attempted again in a subsequent session. For advice transactions that are pre-pended in a settlement session, any error should cause the settlement session to be aborted and the appropriate error text displayed.

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## 2.9 SETTLEMENT PROCESSING

After the host has been updated regarding all advice transactions, a settlement totals record must be submitted in order to reconcile the terminal and host totals and to close the batch. If the host and terminal totals are out-of-balance, the host will request that the terminal upload its entire batch. If the host requests the terminal to upload its batch, the terminal sends a settlement totals trailer following the upload. The uploaded batch will be settled and the batch closed.

### Settlement Flow Diagram

(Msg=ISO Message Type, PC=ISO Processing Code)

Terminal	FDCN Host
<b>Send Offline Advice to Host</b> If pending advice, send Advice Request → (Msg: '0220')	<b>Process Advice</b> ← Send Advice Response (Msg: '0230')
<i>The terminal continues sending advice messages until all pending advice transactions have been uploaded to the host.            At this point, the terminal and the host batch totals should be in balance.</i>	
<b>Send Totals</b> Send Settlement Totals Request → (Msg: '0500', PC '920000')	
	<b>Reconcile Totals</b> ← Send Reconciliation Totals Response (Msg: '0510', PC '92000x') Set Field 39, Response Code = '95' if out-of-balance.
<b>Upload Batch if Out-Of Balance</b> If first/more, send Batch Upload Detail Request → (Msg: '0320', PC '<original>')	
	<b>Process Detail</b> ← Send Batch Upload Detail Response (Msg: '0330', PC '<original>')
<i>The terminal continues sending batch upload detail until all transactions have been uploaded to the host.</i>	
<b>Send Upload Totals</b> If batch uploaded, send Totals Request → (Msg: '0500', PC '960000')	
	<b>Reconcile Totals</b> ← Send Reconciliation Totals Response (Msg: '0510', PC '96000x')
<b>Report Statistics (optional-ignored by host)</b> Send Statistics Request → (Msg '0800', PC '910000')	
	<b>Send Statistics Response</b> ← Send Statistics Response (Msg: '0810', PC '91000x')
<b>Initialize If Required</b> If supporting integrated terminal management and last response Processing Code = '910004', '920004' or '960004', perform initialization. <u>See ISO Dual Addendum A - Usage with Terminal            Management.</u>	

## 2.10 RESPONSE PROCESSING

In general, a successfully completed request/response session will include a Field 39 Response Code of '00' to indicate a successful completion. Similarly, if the POS device supports partially approved authorizations, a successfully completed request/response session may include a Response Code value of '10' in Field 39 when only a portion of the requested transaction amount has been approved. Optionally, the host may indicate specific error conditions by returning defined codes for which an application can have fixed response text (refer to page 203). If a Response Code is returned that is not defined, then a generic error response message that includes the actual Response Code received should be displayed at the terminal. The inclusion of the Response Code in the displayed text will aid support staff in resolving problems quickly. Any response code other than '00' or '10' should be treated as an error. In addition to the Response Code, any response may include Response Display Text (Private Use Field 63 or Private Use Field 63, Table 22) which should be displayed in place of or in addition to the defined text associated with the Field 39 Response Code. Even if Response Display Text is included in a response message, the Field 39 Response Code should still be used to determine if the transaction was successful or not.

**Note:** Any time the response to the first message in a session receives a Field 39 Response Code other than '00' or '10', an error condition should be assumed, the appropriate error text should be displayed and the session aborted. Typically, the only scenario where an error condition might not immediately result in an aborted session (with appropriate error display) is when a response code other than '00' is received for an offline advice that is appended to an online authorization. This transaction is typically transparent to the operator of the terminal. In this scenario, the offline advice would eventually be submitted at the beginning of the settlement session which would result in the appropriate error message being displayed so that the condition can be resolved.

## 2.11 US/DOMESTIC DEBIT PROCESSING

Features that may apply for credit card processing may not apply for debit card processing. Some of these features can be controlled by the FDCN host through initialization parameters if integrated terminal management (ITM) is being supported (refer to ISO Dual Addendum A – Usage with Terminal Management), or all features can be controlled/enforced by the application. Some features that are typically disabled for US/domestic debit cards are adjustments, voice referrals, force transactions, expiration date entry/validation, check digit validation, manual entry of the account number, Track I only cards, voids, auth only transactions and authorization floor limits. PIN entry is required for US/domestic debit cards. Some optional features include debit cash back, online refunds and the debit receipt signature line. The POS application should insure that Track II data is always required for debit transactions. Only DUKPT PIN encryption is supported by the FDCN host for US/domestic debit transactions.

## 2.12 US/DOMESTIC INTERCHANGE COMPLIANCE

This revision of the First Data interface incorporates the requirements necessary to comply with interchange compliance programs established by the card associations, including Visa's Custom Payment Service (CPS) and MasterCard's Interchange Compliance Program (ICP), and the newer requirements for incentive discount rates in the various industry types (retail, lodging, auto rental, direct marketing, etc.). Collectively, these programs will be referred to as compliance programs throughout the remainder of this document.

Compliance information provides the issuer with a positive match between the original authorization, and the subsequent settlement transaction. If authorizations are not captured real-time at the FDC host (pure terminal capture), this information must be captured and managed by the POS system and submitted with the final settlement batch. In order to achieve the most favorable discount rates, the authorization and capture system must be able to reliably transport additional interchange compliance data as required based on industry types from the card authorization response to eventual settlement.

### 2.12.1 Compliance - Retail

In order to qualify for the most favorable retail treatment, transactions must satisfy the following characteristics:

- **Custom Payment Service Data:** Either the terminal or host system must take responsibility for transport of retail-type compliance data including the original authorization amount and AVS result codes for keyed transactions.
- **Account # Source:** The card must be present at the point of sale and the authorization request must include full magnetic stripe image.
- **Authorization:** A single authorization must support the settled transaction.
- **Settlement Date:** The authorization must have been accomplished electronically either the same day or the day before the settlement date.
- **Settlement:** Settlement must be timely in accordance with deadlines established by merchant bank.

### 2.12.2 Compliance - Lodging/Auto Rental

For those POS systems processing lodging or auto rental transactions that wish to qualify for the new incentive discount rate programs (Visa's CPS/Hotel, MasterCard's Premier Travel Service, etc.), management of interchange compliance payment service data is required. In general, POS systems must support the following capabilities in order to qualify:

- **Original Auth/Duration:** The first authorization related to an eventual transaction, regardless of whether the card is actually swiped or not, must include a duration value (estimated number of days until the transaction will be settled). *Note: If the transaction will be settled the same business day (such as retail sale, advanced deposit charge, etc.), the duration should be submitted as '00' and will be treated as a standard retail transaction.*
- **Custom Payment Service Data:** This data must be stored from the original authorization response and retrieved for later incremental authorizations, partial reversals and eventual settlement. The original amount authorized and the total amount authorized must be included with the final settlement transaction.
- **Incremental Authorizations:** The incremental authorization is used to increase the total amount authorized from the original (or latest prior incremental) authorization to insure that the final settlement amount is within the 15% tolerance allowed. *The incremental authorization must contain*



*COMPLIANCE data from the original authorization response, as well as the incremental amount to authorize and the extended duration. The POS system must retain both the original and revised total amounts authorized.*

- **Partial Reversals:** The partial reversal is used to decrease the total amount previously authorized to insure that the final settlement amount is within the 15% tolerance allowed. This transaction must contain Payment Service data from the original authorization response, the downward revised amount, as well as the original auth code and the total amount authorized. Only one partial reversal is allowed per transaction and no subsequent incremental authorizations are allowed.
- **Settled Amount Tolerance:** The final amount must be within 15% of the total (or net) authorized amount.
- **Sales Completion:** The sales completion transaction (checkout for lodging, return for auto rental) is sent to the host during the settlement process following an associated partial reversal if applicable. The total authorized amount must equal the amount of the original pre-auth plus any amounts from incremental authorizations or the final settlement amount if a partial reversal applied.
- **Prompt for Tax Exempt Indicator and Rental Class ID:** *In order to qualify for T&E III, the POS device must prompt for and submit a tax exempt indicator and a rental class ID. Other required fields such as rental rate, city, state/province, country and days required are not required from the POS terminal when interfacing to the Nashville front-end.*

### 2.12.3 Compliance - Direct Marketing

For those POS systems processing direct marketing transactions that wish to qualify for the new incentive discount rate programs (CPS Direct Marketing, etc.), management of interchange compliance payment service data is required. In general, POS systems must support the following capabilities in order to qualify:

- **Custom Payment Service Data:** This data must be stored from the original authorization response and retrieved for later partial reversals and eventual settlement. The original amount authorized and the total amount authorized must be included with the final settlement transaction.
- **Partial Reversals:** The partial reversal is used to decrease the total amount previously authorized to insure that the final settlement amount matches the net amount authorized exactly. *This transaction must contain COMPLIANCE data from the original authorization response, the downward revised amount, as well as the original auth code and the total amount authorized. Only one is allowed per transaction.*
- **Settled Amount Tolerance:** The final amount must match the net amount authorized *precisely to the penny.*
- **Address Verification:** The initial authorization must include address verification data.

## 2.13 LOYALTY PROCESSING

First Data Merchant Services (FDMS) is implementing a new universal loyalty solution for its merchants. The Electronic and Rewards Network (EARN) offers merchants a system that enables consumers to accumulate rewards in real-time, based on point-of-sale transactions.

Figure 1 describes the flow of Loyalty processing.

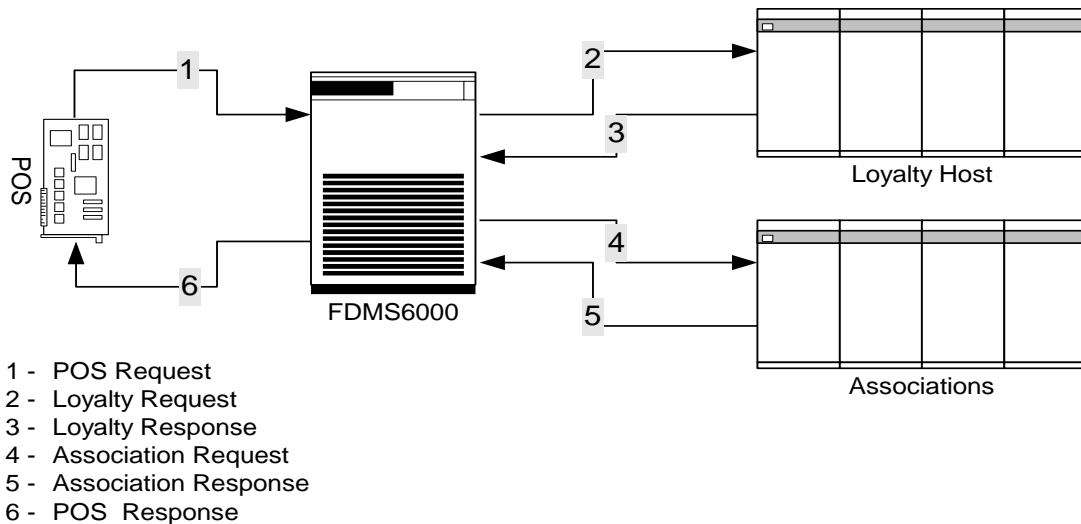


Figure 1

Loyalty requests will include credit/debit authorizations, financial transactions, and card file transactions. Credit/debit authorization requests will be processed through Loyalty and then sent, with a possible transactions amount adjustment, to the appropriate association for authorization. The financial transactions are Loyalty cash transactions that require Loyalty processing only. Both the credit/debit and financial transactions will support reversal processing. The card file transactions are Loyalty card member management messages and will only be sent to the Loyalty host.

## 2.14 PREPAID CARD PROCESSING FUNCTIONALITY

Prepaid products provide consumers with the flexibility to pay in advance. Card associations recognize that prepaid products represent unique opportunities for both merchants and consumers. Several transaction options are available in support of these type cards.

### 2.14.1 Activation and Load of Prepaid Cards (*Check for Availability*)

- **Activation**—Notifies the Issuer that a card has been purchased and should be activated for cardholder usage on the Issuer Processor system.
- **Load**—Notifies the Issuer of the dollar amount to be loaded to the card account. For an existing card account, the load amount should be added to the available balance on file.

**Note:** Load transactions do not require Activation. Load transactions can be independent of Activation transactions.

For a new card account, the card should be activated for usage and the amount added as the initial load to the card account. This is an unlinked load transaction in which the source of funds for the load value is provided from either one or the other of the following:

- ♦ Cash, or
- ♦ Another negotiable instrument (such as a check, money order or travelers check) or debit or credit card that may or may not be issued by the prepaid card Issuer.

**Note:** Values associated with Activation and Load transactions must be immediately posted to the prepaid card accounts and be available for potential cardholder access.

#### ***Settlement***

Settlement of Activation and Load transactions is carried out directly between the merchant or their Acquirer and the card Issuer. Arrangements for the settlement of Activation and Load transactions must be made between the Issuer and participating business partners.

#### ***Exception Items***

Adjustments or charge-backs are not allowed for Activation or Load transactions.

### 2.14.2 Partial Authorization Approvals

It is often difficult for the consumer to spend the exact amount available in the prepaid account, as purchases can be for amounts greater than the value available. This can result in unnecessary declines. Partial authorization capability addresses decline rates and enhances the consumer and merchant experience at the point of sale. Merchants have the option of accepting authorization responses approved by the issuer for only a portion of the requested amount rather than having the sale declined. The residual transaction amount of the transaction may then be paid by other means.

Partial authorization approval response messages support the following:

- The approved transaction amount. The amount must be used for reconciliation purposes and must also be used as the original transaction amount for any subsequent reversals, incremental authorizations, etc.
- A response code identifying the transaction as partially approved.
- The original transaction amount requested. This amount will be housed in the Additional Account / Amount Information Field 63, Table 90 Account Information Record identified with an Amount Type of 57.

Requestors must indicate that they are capable of supporting partial authorization approvals and receiving the information listed above. FDMS uses the information provided in the Additional Account / Amount Information request table to determine the requestor's ability to support partially approved authorization response messages and then forwards this information in the request message to the issuer. If the issuer supports partial authorizations and only a portion of the transaction amount can be approved, a partial approval will be returned if the requestor has indicated the ability to support partial authorizations. If the requestor doesn't indicate that they have the capability to support partial authorizations, the transaction will be rejected by the issuer because of insufficient funds.

### 2.14.3 Cash Disbursement

Some merchants will allow for the purchase of a good or service with additional cash received from the purchase. The consumer can ask for a cash disbursement on a prepaid card purchase or a credit card purchase. *This feature is not supported for all card associations.*

### 2.14.4 Account Balance Information

Two processing options are available for receiving cardholders' account balance information at merchant locations. They are as follows:

- Balance information that is returned as part of the authorization purchase response. *This type of transaction is not supported for all card associations.*
- Stand-alone balance inquiry initiated by the cardholder. This option is designed to allow cardholders to request account balance or available credit prior to the initiation of a purchase transaction. Transactions identified as stand-alone balance inquiries must also contain a transaction amount of \$0.00. These transactions should not be captured for settlement processing. *This type of transaction is not supported for all card associations.*

To receive balance information, the requestor must first indicate that they are capable of receiving such information. FDMS uses the information provided in the Additional Account / Amount Information request table to determine the requestor's ability to support the inclusion of account balance information in response messages. If an issuer includes account balance information in their authorization response and the requestor indicates their ability to receive such information, the account balance data will be

returned to the POS device in the Additional Account / Amount Information table of the response message.

## **2.15 CANADIAN DEBIT PROCESSING - TERMINAL MAC/EKME GENERATION AND VERIFICATION**

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A message authentication code ('MAC') is an authentication tag (sometimes called a checksum) derived by applying an authentication scheme, together with a secret key, to a given message. MACs are computed and verified with the same key, so that verification is restricted to the intended recipient. This section covers the methodology used to generate or verify a 'MAC' block and the verification involved in the Encrypted Available Balance ('EKME') block at the terminal. The terminal MAC discussed in this document applies to block cipher-based MAC.

The MAC is a value derived using an algorithm on certain data elements in a message, and the terminal includes the resulting value in the message when sending. The receiver calculates the MAC using the same data elements. If the receiver-calculated value matches that in the message, it is relatively certain that the message has not been tampered with or damaged during the transmission.

A 16 byte MAC block, with the first 8 bytes containing valid data and the remaining 8 bytes being zero filled, will be generated for each message originating from the terminal except for Canadian Debit key updates (Message 0800/0810, Processing Code 000000).

Responses received by the terminal may or may not have a MAC block, depending upon the response code received. For example, if the transaction didn't make it to the host, or encountered a host system error host (such as the key server or encryption box being unavailable), then the MAC block returned to the terminal will be blanks. But if there is a valid MAC block present in the MAC field in the response, the terminal does the verification on the MAC.

The encrypted data block that has the balance amount for the card is called the EKME block, and is also 16 bytes in length. Unlike the MAC block, the terminal will always be receiving and never sending an EKME, so the only operation it will perform on it is decryption, never encryption. All balance Inquiry transactions will have a MAC block in the response even if the transaction was declined. If the request was approved, the terminal formats the response information and sends it to the PIN pad. The PIN pad decrypts the EKME block and displays the balance amount on the PIN pad display. Only the customer who does the Balance Inquiry using his/her card is supposed to view the balance amount displayed on the PIN pad.

The encryption/decryption process depends upon three secret keys stored within the terminal known as the working keys, and one permanent key stored in the PIN pad. The working keys are:

- TMAC – Terminal Message Authentication Code (MAC) working key. A MAC Key is used to authenticate selected data elements in messages.
- TKPE – Terminal PIN Encryption working key. A PIN Encryption Key is used to protect PINs as they are transmitted.
- TKME – Terminal Message Encryption working key. A Message Encryption Key is used to encrypt and decrypt selected message elements, excluding PINs.

These working keys can be changed at any time based on rules and regulations for the Key changes specific to that merchant or client.

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The PIN pad is injected with a permanent Terminal Key Encryption Key (TKEK), which is used to encrypt and decrypt the working keys that are exchanged between the Host and the terminal. This key must also be stored on the host encrypted under the host Master Key.

### **Canadian Debit Key Update MAC Process (Message 0800/0810, Processing Code '000000 ')**

Once the terminal has been loaded with the software application, it is ready to request its 3 working keys. Performing a parameter download sends a request to the host to generate 3 working keys (TMAC, TKPE, and TKME) and the 4 byte check digit associated with the message authentication working key (TMAC). The Canadian Debit Key Update request should be sent to the host as soon as the terminal has successfully completed a parameter update (init) session but before the line is dropped for dial terminals. The key update request is only sent for terminal applications that support Canadian debit and when Canadian debit is enabled during the parameter update (init).

The response for the key update request, if successful, will contain the new terminal working keys, the MAC check digit and a MAC block. When the terminal receives the response, it sends a message to the PIN pad to verify the MAC block. The PIN pad expects a MAC verification request to have a specific format, as shown below, including data elements not present in the host response message. Therefore, the terminal application will create a message that includes the host response information in the appropriate fields, as well as all of the additional data fields expected by the PIN pad, filled with zeroes. The terminal sends this new message to the PIN pad, requesting MAC verification. The pin pad sends a message back to the terminal indicating success or failure of the MAC verification. If the PIN pad successfully verifies the MAC block, the new keys and the MAC check digit are stored in the terminal. If the MAC block fails verification at the PIN pad, then the terminal displays the message "MAC Verification Failed".

Below is the format in which the terminal sends the data to the PIN pad for the MAC verification on a successful parameter download response. The fields are separated by a space character.

- Account number (PAN) – 19 bytes. All zeroes.
- Processing code – 6 bytes. All zeroes.
- Transaction amount – 12 bytes. All zeroes
- Trace number – 6 bytes.
- Terminal RRN – 12 bytes. All zeroes
- Response code – 2 bytes.
- Terminal MAC working key – 16 bytes.
- Terminal KME working key – 16 bytes.
- Terminal KPE working key – 16 bytes.

The 8 bytes of the MAC block that contain valid data are also sent to the PIN pad.

### **Authorization/Reversal request MAC process (Message 0200/0210 and Message 0400/0410)**

The terminal generates a MAC block for an authorization/reversal request by sending the following data elements to the PIN pad.

- Account number (PAN).
- Processing code.
- Transaction amount.
- Trace number
- Terminal RRN

The above space-separated fields will be sent, along with the TMAC working key, to the PIN pad in a request to generate an encrypted MAC block. The PIN pad uses this TMAC working key to generate an encrypted MAC block based on the data elements provided. The terminal receives the MAC block, includes the MAC block in the request message and sends it to the host.

### **Authorization/Reversal response MAC process**

When the terminal receives the authorization/reversal response from the host, the MAC block, the TMAC working key, and the appropriate additional data elements as noted below, are sent to the PIN pad in a MAC verification request. The TMAC working key will be used by the PIN pad to verify the MAC block received. The data elements sent to the pin pad are space separated.

The following are the mandated data elements that are used for the MAC verification by the PIN pad:

- Account number (PAN). This is a variable length field and the maximum length is 19 bytes.
- Processing code
- Transaction amount
- System trace number
- Terminal RRN
- Response code (Values: Approval – 00, Decline – 57)

Apart from the above mentioned data elements; there are 3 other optional data elements. If any of these are present in the response message it will be included in the MAC verification.

- TMAC working key
- TKME working key
- TKPE working key

The 8 byte MAC block is also sent to the pin pad.

If the MAC verification fails at the PIN pad, the terminal will display or print "MAC Verification Failed". Subsequently, a reversal will be generated and stored in the terminal with a reason code of 30. If the MAC verification failed due to TMAC sync error, then a reversal will be generated with a reason code of 31. This reversal will be transmitted to the host, the next time a transaction is attempted. For any transaction to be processed, the stored reversal has to be processed first. If the host declines the reversal, or if the reversal response fails MAC verification, the reversal will be retransmitted up to 2 additional times. After the third unsuccessful attempt, the reversal will be deleted. New keys may be received on any reversal attempt and should be used to process the response in which they were received.

For 0400 Canadian debit reversals, the MAC check digit is used during Canadian debit processing to distinguish a MAC synch error from a MAC (TMAC) verification error when MAC verification fails. If the MAC authentication fails for a transaction and the MAC Check Digit received in the transaction response

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does not match the MAC Check Digit stored when the MAC working key was last received from the host, then the 0400 Canadian Debit Reversal Code is set to '31' for synch error; otherwise, the Reversal Code is set to '30' for verification failure.

#### **EKME/Data Block (Encrypted available balance).**

The EKME block is an encrypted data block containing the balance amount of the customer's account. This encrypted block will be decrypted at the PIN pad and the balance amount will be displayed at the pin pad display for a few seconds.

EKME block is 16 bytes long. The host sends the encrypted EKME block on a Balance Inquiry approval response. The terminal sends this block along with the TKME working key (Message encryption key) to the PIN pad. The PIN pad decrypts the EKME/Data block and displays the balance amount on the pin pad.

If pin pad fails to decrypt the data block, the terminal will display/print 'Decryption Failure'. Message decryption failure can only occur on balance inquiry messages returned to the terminal where balance data is present.

There are 2 types of failures that can happen.

- ☐ Message Decryption Failure
- ☐ Message Encryption Key synchronization error.

In both of these circumstances a reversal will be generated with the appropriate reversal reason code of 86.



## **2.16 DYNAMIC CURRENCY CONVERSION (DCC)**

Dynamic Currency Conversion (DCC) allows merchants to offer their international credit cardholders the choice to pay for goods or services in the currency of their card. The service is currently offered for Visa and MasterCard transactions.

The DCC service provides convenience and a level of comfort to the international cardholder by enabling them to carry out transactions in their own home currency and to receive a favorable exchange rate. Once the customer elects to proceed with DCC, the transaction remains the currency of the card throughout the entire transaction and settlement process. The merchant will produce a receipt showing the U.S. Dollar amount, the foreign currency amount, the rate of exchange used to convert the transaction, as well as an acknowledgement signed by the cardholder indicating both that they had a choice to pay in U.S. Dollars and that the choice of currency is final.

DCC merchants will be required to accept a daily exchange rate table as well as a monthly BIN card look-up table to operate the DCC service.

Merchants who process DCC transactions must capture those additional data elements that correspond to the DCC transaction. The DCC data elements required during authorization processing consist of the Foreign Amount and Currency Code. The additional DCC data elements for settlement processing consist of the Currency Code; Foreign Amount; DCC Authorization Date and Time; DCC Transaction Time Zone; DCC indicator; DCC Foreign Exchange Rate; and US Dollar Amount.

### **2.16.1 DCC Indicator**

The FDMS Nashville platform will recognize the transaction as a DCC transaction based on the value in the DCC indicator.

- ☐ DCC indicator value of “1” (DCC convertible – Cardholder agrees) the transaction will be routed to OmniPay for processing.
- ☐ DCC indicator value of “2” (not DCC convertible)
- ☐ DCC indicator value of “3” (DCC convertible – Cardholder declined) – These transactions are submitted into the standard North PTS settlement process.
- ☐ DCC indicator value of “4” is reserved for future use.

### **2.16.2 Transaction Amount**

The Transaction Amount field represents the foreign amount, where the DCC indicator is a value of “1” (DCC convertible/Cardholder agrees). The transaction amount should be in U.S. dollars, where the DCC indicator is a value of “2” (not DCC convertible) or “3” (Cardholder Declined). The number of implied decimal positions depends on the Transaction Currency Code. This field is submitted to the host via Bit Field 4.

As an example, US dollar amount have 2 implied decimal places so the transaction amount would be ‘000000000100’. The Yen has no implied decimal places so for 1 Yen the dollar amount would be ‘000000000001’.

### **2.16.3 Currency Code**

This field contains the Numeric Country Code of the DCC transaction amount. Omit Currency Code or set value as “840” (US) for DCC transactions that are not convertible or where cardholder declined. This field is submitted to the host via Bit Field 51.

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#### **2.16.4 DCC Transaction Date and Time**

This field represents the merchant's local date and time when the transaction was converted to the foreign currency (i.e., the authorization time of original sale). This date and time are submitted to the host via Bit Fields 12 and 13.

#### **2.16.5 DCC Time Zone of Transaction**

This field represents the time zone where the merchant is located. This field denotes the number of hours, between +12 and -12 as compared to Greenwich Mean Time (GMT); GMT = "+00". Example: Eastern Standard Time (ET) = -05. Omit for DCC transactions that are not convertible or where the cardholder declined. This field can be submitted to the host via Bit Field 63, Table 19 but if set to a dummy value of '999', will be plugged by the host from the merchant's record on the host.

#### **2.16.6 DCC Foreign Exchange Rate**

This field represents the exchange rate used to convert the transaction, as provided by FEXCO. Omit or set to all zeroes for DCC transactions that are not convertible or where the cardholder declined. This field is submitted to the host via Bit Field 63, Table 19.

#### **2.16.7 DCC U.S. Dollar Amount**

This field contains the U.S. Dollar final settlement amount that was converted to the foreign currency. Omit or set to all zeroes for DCC transactions that are not convertible or where the cardholder declined. . This field is submitted to the host via Bit Field 63, Table 19.

#### **2.16.8 Other Amount Fields**

When DCC is accepted, all amount fields included in a transaction (other than the DCC U.S. Dollar Amount) sent to the host should be converted using the FX rate associated with the currency code included in Field 51. These fields include the tip amount, tax amount, extra lodging room rate, lodging tax rate, original transaction amount, original amount authorized, and total amount authorized.

### **Managing the DCC BIN and FX Files**

- ☐ The terminal must ensure the DCC FX table is current during all pre-auth (check-in for lodging and auto rental) and online authorization transactions. The terminal will include Field 63, Table F1 on the request message and accept Field 63, Table F1 on the response to obtain the status of the FX file stored at the terminal. If the host indicates that the file needs to be updated, the terminal will request a file transfer of the new DCC FX file once the authorization processing has been completed (auth code displayed and receipt printed). Messages should be displayed to discourage the operator from intervening with the transmission.
- ☐ During settlement and initialization processing (if terminal management applies), the terminal must ensure both the DCC BIN and FX tables are current. After the settlement and/or initialization processing have been completed (including batch upload processing if required), the terminal will send in a 0800 File Processing message to check the status of the DCC BIN file and will request transfer of a new file if the host indicates the file is out of date. After the DCC BIN file update processing has been completed, the terminal will send a 0800 File Processing message to check the status of the DCC FX file and will request transfer of a new file if the host indicates the file is out of date. Messages should be displayed to discourage the operator from intervening with the transmission.
- ☐ The terminal must support a function that allows the operator to check the status of both the DCC FX and BIN files and request transfer of a new file if either is out-of-date. The file status and transfer

processing shall mimic that described above for settlement processing using the 0800/0810 sequence.

- If for some reason the terminal does not successfully receive an updated FX or BIN file, it should continue using the existing file until an updated file is received. One exception is the first init after a download in which case the terminal must keep trying to load the DCC FX and BIN files until they are loaded successfully.
- If the FX rate is expired in the file, DCC must not be offered for that transaction. See exception below for lodging processing.

***Assumptions for DCC converted lodging transactions.***

- The check-in amount uses the FX rate at time of the check-in.
- All subsequent user initiated incremental auth transaction would use the FX rate at the time the incremental auth amount is entered at the terminal.
- The check-out would use the FX rate at the time of check-out. This is a settlement only transaction and there is no re-authorization of the total amount.
- The final check-out incremental auth or partial reversal transaction would add or reverse the difference between the total amount authorized in the consumer's currency and the final check-out amount converted using the FX rate at the time of the check-out.
- The check-in amount, incremental auth amount and check-out amount are all entered by the user in US dollars.
- The room rate and tax rate are always entered in US dollars. These are extra settlement fields that currently apply for MC. They need to be converted using the FX that applies at the time of check-out before they are sent to the host
- The terminal sends in a total amount authorized and an original amount authorized for compliance processing. These should be the converted amounts.
- If the FX rate is expired at check-out, the terminal will display an error message and abort the check-out. It will be up to merchant procedures whether the table is updated or the transaction is re-run as an online sale/check-out using US dollars. There is no requirement to do a partial reversal for the total amount authorized. The error text displayed at the terminal will be:

'FX RATE EXPIRED'  
'RE-ENTER AS US\$ SALE'

## 2.17 EMV CHIP PROCESSING

EMV is short for EMVCo which was formed by EuroPay International, MasterCard International and Visa International. EMV provides the ability for merchants to send the data elements required for processing Chip or Integrated Circuit Card (ICC) transactions.

EMV is only applicable to merchants domiciled in Canada and the LAC Region (excluding merchants domiciled in Mexico where the domestic cards are processed through Prosa).

Merchants or vendors supporting EMV data elements must use a chip capable reader/device that has been certified by EMVCo for type approved terminal level 1 and 2 prior to testing with FDMS. Further information regarding EMVCo's roles, ICC specifications, type approval, testing and device compliance refer to <http://www.emvco.com>. Those merchants or vendors that integrate their point of sale device with an EMVCo approved terminal will work with the type approved terminal developer.

The EMV data elements must be present and populated for transactions that occurred as a result of the following:

- The chip card was inserted into the terminal's chip reader.
- The chip on the card connected with contacts in the terminal so that they communicated with each other.
- The card remained in the terminal until the transaction was completed.

Chip capable reader/devices must be injected with the EMVCo public keys.

Due to the sensitive nature of the interaction among chip, device and issuer, merchants (or their vendor representatives) must certify as EMV-ready with Visa and M/C. This certification is processed through the FDMS test system and into specially-equipped systems at M/C and Visa. The merchant (or vendor) must purchase a formal set of test cards and scripts from Visa and M/C to facilitate these tests.

Participation in this structured validation process must be done with physical devices, **not** simulators, and the script must be successfully completed with no errors. If an error is discovered, a subsequent certification has to schedule and the entire script(s) re-tested. This regression requirement ensures that no adverse effects result from any modifications or fixes.

### Chip Based non-EMV Transactions

For transactions where the chip was read *but* the EMV data elements are not provided, the transaction will be cleared as a non-EMV chip based transaction.

### EMV Processing Principles

The issuer personalizes parameters in the chip. The chip on the card works in conjunction with the certified chip-capable device to approve, decline, or forward the transaction online by performing a series of risk management steps at the point of transaction. These include:

- Offline data authentication. This feature uses a public key to validate the card is genuine offline.
- Offline authorization controls. These controls prompt transactions to be sent online to the Issuer or to be declined offline.
- Offline PIN verification. This feature allows the cardholder's to enter their PIN to be validated offline between the card and device.
- Decision to authorize online.
- Decision to decline offline regardless of online approval.
- Disabling all or portions of the card's capability

At the inception of a chip transaction, the terminal and the chip share risk assessment duties. First, the device determines whether the transaction should be approved offline, declined offline or forwarded for online authorization. As a result of this initial decision, the chip-reading device submits its determination to the card. The card then evaluates the risk associated with the device-assessed transaction according to its issuer-customized parameters. Based on these combined findings, the card makes its decision and generates a digital certificate and audit trail data. The certificate and audit trail data are sent to the device with the cards decision. When the device receives an offline approval or decline, the device informs the merchant and the transaction is completed. If the transaction requires a host decision, the device will send FDMS a request for authorization.

An online EMV authorization request contains a number of chip data fields (EMV tags) that are routed to the Issuer. The Authorization Request Cryptogram (ARQC) using a Data Encryption Standard (DES) key and all chip-associated data are sent in the auth request message. The Issuer validates the ARQC and chip-associated data prior to making an authorization decision.

If the Issuer supports Issuer authentication, either Visa/MasterCard or the Issuer generates a second cryptogram called the Authorization Response Cryptogram (ARPC), which is sent back to the chip/chip-reader device. The ARPC is used by the chip to ensure that a valid authorization response came from the legitimate issuer.

Issuer Script may also be sent in the response message to enable updating card data and functionality. These may include but are not limited to:

- Offline PIN – The card can store a reference PIN value in its secure memory, and check it offline against a value entered by the cardholder.
- Application Blocking - Deactivates the application on the chip if the card is reported lost or stolen to stop the card from being used offline.
- Control of Offline Spending – The software application running on the chip is programmed with offline spending limits. These may include:
  - Velocity limits -The maximum number of consecutive offline transactions that are allowed. This issuer programs the card to always go online after a certain number of offline transactions.
  - The maximum cumulative value of consecutive offline transactions that is allowed. Using this mechanism the issuer can control their offline risk exposure. Once a card has been used to make offline transactions to a value defined by the issuer, it will only allow a further transaction if it is online approved.
  - The risk assessment of the transaction, which may be based on data including transaction amount, transaction country and type of merchant location.

If the issuer provides the Issuer Script in the response along with an approved response, the card can override the Issuer's authorization with a decline. An example issuer script is shown below.

Example: 7210860E04DA9F580905a1a2a3a4a5a6a7a8 (shown in hex nibbles)

This command is interpreted as follows:

1 byte of data	72	Issuer Script Tag
1 byte of data	10	Length of Issuer Script Data (10=16 bytes)
1 byte of data	86	Issuer Script Command Tag
1 byte of data	0E	Length of Issuer Script Command data (0E=14 bytes)
14 bytes of data	04DA9F580905a1a2a3a4a5a6a7a8	

Where:  
04 is 1 byte of data

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DA is 1 byte of data  
...  
a1...a8 is MAC

Transactions that are approved offline are not submitted to FDMS for an on-line authorization request.  
***The approved off-line transactions are submitted during the settlement process.***

Transactions that are approved online without override by the card ***also need to be resubmitted before settlement.*** The terminal will send a 0220 adjustment advice that will include the final Field 55 EMV data including the final Transaction Certificate (TC) created by the card.

### EMV Data Field Identifier

The EMV Data Field Identifier contains the EMV Data Length Indicator and the EMV chip data in tag-length-value (TLV) format. Multiple TLV data elements may be present in the EMV Data Field Identifier.

EMV Data Length format is defined as:

- EMV Data Length Indicator – The EMV Data Length Indicator defines the length of bytes present in the EMV Data Field Identifier, excluding the EMV Data Length Indicator. The EMV Data Length Indicator is 3 bytes in length represented in base 10.

TLV format is defined as:

- Tag – The tag contains a 1 or 2 byte binary value that identifies the content of the value field.
- Length – The length defines the length of the value represented in binary format.
- Value – The value is a variable length field that contains transaction-specific data.

### EMV DATA FIELD IDENTIFIER SAMPLE

The EMV Data Field Identifier will contain the EMV Data Length Indicator and multiple TLV data elements as described above. Below is a sample of the EMV Data Field Identifier with 2 TLV data elements.

See 'Appendix E – EMV Tag Matrix' for a complete list of the EMV Tags.

### Sample Data

EMV Data Length Indicator	Tag 1	Length 1	Value 1	Tag 2	Length 2	Value 2
0024	9F37	04	833A1232	9F10	02	AB34

0249F3704833A12329F1002AB34 (binary hex nibbles)

024 = EMV Data Length Indicator  
9F37 = "Unpredictable Number" Tag  
04 = Length Indicator  
833A1232 = Unpredictable Number  
9F10 = "Issuer Application Data" Tag  
02 = Length Indicator  
AB34 = "Issuer Application Data"

## ***Managing the CA Public Key File***

During settlement and initialization processing (if terminal management applies), the terminal must ensure the EMV CA public key file is current. After the settlement and/or initialization processing have been completed (including batch upload processing if required), the terminal will send in an 0800 File Processing message to check the status of the 'EMVKEY' file and will request transfer of a new file if the host indicates the file is out of date. After the 'EMVKEY' file update processing has been completed, the terminal will send a final 0800 File Processing message to check the updated status of the file. Messages should be displayed to discourage the operator from intervening with the transmission.

The terminal must support a function that allows the operator to check the status of 'EMVKEY' file and request transfer of a new file if the file is out-of-date. The file status and transfer processing shall mimic that described above for settlement processing using the 0800/0810 sequence.

If for some reason the terminal does not successfully receive an updated file, it should continue using the existing file until an updated file is received. One exception is the first init after a download, in which case, the terminal must keep trying to load the EMVKEY file until it is loaded successfully.

### Document references that apply for the 'EMVKEY' file update process:

Section 0:	Field 63, Table F1 – F5 - File Update Status Packet
Section 5.33.77:	Field 63, Table FB – File Block Transfer Packet
Section 6.10.13:	0800 File Processing Request
Section 6.10.14:	0810 File Processing Response
Section 6.10.15:	File Update Processing Flow
Section 12:	CA Public Key File Format

### 3 DATA FIELD FORMAT TYPE AND LENGTH INDICATORS

Format types and field lengths in the layout specifications below utilize ISO 8583 conventions. The following may further clarify the field layout type/length indicators:

**The following rules apply to the data elements shown on the following page:**

- In the table below, a lower case 'n' implies a numeric as used in each field definition to represent the maximum number of elements for variable length fields and the exact number of elements for fixed length fields.
- All data elements begin on a byte boundary.
- Fixed length 'N' type fields with an odd length are right justified to a byte boundary and zero filled on the left.
- The length indicator for a variable length field ('..' and '...') is a count ('nn' or 'nnn' respectively) of the number of elements to follow (not always the number of bytes, nibbles, etc.) and it does NOT include the length of the length indicator.
- All length indicators for variable length fields are represented in a binary coded decimal (BCD), right justified to a byte boundary and zero filled on the left.
- The variable Primary Account Number (Field 2), with an odd length is left justified within the field and 'F' filled.
- 'AN' implies numeric digits, 'a'-'z' and 'A'-'Z'.
- 'ANS' implies numeric digits, 'a'-'z', 'A'-'Z' and all other printable characters.



INDICATION	COMMENT
AN n or ANS n	<b>Alphanumeric Fixed Length</b> - ASCII printable character set. Left justified, space filled. Field size 'n' is expressed in bytes. Example - Response Code Bit 39 (AN 2), Length 2, Value '01': Hex 30 31
AN ..n or ANS ..n	<b>Alphanumeric Variable Length (2)</b> . Left justified, space filled, if necessary. Field size 'n' is expressed in maximum number of bytes allowed, excluding the length byte. Example - Additional Response Data Bit 44 (AN ..10), Length 2, Value '02': Hex 02 30 32
AN ...n or ANS ...n	<b>Alphanumeric Variable Length (3)</b> . 'n' is maximum number of bytes allowed, excluding length. Amounts using this type have two assumed decimal places unless foreign currency applies. Example - Invoice Number Bit 62 (AN ...10) - Length 10, Value '0000123456': Hex 00 10 30 30 30 30 31 32 33 34 35 36 Example - Tip Amount Bit 54 (ANS...12), Length 12, Value '\$32.96': Hex 00 12 30 30 30 30 30 30 30 30 33 32 39 36
AN ....n or ANS ....n	<b>Alphanumeric Variable Length (4)</b> . 'n' is maximum number of bytes allowed, excluding length. Amounts using this type have two assumed decimal places unless foreign currency applies. Example - Health Care Bit 48, Dataset 72, Bit 15 (AN ....1900), Length '10', Value '0000123456': Hex 00 10 30 30 30 30 31 32 33 34 35 36
AN V ANS V	<b>Alphanumeric Variable Length (without length byte)</b> . length determined by some other method (length of table, delimiters, etc.). Example - Check Number Bit 63, Table 64 (AN ...13), Value '1234': Hex 31 32 33 34
ANSB ....n	<b>Alpha, numeric, special characters and binary representation of data - variable length (up to 9999)</b> . 'n' is maximum number of bytes allowed, excluding length. Example - (ANSB ....9999), Length 6, Value '123<line feed character>12': 00 06 31 32 33 0A 31 32
N n	<b>Packed Numeric Fixed Length</b> . 0-to-9 values packed in 4-bit BCD. Right justified, zero filled. Field size 'n' is expressed in significant digits or half-bytes. When the size is an odd number, the <b>first</b> half-byte of data is padded with a 4-bit 0 (null). Amounts under this format type have two assumed decimal places unless foreign currency applies. Examples: Processing Code Bit 3 (N 6), Length 6, Value '004000': Hex 00 40 00 POS Entry Mode Bit 22 (N 3), Length 3, Value '012': Hex 00 12 Transaction Amount Bit 4 (N 12), Length 5, Value '\$142.75': Hex 00 00 00 01 42 75
N ..n	<b>Packed Numeric Variable Length</b> . Field size 'n' is maximum digits or half-bytes, excluding length byte. When the size is an odd number, the <b>last</b> half-byte is normally padded with a 4-bit 0 (null); <i>however, the PAN-Field 2 is left justified and padded with a HEX F for odd lengths</i> Example: Primary Account Number Bit 2 (N..19). Length 13, Value '4100123456789': Hex 13 41 00 12 34 56 78 9F
Z ..n	<b>Track 2 Data</b> . Same as 'N ..n' but allowing a Hex D as a valid digit for the field separator. Example: Track 2 Data Bit 35 (Z ..37), Length 21, Value '4100123456789=9304101': Hex 21 41 00 12 34 56 78 9D 93 04 10 10
B n	<b>Binary Fixed Length</b> . The field allows the full range of binary data without regard to ASCII value, printability or command duplication. Field size is expressed in <b>bits</b> . Example: Health Care Bit 48, Dataset Identifier (B 8), Length 8 (bits), Value '00010110': Hex 16

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## 4 SYNCHRONOUS MESSAGE STRUCTURE

### 4.1 GENERAL MESSAGE STRUCTURE

A message between the POS device and the Nashville host consists of a message header, the application data and a two byte CRC. The message header is made up of an HDLC/SDLC poll address byte (usually 30h), an HDLC control byte (e.g. 10h), and a 5 byte TPDU described below.

### 4.2 TPDU - TRANSPORT PROTOCOL DATA UNIT

The TPDU is a 5 byte header that precedes the application data in synchronous protocol. The fields are defined as follows for request messages:

TPDU ID:	Identifies TPDU type (1 byte) 60h - Transactions 68h – Initialization
Destination Address:	Network International Identifier (2 bytes -nnnnh) – refer to ISO Dual Addendums A <del>and B</del> for specifics on values that apply depending on whether integrated terminal management applies or not.
Originator Address:	Identifies the individual terminal or process originating the transaction 0000h (2 bytes)

### 4.3 ISO DUAL VIA DATAWIRE

When processing through the Datawire IPN, the synchronous level protocol and framing characters (including the CRC) do not apply. Only the TPDU header and ISO Dual message apply. The session has to be setup using the API calls as required by Datawire. An example TPDU and ISO Message portion is shown below.

```
60 00 38 00 00 02 00 30 20 05 82 00 C8 08 06 00 40 00 00 00 00 00 01
00 00 00 08 00 22 00 38 00 01 31 30 34 32 34 32 32 35 31 30 30 30 30 30
30 30 30 31 37 32 34 39 34 76 42 34 30 30 35 35 31 39 32 30 30 30 30 30
30 34 5E 46 44 4D 53 20 54 45 53 54 20 43 41 52 44 20 20 20 2F 56 49 53 41
5E 30 35 31 32 31 30 30 35 34 33 32 31 30 30 30 30 30 30 30 30 30 30 30
30 30 30 20 20 31 35 30 20 20 41 05 11 07 12 25 18 00 00 00 06 30 30 30 30
30 36 00 10 00 04 36 36 30 32 00 02 37 33
```

## 4.4 SYNCHRONOUS PROTOCOL MESSAGE SESSION EXAMPLE (DOES NOT APPLY FOR DATAWIRE PROCESSING)

**SNRM from host:**

30 93 F7 7F

**Unnumbered Response from terminal:**

30 73 F9 E3

**Host sends poll command:**

30 11 ED E3

**Terminal Sends Auth Request:**

30 10 60 00 38 00 00 02 00 30 20 05 82 00 C8 08 06 00 40 00 00 00 00 00 01  
00 00 00 08 00 22 00 38 00 01 31 30 34 32 34 32 32 35 31 30 30 30 30 30 30  
30 30 30 31 37 32 34 39 34 76 42 34 30 30 35 35 31 39 32 30 30 30 30 30 30  
30 34 5E 46 44 4D 53 20 54 45 53 54 20 43 41 52 44 20 20 20 2F 56 49 53 41  
5E 30 35 31 32 31 30 30 35 34 33 32 31 30 30 30 30 30 30 30 30 30 30 30  
30 30 30 20 20 31 35 30 20 20 41 05 11 07 12 25 18 00 00 00 06 30 30 30 30  
30 36 00 10 00 04 36 36 30 32 00 02 37 33 FF A7

**Host Sends Receive Ready (Basically an ACK):**

30 31 EF 67

**Terminal Acknowledges (ready for a response):**

30 11 ED E3

**Host Auth Response:**

30 30 60 00 00 00 38 02 10 30 38 01 00 0E 80 00 02 00 40 00 00 00 00 00 01  
00 00 00 08 13 08 40 11 07 00 38 30 30 30 30 31 38 33 35 38 31 34 39 4F 4B  
31 32 33 38 30 30 30 34 32 34 32 32 35 31 00 34 00 26 32 30 45 30 31 35 33  
31 31 31 34 32 32 33 31 31 32 39 47 34 37 31 45 20 39 30 00 04 37 34 30 32  
08 74

**Terminal Acknowledges (received okay):**

30 31 EF 67

**Notes:**

- ☐ In the message packets, the first two bytes are sync control characters (e.g. 30 30 in the auth request above). These keep track of the packet order to make sure no packets are missed.
- ☐ The next five bytes (e.g. 60 00 38 00 00 in auth request above) makes up the TPDU.
- ☐ The next byte is the start of the message data (e.g. 02 00 message type in auth request above).
- ☐ The last two bytes in each message are the CRC bytes. (even for the small control packets)
- ☐ There are no length bytes. HDLC framing works by sending a special character ( 0x7E) at the start of a frame and a special character (0x7E) at the end of a frame (the protocol makes sure these character never appear in the actual message)
- ☐ Check the site below for more detail.

[http://en.wikipedia.org/wiki/High-Level\\_Data\\_Link\\_Control](http://en.wikipedia.org/wiki/High-Level_Data_Link_Control)

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# 5 NASHVILLE ISO DUAL FIELDS AND TABLES

## 5.1 ISO DUAL FIELDS AND TABLES USED IN THIS SPEC

The following fields are supported in this FDC Nashville interface specification. Others may be added as required. ***Fields shaded below are typically used when integrated terminal management applies – refer to ISO Dual Addendum A.***

FIELD	TABLE	FIELD NAME	ATTRIBUTE	COMMENT
		ISO 8583 Message Type	N 4	Defines transaction type
		ISO 8583 Bit Map	B 64	Standard ISO 8583 Bit Map
2		Primary Account Number	N ..19	Included when track data is not available
3		Processing Code	N 6	Defines transaction type and flow control
4		Transaction Amount-	N 12	Transaction amount
11		System Trace Audit Number	N 6	Echoed by host in response
12		Local Transaction Time	N 6	HHMMSS (merchant time)
13		Local Transaction Date	N 4	MMDD (merchant date)
14		Expiration Date	N 4	Expiration date when applicable
22		Point of Service Entry Mode	N 3	Account # entry type
23		Card Sequence Number	N 3	EMV / CHIP card sequence #
24		Network International Identifier	N 3	Identifies the acquiring host
25		Point of Service Condition Code	N 2	Defines special conditions
27		Additional POS Information	N 2	Defines terminal capabilities
31		Acquirer Reference Data	AN ..1	Check digit reference flag for Field 41
35		Track II Data	Z ..37	Track II data if available
37		Reference Number	AN 12	Retrieval reference #
38		Approval Code	AN 6	As applicable for approved transactions
39		Response Code	AN 2	Indicates status of transaction
41		Terminal ID	AN 8	Uniquely identifies terminal to host
42		Merchant ID	AN 15	Uniquely identifies merchant to host
45		Track I Data	ANS ..76	When valid Track II data is not available
48		Application Specific Data	ANSB....9999	Application specific data (e.g. health care)
51		Transaction Currency Code	AN 3	Numeric currency code associated with amount fields
52		PIN Block	N 16	Encrypted customer entered PIN
53		Logon Password	N 16	Nashville host logon password
54		Tip Amount	AN ...12	Transaction tip amount
55		EMV / CHIP Data	ANSB ...999	Required for EMV / CHIP transactions
60		Private Use Fields		
		Batch Number	AN ...6	Terminal batch number
		Software/Revision ID	AN ...32	Terminal software name and revision
		Original Message Data	AN ...22	Data from original transaction
		Original Amount	AN ...12	Amount from original transaction
		Parameter Initialization Tables	AN ...999	Nashville host initialization data
61		Private Use Fields		<i>None defined</i>
62		Private Use Fields		
		Invoice, Folio, Rental Agreement or	AN ...10	Merchant transaction reference number

FIELD	TABLE	FIELD NAME	ATTRIBUTE	COMMENT
		Order Number		
63		Private Use Fields		
		Settlement Totals	AN ...90	Batch totals for reconciliation
		Response Display Text	ANS ...40	Text to display at the terminal
		Terminal Statistics	AN ...105	Local terminal statistics
		Additional Data Length	N 3	Length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	Alternate merchant transaction reference #
	10	Clerk/Server Data	AN ...10	Employee ID number
	12	Lodging Data	AN ...49	Lodging settlement data (legacy)
	13	Lodging Data	AN ...79	Lodging settlement data
	15	Auto Rental Data	AN ...76	Auto rental settlement data
	18	Debit Key Synch Counters	AN ...11	Canadian debit key synch counters
	19	Dynamic Currency Conversion Data	AN ...31	DCC settlement data
	20	Compliance Response Data	AN ...26	Response payment service data
	21	Compliance Original Auth Amount	AN ...14	Original authorization amount
	22	Response Display Text	ANS ...42	Text to display at terminal
	23	Response Print Text	ANS ...45	Text to print at terminal
	31	Network Response Code	AN ...4	Native debit network response code
	32	<del>Card Authentication Result Code</del>	<del>AN ...3</del>	<del>Card authentication result for EMV chip transactions (Visa only)</del>
	33	DUKPT Key Serial Number	AN ...22	DUKPT key serial number
	34	Canadian Debit Keys	AN ...50	Canadian debit master session keys
	35	Message Authentication Code (MAC) and MAC Check Digit	AN ...22	Canadian debit MAC authentication code and MAC check digit
	37	Canadian Debit Encrypted Balance	AN ...18	Canadian debit encrypted debit account balance
	38	Reversal Reason Code	AN ...4	Reversal reason code
	39	Tax Amount	AN ...14	Transaction tax amount
	41	Cash Back Amount	AN ...14	Transaction cash back amount
	42	Schedule Download	AN ...72 or AN ...89	Trigger information for auto program download
	43	<del>Application ID (Reserved for Future Use)</del>	<del>AN ...14</del>	<del>Specifies application for which information is being requested to be returned in Table 44.</del>
	44	<del>Application Download Information (Reserved for Future Use)</del>	<del>AN ...183</del>	<del>Information required to download new version of an application.</del>
	44	Card Authentication Result Code	AN ...3	Card authentication result for EMV chip transactions (Visa only)
	48	# of Payments	AN ...4	Credit plan # of payments indicator
	49	Terminal Status	AN ...22	Terminal configuration information
	50	Special Indicators	AN ...5	ECI indicator and transponder indicators
	51	RESERVED (Legacy Usage)	AN ...8	Discount Credit Qualification Data
	52	RESERVED (Legacy Usage))	AN ...20	Discount Credit Data
	53	Total Amt Authorized	AN ...14	Total amount authorized after incremental auth and partial reversal adjustments
	54	Address Verification Zip/Address	AN ...31	AVS zip code and address data
	55	AVS Response Code	AN ...5	AVS result code
	56	Card Code Validation Value	AN ...7	Card code value (VS/CVV2, MC/CVC2, AX/CID, ...)

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FIELD	TABLE	FIELD NAME	ATTRIBUTE	COMMENT
	57	Card Code Validation Result Code	AN ...3	Card code validation result code
	58	MICR Data (keyed or read)	AN ...68	Check MICR data
	59	Transit/Bank Number	AN ...11	Check bank routing number
	60	Checking Account Number	AN ...21	Check account number
	61	ID/Driver's License Number	AN ...37	Check writer's driver's license number
	62	ID/State Code	AN ...5	Check writer's driver's license state code
	63	Birth Date	AN ...10	Check writer's birth date
	64	Check Number	AN ...12	Check number
	66	Card Type ID	AN ...4	Nashville card type identification code
	67	Service Provider ID	AN ...9	Nashville service provider ID
	68	Commercial Card Data (Reserved for Future Use)	AN ...75	Commercial card data with 12 digit amounts
	69	Commercial Card Data (old)	AN ...60	Commercial card data with 7 digit amounts
	70	Duration	AN ...5	Duration for lodging and auto rental
	71	Room Number	AN ...8	Room number for lodging
	72	Customer Accounting #	AN ...12	Customer accounting # for lodging
	73	Request For Commercial Card Type	AN ...2	Trigger for host to return commercial card type on authorization response
	74	Commercial Card Type Indicator	AN ...4	Commercial card type on auth response
	76	Check Type	AN ...4	Check type (personal or business)
	77	Alternate Check Approval ID Codes	AN ...87	Check ID code, source and #
	78	Transaction Reference #	AN ...30	Transaction reference #
	79	Credit Plan/Terms ID	AN ...8	Credit plan type and invoice #
	80	Service Development Indicator	AN ...3	Debt payment indicator
	81	TeleCheck Version Control #	AN ...69	ECA TeleCheck POS device information
	82	MICR Reader Status	AN ...5	ECA check reader status
	83	ECA Response Data	AN ...14	ECA response status (declined, approved for check guarantee only or approved for ECA)
	84	Billing Control #	AN ...26	ECA customer/merchant control or tracking #
	85	Return Check Fee	ANS ...8	ECA return check fee for printing on sale approval receipt
	86	Telephone #	AN ...12	ECA check writer phone number
	87	ZIP Code	AN ...11	ECA check-writer ZIP code
	88	Trace ID	AN ...24	ECA unique TeleCheck transaction level identifier
	89	Debit Authorization Information (RESERVED FOR ISO TERM PROCESSING)	AN ....19	Debit authorization for terminal capture merchants
	90	Additional Account / Amount Information Request	ANS ...179	Terminal partial authorization and balance return capability indicator
	90	Additional Account / Amount Information - Response	ANSB ...69	Additional account/amount information returned when balance information applies or for reporting the original amount requested for partial approvals.
	91	Return Check Fee Capable Indicator	AN ...5	Terminal ECA return check fee capability indicator
	92	Return Check Fee Note	AN ...104	Return check fee verbiage to print on the ECA receipt
	93	Visa Agent Identification Service/ FDMS TPP ID	AN ...59	If applicable for Visa transactions provided by Third Party Processors and

FIELD	TABLE	FIELD NAME	ATTRIBUTE	COMMENT
				VARs
	94	Cash Advance Serial Number	AN 12	Pre-printed serial number from cash advance pre-printed draft.
	F1 – F5	File Update Status	ANSB ...37	Request or report file status
	FB	File Block Transfer	ANSB ....9999	File block to load
	L1	Loyalty Card Action Request	AN ...V	Loyalty transaction request
	L2	Loyalty Card File Update Request	AN ...V	Loyalty card file request
	L3	Loyalty Card Action Response	AN ...V	Loyalty transaction response
	L4	Loyalty Card File Update Response	AN ...V	Loyalty card file response
	L5	Loyalty Display Response	AN ...V	Loyalty display text
	AX	American Express Compliance	AN ...V	American Express Compliance Table
	EV	EMV Response Data	AN ...V	Issuer specific response data such as MC Authorizing Agent ID
	OP	Offer Redemption Packet	AN ...V	Supports all fields related to offer redemption processing at the point-of-sale.
	SD	Supplemental Data Packet	AN ...V	Specifies special data that can apply along with a flexible method for including the data in an ISO Dual message..
	SP	Security Packet	AN ...V	Specifies special security processing applies to support protection of sensitive data.

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## 5.2 ISO 8583 MESSAGE TYPE (N 4)

In conjunction with the processing code, the message type defines the type of transaction (see page 143).

## 5.3 ISO 8583 BIT MAP (B 64)

Standard ISO 8583 Bit Map

## 5.4 FIELD 2 - PRIMARY ACCOUNT NUMBER (N ..19)

Card account number when Track I or II data is not available (manually keyed online, force, reversal, batch uploads, batch downloads, etc.). *Note: For odd lengths, pad on right with Hex F.*

*Example:*

ISO Dual Field	Length of User Data	Value of User Data	ISO Dual field representation
Field 2 – Primary Account #	15	'371449635398431'	Hex: 15 37 14 49 63 53 98 43 1F

***Field 2 must be omitted if the account number is included in Field 63, Table 'SP' (Security Packet) in either encrypted or token form.***

***When EMV applies and the chip provides the account # in EMV Tag 5A (PAN) rather than Tag 57 (Track ii Data), the account # is included in Field 2 if TransArmor encryption is disabled or Field 63. Table SP, Tag 05 (Encryption Block) if TransArmor encryption is enabled. In either case, Tag 5A is not included in Field 55.***

## 5.5 FIELD 3 - PROCESSING CODE (N 6)

In conjunction with the Message Type, the processing code defines the type of transaction, default account and processing flow control (see page 143).



## 5.6 FIELD 4 - TRANSACTION AMOUNT (N 12)

This field represents the total amount of the transaction including tip, cash back, tax and all other auxiliary amounts. In most instances, the transaction amount value from the request message is “echoed” back to the merchant in the host response messages (0110s, 0210s, and 0410s). However, for partial approvals, the partially approved amount is returned in the host response message Field 4. The amount is unsigned and contains no decimal point. Note that the number of implied decimals associated with the transaction amount depends on the currency code that applies.

### **Incremental Authorizations:**

For incremental authorizations, this field should be the amount over and above that previously authorized.

### **Partial Reversals**

For partial reversals, this field should be the final settlement amount.

### **Voids**

For voids, this field should typically be zero. However, for Canadian debit voids, this field should be the total amount to reverse.

### **Balance Inquiry:**

The transaction amount must be zero for all Balance/Available Funds Inquiry messages.

### **Dynamic Currency Conversion:**

The applicable currency code is included in Field 51 (Transaction Currency Code) if different than US currency ('840').

### **Partial Approvals:**

For partially approved transaction responses (responses in which Field 39 contains a value of '10'), this field will contain the total amount approved by the card issuer and is the amount which should be used for reconciliation purposes. Field 63, Table 90 – Additional Account / Amount Information, will contain the total transaction amount from the initial request and is provided for informational purposes only.

Example:

ISO Dual Field	Length of User Data	Value of User Data	ISO Dual field representation
Field 4 – Transaction Amount	5	'12985' (e.g. \$129.85)	Hex: 00 00 00 01 29 85

## 5.7 FIELD 11 - SYSTEM TRACE AUDIT NUMBER (N 6)

This field represents the trace number generated by the terminal that is included in the request messages and echoed by the host in responses – it may be used by the terminal to validate the response.

## 5.8 FIELD 12 - LOCAL TRANSACTION TIME (N 6)

This field represents the time that the transaction originated at the POS device (local merchant time). The format is HHMMSS.

***Dynamic Currency Conversion:***

For DCC transactions, this field must represent the time when the amount was converted. This applies to both authorization and settlement processing.

## 5.9 FIELD 13 - LOCAL TRANSACTION DATE (N 4)

This field represents the date that the transaction originated at the POS device. The format is MMDD.

***Dynamic Currency Conversion:***

For DCC transactions, this field must represent the date when the amount was converted. This applies to both authorization and settlement processing.

## 5.10 FIELD 14 - EXPIRATION DATE (N 4)

This field is included when track data is not available and the expiration date is required (manually keyed online, advice, batch uploads, reversals, batch downloads, etc.). The format is YYMM.

***If the expiration date field is required when the real account # is included in Field 2, then the field is also required when Field 2 is omitted and a token is included the Field 63 SP Packet instead (unless the expiration date is included in the SP packet as well – see below).***

***Field 14 must be omitted if the expiration date is included in encrypted form in Field 63, Table SP, Tag 5.***

## 5.11 FIELD 22 - POINT OF SERVICE ENTRY MODE (N 3)

This field defines the primary account # entry method where 'x' indicates PIN entry capability. ~~for domestic (US) applications, x='1' if PIN applies or '2' if PIN does not apply. See Canadian processing note below.~~

- '00x' – Unspecified
- '01x' – Manually keyed
- '02x' – Read from magnetic stripe
- '03x' – Bar code read (**FUTURE**)
- '05x' – Integrated circuit card read – CVV data reliable (used for EMV chip read)
- '07x' – Contactless M/chip or Visa Smart Card read
- 79x' – Chip card capable – key entered (used for EMV fall back to key entered)
- '80x' – Chip card capable – unaltered track data read (used for EMV fall back to swiped)
- '82x' – Contactless magnetic stripe read – conducted using Mobile Commerce Device
- '91x' – Contactless chip magnetic stripe read (RFID)
- '95x' – Integrated circuit card read – CVV data unreliable

### **Incremental Authorization and Partial Reversals:**

For incremental authorization and partial reversal transactions, this field should indicate manually keyed ('01x'). ~~be the same as for the original authorization.~~

### **~~Canadian Processing:~~**

### **PIN Entry Capability (3<sup>rd</sup> position of POS Entry Mode):**

The third position of ISO Dual Field 22 Point of Service Entry Mode will be based on the terminal capability to accept PIN entry. The valid values are shown below:

- '0' – Unspecified or unknown
- '1' – Terminal has PIN entry capability
- '2' – Terminal does not have PIN entry capability
- '8' – Terminal has PIN entry capability but PIN Pad is not currently operative
- '9' – PIN verified by terminal device (**not used**)

*Note: The third position of ISO Dual Field 22 Point of Service Entry Mode will always be a '1' for terminals that have a functioning integrated or attached PIN pad regardless of whether a PIN was entered or not for the transaction.*

## 5.12 FIELD 23 – EMV CARD SEQUENCE NUMBER (N 3)

The Card Sequence Number is a number used to differentiate cards that have the same primary account number (PAN). Field 023 contains the Card Sequence Number in the range '000' to '099', right justified and left-padded with zeroes. It is only used for transactions containing EMV compliant ICC System Data. For transactions containing ICC Data, the Card Sequence Number is mandated when the card product includes the Card Sequence Number in the criteria for uniquely defining a card. In this case, Field 023 must contain the Application PAN Sequence number (EMV tag 5F34), if present on the ICC. If EMV Tag 5F34 is not available (is not supplied by the card), Field 023 must be omitted.

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### 5.13 FIELD 24 - NETWORK INTERNATIONAL IDENTIFIER (N 3)

This field identifies the terminal class to the acquiring host. *See example values below.*

35	US VAR Solutions
37	US AMEX 3200 Solution
38	US Class A Solutions
45	Canadian VAR Solutions
47	Canadian Leased Line Solutions
48	Canadian Class A Solutions
49	Canadian EDC Solutions
51	Latin America/Caribbean (LAC) Class A Solutions
52	Mexico Class A Solutions ( <b>FUTURE</b> )
53	Latin America/Caribbean (LAC) – GCS (split dial) ( <b>FUTURE</b> )

### 5.14 FIELD 25 - POINT OF SERVICE (POS) CONDITION CODE (N 2)

This message defines special conditions that might apply for the transaction:

- '00' – Normal presentment (cardholder is present with card)
- '01' – Customer not present
- '03' – Merchant suspicious
- '04' – Cardholder not present, recurring payment, bill payment
- '05' – Customer present, card not present (transponder transaction)
- '06' – Pre-authorized (floor limit transaction)
- '08' – Mail and/or telephone order
- '51' – Open tab
- '71' – Card present – magnetic stripe cannot be read

***Incremental Authorization and Partial Reversals:***

For incremental authorization and reversal transactions, this field should be the same as for the original authorization.

## 5.15 FIELD 27 – ADDITIONAL POS INFORMATION (N 2)

0100, 0200, 0220, 0320 and 0400

This field is comprised of the POS Type (first four bits) and the POS Capability (last four bits) data elements. The POS Type describes the general category of terminal used for the transaction. POS Capability describes the data entry methods available at the POS location.

### POS Type

Value	Description
0	Unspecified
1	Limited-Amount Terminal
2	Unattended Terminal (ATM)
3	Unattended Terminal – Self-Service Terminal
4	Electronic Cash Register
7	Dial Terminal / Register Device
9	mPOS Acceptance/Mobile device

### POS (Terminal) Capability (Specify Maximum Capability)

Value	Description
0	Unknown
1	Terminal Not Used
2	Magnetic Stripe Read Capability (but not any type of chip capability)
3	Bar Code Read Capability
4	OCR Read Capability
5	Integrated Circuit Card Read Capability (contact chip capable)
6	Contactless Chip Read Capability (but not contact chip capable)
7	Contactless Magnetic Stripe Read Capability (but neither contact chip nor contactless chip capable)
9	Terminal Does Not Read Card Data

## 5.16 FIELD 31 – ACQUIRER REFERENCE DATA (AN ..1)

This field indicates whether check digit truncation applies for the terminal ID submitted in Field 41. *This field is mandatory unless Field 41 contain a truncated TID (TID with last digit removed). The field may be omitted if Field 41 contains a truncated terminal ID (legacy usage when integrated terminal management applies).*

'0' – Check digit truncation applies. The terminal ID value in Field 41 contains only the first 7 bytes of the Terminal ID (plus leading zeroes). The host must calculate a Luhn Mod 10 check digit and append it to the value in Field 41 to obtain a valid TID.

'1' – Check digit truncation does not apply. The terminal ID value in Field 41 contains the full 8 bytes of the Terminal ID.

ISO Dual Field	Length of User Data	Value of User Data	ISO Dual field representation
Field 31 – Acquirer Reference Data	1	'1'	Hex: 01 31

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## 5.17 FIELD 35 - TRACK II DATA (Z ..37)

Valid TRACK II data (excluding start sentinel, end sentinel and LRC) is included when available. *This field is required for debit reversals (domestic and Canadian debit). Note: For odd lengths, pad on right with Hex 0 or F.*

ISO Dual Field	Length of User Data	Value of User Data	ISO Dual field representation
Field 35 – Track II Data	29	'5435560000000007=120810123456'	Hex: 29 54 35 56 00 00 00 00 07 D1 20 81 01 23 45 6F

***Field 35 must be omitted if Track II data is included in Field 63, Table 'SP' (Security Packet) in encrypted form.***

***When EMV applies and the chip provides Track II data in EMV Tag 57 (Track II Equivalent Data), the Track II data is included in Field 35 if TransArmor encryption is disabled or Field 63. Table SP, Tag 05 (Encryption Block) if TransArmor encryption is enabled. In either case, Tag 57 is not included in Field 55.***

## 5.18 FIELD 37 - REFERENCE NUMBER (ANS 12)

In general, this field represents the host generated system reference number – the format is 'ssssttttbb' where 'sssss' is the summary ID, 'ttttt' is the transaction ID and 'b' is a space. If a advice receives a new RRN, the new RRN should replace the old. For error responses, this field may contain text that defines the particular error scenario (e.g. 'LOCKED TID', etc.); applications can make use of this field for trouble shooting assistance.

### Canadian Debit:

For Canadian debit, the POS terminal generates the reference number and includes in on the transaction request. The host echoes the field back to the terminal on the transaction response. The terminal must ensure that the number is unique within the batch. The terminal should create the reference number as follows:

Positions 1 – 4: '0000'

Positions 5 – 6: Last 2 digits of the ISO Dual Field 41 Terminal ID

Positions 7 – 12: The terminal generated system trace number (ISO Dual Field 11)

For example, if the Field 41 TID is '00123456' and the Field 11 System Trace Number is '004567', the Field 37 Reference Number would be '000056004567'.

## 5.19 FIELD 38 – APPROVAL CODE (AN 6)

The approval code is assigned by the authorization host for approved transactions when applicable or keyed by the operator for voice referral and force transactions. Note: This field always represents the original auth code regardless of subsequent incremental or reversal transactions.

## 5.20 FIELD 39 - RESPONSE CODE (AN 2)

The response code returned on all transaction responses from the host indicates the status of the transaction.

'00' – No error/approved

'10' – No error/partial authorization approval

'nn' – Error (Refer to 'Appendix A: Response Codes', page 203)

## 5.21 FIELD 41 - TERMINAL ID (AN 8)

The terminal ID uniquely identifies a given terminal to the FDCN host system. Note: For the Nashville host (legacy usage), this field should be the truncated terminal ID (minus the check digit) if Field 31 is set to 0 or not present. If Field 31 is set to '1', this field must contain the entire (non-truncated) Terminal ID.

## 5.22 FIELD 42 - MERCHANT ID (AN 15)

The merchant ID uniquely identifies a given merchant to the FDCN host system.

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## 5.23 FIELD 45 - TRACK I DATA (ANS ..76)

Valid TRACK I data (excluding start sentinel, end sentinel and LRC) is typically included when available and when valid Track II data is not available.

ISO Dual Field	Length of User Data	Value of User Data	ISO Dual field representation
Field 45 – Track I Data	76	'B421765111111119^FDMS<space>CHECK CARD<space><space><space>/VISA^09041005432100000000000000<space><space>150<space><space>A'	76 42 34 32 31 37 36 35 31 31 31 31 31 31 31 31 31 39 <b>5E</b> 46 44 4D 53 20 43 48 45 43 4B 43 41 52 44 20 20 20 <b>2F</b> 56 49 53 41 5E 30 39 30 34 31 30 30 35 34 33 32 31 30 30 30 30 30 30 30 30 30 30 30 30 30 20 20 31 35 30 20 20 41

**Field 45 must be omitted if Track I data is included in Field 63, Table 'SP' (Security Packet) in encrypted form.**

## 5.24 FIELD 48 – APPLICATION SPECIFIC DATA (ANSB ....9999)

Application specific data is used for submitting and receiving unique data fields. Processing applications should accommodate the inclusion of additional datasets and allow for expanded bit maps within a dataset. Unrecognized datasets should be ignored by the application, and their presence should not cause unexpected results. The application should ensure it is using the correct dataset based on the dataset ID that applies. When processing a dataset, use the continuation bit (the first bit of the bit map) to determine the number of bit maps included in the dataset.

### GENERAL LAYOUT OF APPLICATION SPECIFIC DATA

FIELD	ATTRIBUTE	COMMENT
Length	N4	'nnnn' – length of all data that follows for Bit Field 48 (all datasets)
Dataset Identifier	B 8	Unique value identifying the content / layout of the data to follow. The current dataset identifiers allowed includes the following:  Decimal '72' (hex '48') for Health Care Data – only available for use with Health Care Transaction (i.e. 0900/0910 Messages)
Dataset Length	B 16	Two digit number where each number is made up of 8 bits. The total length is determined by treating the two digits as a single binary integer giving a length from 1 – 65535 (FFFF hex). This gives the length of the sub-elements and any dataset bit map that follow for this dataset
Bit Map	B 16	The position of a '1' in the first position indicates that another bit map follows. This means that the first position does not indicate a sub element, but the presence or absence of a further bit map.
		<i>Additional bit maps may apply in the future as new fields are defined for health care processing.</i>
Dataset data	As defined for dataset below	<i>Application data as defined for the dataset – fields are included only if they apply and are indicated in the dataset bit map.</i>



## Health Care Dataset '72' Data Fields:

FIELD	TABLE	FIELD NAME	ATTRIBUTE	COMMENT
2		Health Care Transaction Type	N 2	'01' – Eligibility – In-Network '02' – Eligibility – Not In-Network '03' – Update Payer/Provider Menu Text
3		Payer ID	AN ..20	ID for payer (insurance carrier)
4		Provider ID	AN ..20	ID for provider (doctor)
5		Patient DOB	N 8	Patient's date of birth (mmddccyy)
6		Date of Service	N 8	Date service provided (mmddccyy)
7		Dependent Code	N 2	Relationship of patient to subscriber: 00 – Self      01 – Spouse 02 – Child    03 – Other
8		Subscriber ID	AN ..30	Subscriber's ID
9		Subscriber First Name	AN 10	1 <sup>st</sup> 10 characters of subscriber's first name (Left justified with trailing spaces); if input of the field was requested but the user bypassed the entry – all spaces should be sent; if input of the field was not requested, the field should be omitted all together
10		Subscriber Last Name	AN 16	1 <sup>st</sup> 16 characters of subscriber's last name (Left justified with trailing spaces) if input of the field was requested but the user bypassed the entry – all spaces should be sent; if input of the field was not requested, the field should be omitted all together
11		Policy/Group #	AN ..30	Subscriber's policy or group #; if input of the field was requested but the user bypassed the entry – a length of Hex 00 with no data to follow should be sent; if input of the field was not requested, the field should be omitted all together
12		Track III Data	ANS ..79	Data (AAMVA encoding format) as read from Track III (excluding start sentinel, end sentinel and LRC)
13		Health Care Merchant #	AN 16	Health Care Merchant # (as received in Initialization Field 60, Table 3, Merchant Issuer Number field for the Health Care card type)
14		Service/Procedure Code	AN 2	Code to describe service or procedure for which the eligibility request applies.
15		Printer Response Text	AN ....1900	Health care receipt text (The printer data can include line feed character recognized by the supported printer – the terminal application will send the data to the printer without interpretation or reformatting.)
16		Payer/Provider ID Menu Text	AN ....1900	When the Health Care Transaction Type is '03', payer/provider menu data is included . according to the format shown below. Up to 1900 bytes of data may be included as long

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FIELD	TABLE	FIELD NAME	ATTRIBUTE	COMMENT
				as the total length for the 0910 response is not exceeded. The data should replace the data already stored in the terminal when present. If this field is not present or the Bit 16 field length is BCD 0000, then the terminal menu text should be cleared.

#### Health Care Dataset '72', Bit 16 – Payer/Provider ID Menu Data

FIELD	ATTRIBUTE	COMMENT
Length	N 4	'nnnn' – BCD length of the data to follow
Payer Name	AN V (max 9)	Payer name for menu selection (e.g. 'AETNA') – <b>Max length allowed is 9 characters</b>
ASCII FS (hex 1C)	AN 1	Separates payer name from payer ID
USG Payer ID	AN V (max 6)	USG assigned global payer ID (e.g. '60054') – <b>Max length allowed is 6 characters</b>
ASCII FS (hex 1C)	AN 1	Separates payer ID from next payer name (omitted for last payer)
...		<payer name and ID fields are repeated based on # of payers setup at USG for this provider office>
<b>ASCII GS (hex 1D )</b>	<b>AN 1</b>	<b>Separates last payer ID from first provider name</b>
Provider Name	AN V (max 9)	Provider name for menu selection (e.g. 'Smithson') – <b>Max length allowed is 9 characters</b>
ASCII FS (hex 1C)	AN 1	Separates provider name from provider ID
USG Provider ID	AN V (max 9)	USG assigned global provider ID (e.g. '111145') – <b>Max length allowed is 9 characters</b>
ASCII FS (hex 1C)	AN 1	Separates provider ID from next provider name (omitted for last provider)
...		<provider name and ID fields are repeated based on # of providers setup at USG for this provider office>

#### Example Health Care Dataset '72', Bit 16 – Payer/Provider ID Menu Data

The following shows the Bit 16 field values when 3 payers apply (AETNA, BCBS and CIGNA) and 2 providers apply (Smith and Jones). Note: Hexadecimal data is enclosed in angle brackets (for example, '<1C>' is the ASCII FS character).

```
<0060>AETNA<1C>60054<1C>BCBS<1C>00601<1C>CIGNA<1C>66054<1D>SMITH<1C>111111<1C>JONES<1C>111123
```

## 5.25 FIELD 51 – TRANSACTION CURRENCY CODE (AN 3)

This field can be used to specify the ISO 4217 numeric currency code associated with transaction amount fields (e.g., '840' = U.S. Dollar). This field is required when Dynamic Currency Conversion (DCC) applies and DCC is accepted for a transaction. When the field is omitted, the currency is assumed to be '840' for U.S. Dollar.

A sample of the more common currencies and related information is shown below.

Country	Currency	ISO Alpha Code	ISO # Code	Symbol	Subdivision (for implied decimal placement)
Australia	Australian Dollar	AUD	036	A\$	100
Bahamas	Bahamian Dollar	BSD	044	B\$	100
Bermuda	Bermudan Dollar	BMD	060	Bd\$	100
Canada	Canadian Dollar	CAD	124	Can\$	100
Cyprus	Cyprus Pound	CYP	196	Cf	100
Czech Republic	Czech Koruna	CZK	203	Kc	100
Denmark	Danish Krone	DKK	208	Dkr	100
Hong Kong	Hong Kong Dollar	HKD	344	HK\$	100
Japan	Japanese Yen	JPY	392	¥	0
Kuwait	Kuwaiti Dinar	KWD	414	KD	1000
Malaysia	Malaysian Ringgit	MYR	458	M\$	100
Mexico	Mexican Peso	MXN	484	Ps	100
New Zealand	New Zealand Dollar	NZD	554	NZ\$	100
Norway	Norwegian Kroner	NOK	578	NOK	100
Saudi Arabia	Saudi Arabian Riyal	SAR	682	SR	100
Singapore	Singapore Dollar	SGD	702	S\$	100
South Africa	South African Rand	ZAR	710	R	100
Sweden	Swedish Krona	SEK	752	Sk	100
Switzerland	Swiss Franc	CHF	756	SwF	100
Trinidad and Tobago	Trinidad and Tobago Dollar	TTD	780	TT\$	100
United Arab Emirates	United Arab Emirates Dirham	AED	784	DH	100
United Kingdom	British Pound	GBP	826	£	100
United States	US Dollar	USD	840	US\$	100
Europe	Euro	EUR	978	€	100
Poland	Polish New Zloty	PNZ	985	PLN	100
Taiwan	New Taiwan Dollar	TWD	901	NT\$	100
East Caribbean	East Caribbean Dollar	XCD	951	EC\$	100
		XCD	212		100
		XCD	308		100
		XCD	500		100
		XCD	659		100
		XCD	662		100
		XCD	670		100
		XCD	028		100
		XCD	660		100

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## 5.26 FIELD 52 - PIN BLOCK (N 16)

This field is used to submit the encrypted customer entered PIN received from the PIN pad device. If DUKPT PIN management applies, the DUKPT Key Serial Number (Field 63, Table 33) is also required.

**Note:** *For transactions where the PIN is verified offline (e.g. INTERAC chip); is not required (debit contactless transactions under the 'no PIN required' floor limit); or is no longer available (debit void), a PIN block value with all bits set must be populated in this table. See below.*

**Packed Numeric Format:** <ff><ff><ff><ff><ff><ff><ff>

## 5.27 FIELD 53: LOGON PASSWORD (N 16)

When integrated terminal management (ITM) applies, the Nashville logon password is included in all request messages to the Nashville host and, if returned on a response from the Nashville host, the POS application should update/change the logon password stored in the terminal. The default value after a download is all zeroes. The default password is used to complete the start-up initialization with the FDC Nashville host.

## 5.28 FIELD 54 - TIP AMOUNT (AN ...12)

This field holds the tip amount for a transaction if tip entry applies. The maximum value allowed by the Nashville host for this field is \$99999.99.

### **Dynamic Currency Conversion:**

For DCC accepted transactions, the amount is converted using the same FX rate used for the Field 4 conversion and as indicated by the currency code submitted in Field 51.

## 5.29 FIELD 55 – EMV/CHIP DATA (ANSB ...999)

EMV/Chip Data is a series of “Tag/Length/Value” combination for chip card processing. The length of the field is the length of all data that follows the length (total length of field 55 minus 3). All information that follows the 3 digit BCD length of Field 55 should be considered binary data.

### **TAG (ANSB1 or ANSB2)**

Each sub element or “Tag” can be either one or 2 bytes long. To determine if the tag is one or two bytes, check the last 5 bits of the first byte, if they are all on (1) the tag of the sub element is two bytes, including the current byte, long.

Example 1: Tag “9F10” (hex ‘9F’ ‘10’) is a two byte tag - the last five bits of the first byte (hex ‘9F’) are all ones.

Example 2: Tag “72” (hex ‘72’) is a one byte tag - the last five bits of the first byte (hex ‘72’) are not all ones.

### **LENGTH (ANSB ...127)**

The next 1 or more bytes are the length indicator of the tag. To determine the number of length bytes used for this inspect the first byte of the length field. If the first bit of the first byte is a ‘1’, the remaining bits (next 7) are a binary representation of the number of following bytes of the length field. If the first bit is ‘0’, the remaining bits indicate the actual length of the data that follows.

Example 1: If the length byte is a hex ‘0C’, then 12 is the length of the data that follows the sub element.

Example 2: If the tag is hex ‘82’, the length is contained in the next byte of the sub element. The value in the length byte indicates the number of bytes of data following.

### **VALUE(ANSB ...255)**

The data of each Tag/Length/Value combination is up to 255 bytes long, depending on the length of the field specified by the preceding length portion of the sub element.

See a list of all chip tag fields in Appendix E – EMV Tag Matrix.

***When EMV applies and the chip provides the account # in EMV Tag 5A (PAN) rather than Tag 57 (Track II Data), the account # is included in Field 2 if TransArmor encryption is disabled or Field 63. Table SP, Tag 05 (Encryption Block) if TransArmor encryption is enabled. In either case, Tag 5A is not included in Field 55.***

***When EMV applies and the chip provides Track II data in EMV Tag 57 (Track II Equivalent Data), the Track II data is included in Field 35 if TransArmor encryption is disabled or Field 63. Table SP, Tag 05 (Encryption Block) if TransArmor encryption is enabled. In either case, Tag 57 is not included in Field 55.***

*(Continued on next page)*

FIELD	ATTRIBUTE	COMMENT
Length	N 3	'0nnn'
Tab/Length/Value Data	ANSB ...999	EMV/Chip tag fields included as applicable

### Example Field 55 Parsed Data Packet (BCD Packed/Hex Nibbles in format 'nn')

00\96\	Field 55 EMV/Chip Data Length (BCD packed)
9F\02\06\00\00\00\00\09\00\	Amount, Authorized (Numeric)
9F\26\08\56\BF\29\94\72\BD\B0\C7\	Application Cryptogram
82\02\5C\00\	Application Interchange Profile
9F\36\02\45\67\	Application Transaction Counter (ATC)
9F\37\04\12\13\54\15\	Unpredictable Number
95\05\40\80\00\80\00\	Terminal Verification Results
9C\01\00\	Transaction Type
9F\10\11\06\01\1A\03\90\00\00\11\22\33\44\55\66\77\88\99\AA	Issuer Application Data
84\07\A0\00\00\00\04\10\10\	Dedicated File (DF) Name
9F\27\01\80\	Cryptogram Information Data
9F\34\03\5E\03\00\	CVM Results
5F\2A\02\09\78\	Transaction Currency Code
9F\1A\02\08\40\	Terminal Country Code
9A\03\06\08\02\	Transaction Date
9F\33\03\E0\B8\C8\	Terminal Capabilities

### Example Field 55 Hex Data Example (hex dump)

**Field 55 data starts with 0142h in first line below. Note: Data shown below is not associated with example above.**

```

3831370808061331460000001429F2608 817....1F...B.&.
D43CE4BC4CF2D5CF820258009F360200 .<..L.....X..6..
859F34034103029F0206000000000100 ..4.A.....
9F270180840BA0000000041010D05611 .'.....V.
119F10120210A5000F040000DAC00000 .....
0000000000FF9F090200029F3303E0B0 .....3...
C89F1A0201249F1E0838313838373930 .....$...8188790
339A030808069F350122950500080080 3.....5.".....
009F5301525F2A0201249F4104000000 ..S.R_*.$.A....
059C01009F3704351FAACE0006303032 .....7.5.....002
303031001800103130312020202020 001....101
2000043636303103464403

```

## 5.30 FIELD 60 - PRIVATE USE

### 5.30.1 Field 60, Batch Number (ANS ...6)

Usage: Settlement Totals and Upload Totals Trailer Requests (Message Type 0500, Processing Code 920000, 960000)

This field holds the terminal assigned batch number for a batch to be closed. Batch numbers should be unique, sequential and ascending in order. The max batch number allowed is '99999'. *The terminal assigned batch number is not necessarily the same as the host generated batch number that is displayed in CMS.*

FIELD	ATTRIBUTE	COMMENT
Length	N 3	'0006'
Batch Number:	ANS 6	Terminal assigned batch number for a batch to be closed

### 5.30.2 Field 60, Software ID/Revision (AN...32)

Usage: 0800 (Processing Code 910000, 930000, and 94000), 0900 (Health Care)

This field holds terminal application configuration information and typically only applies if the terminal is supporting integrated terminal management (refer to ISO Dual Addendum A) or if the terminal needs to supply the max response buffer size when large variable length responses apply such as for health care receipt text or for file block transfers.

FIELD NAME	ATTRIBUTE	COMMENT
Length	N 3	'0nnn' – BCD length of data to follow
Vendor Software Name and Revision Level	ANS 10	<i>Must be unique within the FDCN host system-contact FDCN host administrator</i>
Parameter Init Tracking #	N 2	Loaded during initialization in Field 60, Table 1, Parameter Init Tracking # (should be '00' on initial parameter request following a download) <i>Table may end here.</i>
Max Response Buffer Size	N 4	Maximum # of bytes that can be received in a response message (e.g. '2048' for a 2048 byte limit). <i>Table may end here.</i>
Off-host Download Status	AN 1	'0' – Not first init after off-host download '1' – First Init after off-host download <i>(after an off-host download, this flag should stay enabled until the first start-up initialization completes successfully)</i>
Off-host Application Name	AN 10	Application ID in CMS (e.g. '067HYP512') - <i>contact FDCN host administrator</i>
Off-host Download Date	N 8	Format: mmddccyy
Off-host Download Time	N 6	Format: hhmmss <i>Table may end here.</i>
Download Type	N 2	Indicates the download type on the first init after a download. '00' – Not first init after download '01' – Manual '02' – Auto Download '99' - Unknown

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### 5.30.3 Field 60, Original Message Data (N ...22)

Usage: Batch Upload Request (Message Type 0320)

This field is used to show the original message type, trace # and amount for an out-of-balance batch upload transaction.

#### ***Dynamic Currency Conversion:***

For DCC accepted transactions, the original transaction amount is converted using the same FX rate used for the Field 4 conversion and as indicated by the currency code in Field 51.

FIELD	ATTRIBUTE	COMMENT
Length	N 3	'0nnn' – BCD length of data to follow
Original Message Type	AN 4	Message type of the original transaction
Original System Trace #	AN 6	Trace number of original transaction – Not currently used
Original Transaction Amount	AN 12	Amount from original approval

### 5.30.4 Field 60, Original Amount Before Adjustment (AN ...12)

Usage: Adjust/Void Advice Request (Message Type 0220, Processing Code 020000/220000)

This field holds the original sale or refund amount before an adjustment or void.

#### ***Dynamic Currency Conversion:***

For DCC accepted transactions, the original amount is converted using the same FX rate used for the Field 4 conversion and as indicated by the currency code in Field 51.

FIELD	ATTRIBUTE	COMMENT
Length	N 3	'0nnn' – BCD length of data to follow
Original Amount	AN 12	Original amount of transaction being adjusted



### 5.30.5 Field 60, Parameter Initialization Tables (AN ...999)

Usage: Initialization Response (Message Type 0810, Processing Code 93000x):

These tables only apply when implementing integrated terminal management. When Field 60 Initialization Tables are present in the Initialization Response, the field begins with a length byte that represents the combined lengths of all the tables that follow, followed by the table data (including length byte) for each applicable table. Refer to ISO Dual Addendum A for initialization table specifics. Tables currently defined are:

- 00 – Clear Init Data
- 01 – General terminal configuration
- 02 – Account range information
- 03 – Card type information
- 04 – Host information
- 05 – Amex descriptor data
- 10 – Display and print text
- 11 – Reserved (Legacy usage – Frequency Discount Program)
- 14 – Reserved (Legacy usage - Packet Dial Network)
- 15 – Everest PIN Pad Configuration
- 16 – Merchant message text
- 17 – Health care in-network payer table
- 18 – Proximity Card Reader Configuration
- 19 – IP configuration
- 22 – DCC receipt text

## 5.31 FIELD 61 - PRIVATE USE

None currently defined.

## 5.32 FIELD 62 - PRIVATE USE

### 5.32.1 Field 62, Invoice/Ticket Number (AN ...10)

Usage: 0100, 0200, 0220, 0310, 0320, 0400

The Private Use Field 62 Invoice/Ticket number must be included in any message session that contains transaction detail. The invoice number is optionally keyed by the operator or assigned internally by the POS application. Note: Since this field is used for duplicate transaction detection at the FDCN host [match is made on account #, amount and invoice number], it is recommended that the invoice number be unique within the batch.

#### **Lodging:**

For lodging processing, this field holds the folio number.

#### **Auto Rental:**

For auto rental processing, this field holds the rental agreement number.

#### **Direct Marketing, Telephone or Mail Order:**

For direct marketing, telephone or mail order processing, this field holds the order number.

FIELD	ATTRIBUTE	COMMENT
Length	N 3	'0nnn' – BCD length of data to follow
Invoice/Ticket Number	AN 6 or AN 10	Invoice number as keyed by the operator or assigned by the POS application. <u>The length of the table must be used to determine the actual length of the invoice number when using this field.</u>  <u>Examples:</u> '123456': Hex 00 06 31 32 33 34 35 36 '1234567890': Hex 00 10 31 32 33 34 35 36 37 38 39 30

### 5.33 FIELD 63 - PRIVATE USE

### 5.33.1 Field 63, Settlement Totals (AN ...90)

Usage Settlement Totals and Upload Totals Trailer Request (Message Type 0500, Processing Code 920000 and 960000):

This field is used to send the settlement totals to the Nashville host. The settlement totals are submitted on an initial settlement request using processing code '920000' and, in an out-of-balance situation, the totals are resubmitted after batch detail has been uploaded to the host using processing code '960000'.  
'0220' voids and zero amount transactions are not included in either the count or amount totals below.  
'0200' Canadian Debit adjustment/void of sales and returns are not treated the same as '0220' void transactions and are included in the counts below. A Canadian debit adjustment/void of a sale increments the debit refund totals and a Canadian debit adjustment/void of a refund increments the debit sale totals in the 0500 request. A \$0.00 total batch value will still require a settlement if Canadian debit transactions exist in the batch.

Field	Attribute	Comment
Length	N 3	'0nnn' – BCD length of data to follow
Credit Card Sales Count	AN 3	Count of all non-zero, non-voided settlement credit card sales
Credit Card Sales Amount	AN 12	Amount of all non-zero, non-voided settlement credit card sales
Credit Card Refunds Count	AN 3	Count of all non-zero, non-voided settlement credit card refunds
Credit Card Refunds Amt	AN 12	Amount of all non-zero, non-voided settlement credit card refunds
Debit/EBT Card Sales Count	AN 3	Count of all non-zero, non-voided settlement debit and EBT sales
Debit/EBT Card Sales Amount	AN 12	Amount of all non-zero, non-voided settlement debit and EBT sales
Debit/EBT Card Refunds Count	AN 3	Count of all non-zero, non-voided settlement debit and refunds
Debit/EBT Card Refunds Amt	AN 12	Amount of all non-zero, non-voided settlement debit and EBT refunds
ECA Sales Count	AN 3	Count of all non-zero, non-voided settlement ECA sales
ECA Sales Amount	AN 12	Amount of all non-zero, non-voided settlement ECA sales
ECA Refund Count	AN 3	Count of all non-zero, non-voided settlement ECA refunds
ECA Refund Amount	AN 12	Amount of all non-zero, non-voided settlement ECA refunds

- Adjustments affect amount totals but not count totals.
- A void will affect the amount and decrement the count; any transaction with a zero amount should be considered a void and should not be included in the count.
- If multiple currencies apply, the dollar amount fields represent the total units of currency without any regard to decimal placement. For example:

1 US Dollar = 000000000100 units of currency  
1 Yen = 000000000001 unit of currency  
1 Dinar = 000000001000 units of currency  
Total units = 000000001101 units of currency

**Example:**

[illegible]

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### 5.33.2 Field 63 Response Display Text (ANS ...40)

Usage: 0510, 0330 and 810 (Processing Codes 930000)

The Response Display Text can be received on **any** response and should be displayed as part of the response processing if received (normally includes descriptive text for an error scenario). The display text is formatted for 2 lines of 20 characters each.

FIELD	ATTRIBUTE	COMMENT
Length	N 3	'0nnn' – BCD length of data to follow
Response Display Text	ANS 2X20	<b>0510 Settlement Successful Text (Field 39 Response Code = '00'):</b> 'Okmmddhhmmbbbb' where 'bbbb' is the last 4 digits of the Field 60 Batch # in the 0500 request.  <b>0510 Settlement Out-of-Balance Text (Field 39 Response Code = '95'):</b> 'BATCH UPLOAD IN PROGRESS'  <b>Other examples:</b> 'BATCH CLOSE ERR/ CALL HELP DESK'

#### Examples:

ISO Dual Field	Length of User Data	Value of User Data	ISO Dual field representation
Field 62 – Response Display Text	14	'OK041113550002'	Hex: 00 14 51 4B 30 34 31 31 31 33 35 35 30 30 30 32
	28	'BATCH<20>UPLOAD<20>IN<20><20><20><20><20>PROGRESS'	Hex: 00 28 42 41 54 43 48 20 55 50 4C 4F 41 44 20 49 4E 20 20 20 20 20 50 52 4F 47 52 45 53 53

### 5.33.3 Field 63 Terminal Statistics (AN ...105)

Usage: Statistics Request (Message Type 0800, Processing Code 910000):

This field is used to upload local terminal statistics to the Nashville host. Since the statistics fields are optional, the developer may “pick and choose” which data elements below to support. If an element is not supported, it should be filled with hex ‘F’. All counts refer to the time period covered by the batch which was just settled. *This field is not required and is currently ignored by the Nashville host.*

FIELD	ATTRIBUTE	COMMENT
Length	N 3	‘0nnn’ – BCD length of data to follow
Terminal Status Response	N 2	‘0F’
Terminal Status	N 2	‘00’
# Messages Received	N 4	Total number of messages received
# Messages Sent	N 4	Total number of messages sent
# Transactions Processed	N 4	Transactions processed means completed without being aborted by the user and responded to by the host
Terminal Redials	N 4	Times “rolled” to alternate number
Communications Errors	N 4	Could-not-connects, connection breaks, negative acknowledgments, etc.
Transaction Time-outs	N 4	Time-outs awaiting host response
Constant	N 60	All ‘F’s
Constant	N 18	‘440050010001500200’
Responses in 5 seconds	N 4	The count of message responses received in less than 5 seconds
Responses in 10 seconds	N 4	Responses received in less than 10 seconds
Responses in 15 seconds	N 4	Responses received in less than 15 seconds
Responses in 20 seconds	N 4	Responses received in less than 20 seconds (Tot Received above minus these 4 counts should be number which took longer than 20 seconds but did not time-out.)
Constant	N 40	All ‘F’s
Card Read Errors	N 4	
Constant	N 10	All ‘F’s
Card Read Attempts	N 4	
Constant	N 30	All ‘F’s

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#### 5.33.4 Field 63 - Additional Data Tables

When Field 63 Additional Data Tables are present, the field begins with a 2 byte BCD packed (N 4) length indicator that represents the combined length in actual bytes of all the tables that follow, followed by the table data (including the table length indicator) for each applicable table as defined below.

**Example:**

ISO Dual Field	Length of User Data	Value of User Data	ISO Dual field representation
Field 63 with Table 20 -Compliance Response Data	26	'AMCC643898<20><20><20><20><20><20>0412A<20>90'	Hex: 00 28 00 26 32 30 41 4D 43 43 36 34 33 38 39 38 20 20 20 20 20 20 30 34 31 32 41 20 39 30

#### 5.33.5 Field 63, Table 09 - Alternate Invoice/Ticket # (AN ...12)

Usage: 0100, 0200, 0220, 0310, 0320, 0400

The invoice/ticket # should be submitted in this table when the Field 62 Invoice # field is being used for the folio number, rental agreement number or direct marketing order number and an invoice/ticket number also applies.

FIELD	ATTRIBUTE	COMMENT
Table Length	N 4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'09'
Ticket #	AN 10	As entered or assigned

#### 5.33.6 Field 63, Table 10 - Clerk/Server Data (AN ...8)

Usage: 0100, 0200, 0220, 0310, 0320, 0400

This table should be included in any message that contains transaction detail when employee ID prompting applies.

FIELD	ATTRIBUTE	COMMENT
Table Length	N 4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'10'
Clerk/Server Number	AN 4	As entered
Filler –Till Number	AN 4	Space filled ( <i>Not Applicable</i> )

### 5.33.7 Field 63, Table 12 - Lodging Data (AN ...49)

Legacy Usage: 0100, 0200, 0220, 0310, 0320, 0400

This table includes information specific to lodging merchants and should be included in any lodging check-out/settlement transaction regardless of the account number source (swiped or manually keyed).

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'12'
Primary Charge Type	AN 1	'1'=Lodging '2'=Restaurant '3'=Gift Shop
Arrival Date	AN 6	<mmddyy> zero fill if not applicable
Departure Date	AN 6	<mmddyy> zero fill if not applicable
Special Program Code	AN 1	'1'=No special code, '2'=Assured/no show, '3'=Advance deposit, '4'=Delayed charge, '5'=Express service, '6'=Assured/normal (For Visa, the host will treat anything other than '2'/No Show as '1'/No Special Code and convert them to the appropriate Visa values)
Extra charge codes	AN 6	Fill with 6 of the following codes as applicable or '000000' if not supported: '2'-Restaurant, '3'=Gift Shop, '4'=Mini bar, '5'=Telephone, '6'=other, '7'=laundry, '0'-no extras
Arrival Time	AN 4	<hhmm> zero fill if not applicable
Departure Time	AN 4	<hhmm> zero fill if not applicable
Room Number	AN 6	Spaces if not applicable
Customer Accounting #	AN 10	Spaces if not applicable
Length of Stay	AN 3	Actual length of stay if applicable

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### 5.33.8 Field 63, Table 13 - Lodging Data (AN ...79)

Usage: 0100, 0200, 0220, 0310, 0320, 0400

This table includes information specific to lodging merchants and should be included in any lodging check-out/settlement transaction regardless of the account number source (swiped or manually keyed). This table includes support for the new revision number, daily room rate and daily tax rate fields as part of the spring 2003 compliance mandates.

#### **Dynamic Currency Conversion:**

*For DCC accepted transactions, the amount is converted using the same FX rate used for the Field 4 conversion and as indicated in the Field 52 Currency Code.*

Element	Attribute	Comment
Table Length	N4	'0nnn' - BCD length of data to follow
Table ID	AN 2	'13'
Revision Number	AN 2	'05'
Primary Charge Type	AN 1	'1' - Lodging '2' - Restaurant '3' - Gift Shop
Arrival Date	AN 6	MMDDYY
Departure Date	AN 6	MMDDYY
Special Program Code	AN 1	'1' - No special code '2' - Assured/no show '3' - Advance deposit '4' - Delayed charge '5' - Express service '6' - Assured/normal (Amex requires 1-6, others consider any value other than 2 as normal)
Extra Charge Codes	AN 6	'2' - Restaurant '3' - Gift Shop '4' - Mini Bar '5' - Telephone '6' - Other reasons '7' - Laundry '0' - filler/no extras
Arrival Time	AN 4	<hhmm> zero fill if not applicable
Departure Time	AN 4	<hhmm> zero fill if not applicable
Room Number	AN 6	Left justified and space filled
Customer Accounting #	AN 10	Left justified and space filled
Length of Stay	AN 3	Right justified and zero fill. (Valid values are 0 – 99)
Total Room Tax	AN 7	Zero fill if not applicable
Total Non-Room Charges	AN 7	Zero fill if not applicable
Daily Room Rate	AN 7	Zero fill if not applicable
Daily Room Rate Tax Amount	AN 7	Zero fill if not applicable.



### 5.33.9 Field 63, Table 15 - Auto Rental Data (AN ...76)

Usage: 0100, 0200, 0220, 0310, 0320, 0400

This table includes information specific to auto rental merchants and should be included in any auto rental settlement transaction regardless of the account number source (swiped or manually keyed).

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'15'
Revision Number	AN 2	'01' – Original format '05' – Format with rental and return country added
Rental Date	AN 6	<yymmdd>
Return Date	AN 6	<yymmdd>
No Show Indicator	AN 1	'0' – Not applicable/not supported, '1' – Assured No Show
Extra charge codes	AN 6	Fill with 6 of the following codes as applicable or '000000' if not supported: '1'-Gas, '2'-Extra Mileage, '3'=Late return, '4'=One way fee, '5'=Parking Violation, '0'-no extras  Note: Explains why charged amount differs from receipt cardholder received at the time of rental return.
Renter/Cardholder Name	AN 26	Data may contain embedded spaces between name fields; name from Track I or as entered; otherwise, space fill if not available
Days Rented	AN 7	Fill with zeroes if not applicable or not supported
Tax Exempt Indicator	AN 1	'0' Not Applicable '1' – Tax Exempt
Rental Class ID	AN 4	Classification of the vehicle rented, such as midsize or luxury ('Open Travel Alliance (OTA) Codes for Vehicle Rental' – refer to page 207). Zero fill if not applicable.
Rental Time	AN 4	<hhmm>
Return Time	AN 4	<hhmm>
Extra Charge Amount	AN 7	
Rental Country	AN 3	Country rental was rented in (Field Only present when Revision Number is '05'; otherwise field must not be present)
Return Country	AN 3	Country rental was returned to (Field Only present when Revision Number is '05'; otherwise field must not be present)

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### 5.33.10 Field 63, Table 18 – Debit Key Synch Counters - (Future - Check for Availability)

Usage: 0200/0210, 0400/0410, 0800/0810

**Note: Use of this table by a POS device (terminal) is optional. The table can be used by a POS solution to ensure the debit working keys (Mac, Pin, KME/Data) stay in synch with the First Data host key server (i.e. for Canadian debit processing). If a merchant is not participating in the key synch counter program, Field 63, Table 18 will not be included in any messaging.**

The First Data host debit system will create a key synch counter for each working key (Mac, Pin, and KME/Data). The counter will start with a value of '1' and increment each time a new working key is generated. If a counter reaches the max of 999, the counter will reset to 1. The counter will be stored at the First Data host along with the respective working key.

For any 0800 key request, the terminal can include Field 63, Table 18 with the key counters set to '999'. If the terminal does not use a particular type of key (i.e. KME key), then that counter must be set to '000'.

The First Data host will return Field 63, Table 18 in the response. The First Data host counter associated with each key will be returned in the response message (0210, 0410, 0810) if Field 63, Table 18 was included in the request.

The terminal will store the key sync counter along with its corresponding working key.

When an authorization or reversal request message is sent (0200 or 0400), then the key sync counter for the PIN working key, the key sync counter for the KME working key (if used), and the key sync counter for the MAC working key would be included.

The First Data host debit system will compare the counters sent in by the terminal to the counters stored in the host First Data host key server. If the counters do not match, a new working key will be generated. The new working key will be sent back in the decline response to the terminal along with a new incremented key synch counter.

#### **0200 Authorization Request, 0400 Reversal Request, 0800 Canadian Debit Key Request**

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0011' – BCD length of data to follow
Table ID	AN 2	'18'
PIN Key Counter	AN 3	'000' – Key not used (0200, 0400 and 0800) '001' to '999' – Currently assigned counter for key (0200 and 0400) '999' – Requesting new key (0800)
MAC Key Counter	AN 3	(same as above)
KME Key Counter	AN 3	(same as above)

#### **0210 Authorization Response, 0410 Reversal Response, 0810 Canadian Debit Key Response**

*Note: If new keys are not being included in the 0210 or 0410 response in Field 63, Table 34, then Field 63, Table 18 will not be included either.*

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0011' – BCD length of data to follow
Table ID	AN 2	'18'
PIN Key Counter	AN 3	'000' – Key not used (0210, 0410 and 0810 – echoed from request) '001' to '999' – Assigned counter for key (0210, 0410 and 0810)  <i>Note: If a new key is included in the response in Field 63, Table 34, the key counter field will hold the counter for the new key; otherwise, this field will hold the counter assigned to the existing key.</i>
MAC Key Counter	AN 3	(same as above)
KME Key Counter	AN 3	(same as above)

### 5.33.11 Field 63, Table 19 – Dynamic Currency Conversion (DCC) Data (AN ...31)

Usage: 0200, 0220, 0310, 0320, 0400

This table includes currency conversion data and applies for settlement only transactions when DCC applies. This field is not supported for auth only type transactions such as pre-auth, incremental auth and partial reversal transactions.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'19'
Dynamic Currency Conversion Indicator	AN 1	Status of Dynamic Currency Conversion 1 = Converted 2 = Not Convertible 3 = Convertible but declined by the cardholder 4 = Reserved for future use
DCC Transaction Time Zone	AN 3	Range from '-12' to '+12' = deviation in hours from Greenwich Mean time based on the merchant's location. If the merchant were located in GMT, the value would be either "+00" or "-00".  <i>'999' means 'unknown' - the field will be plugged using merchant information stored at the Nashville host.</i>  Space filled if the DCC indicator is not '1' above.
Foreign Conversion Rate	AN 13	DCC Conversion Rate: The conversion rate used to convert the Transaction Amount into the Dynamic Currency conversion amount. The conversion rate must be the most current rate available from FEXCO. Four decimal positions are implied using the format 9(9) v 9(4), right justified, zero filled.  Zero filled if the DCC indicator is not '1' above.
US Dollar Amount	AN 12	US Dollar amount of the purchase after any adjustments if applicable.  Zero filled if the DCC indicator is not '1' above.

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### 5.33.12 Field 63, Table 20 - Compliance Response Data (AN ...39)

Usage: 0100, 0110, 0210, 0220, 0310, 0320, 0400, 0410

The Compliance Response Data is received on authorization responses (Message Type 0110 and 0210) for CPS/IPC qualified transactions and is included in subsequent associated transactions such as incremental auth ('0100'), partial reversal ('0100'), sales completion ('0220'), batch download detail, ('0310') and batch upload detail ('0320').

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'20'
Returned ACI	ANS 1	As assigned by Nashville host on original authorization except for incremental authorizations where it must be set to 'I' (as in <u>I</u> ncremental). Example codes follow: 'A' – Swiped (without merchant name/location) 'E' – Swiped (with merchant name/location) <b>'I' - Incremental to previously approved authorization (add auth)</b> 'P' – Preferred Hotel/Auto Rental (CIF Preferred is 'P'/manually keyed) 'N' – Does not qualify for any special rate 'V' – Direct Marketing (manually keyed and AVS data on auth) 'K' – Retail manually keyed and AVS data on auth 'R' – AVS not required (Only available to merchants in VISA healthcare and select developing markets) 'W' – CNP non-3D secure e-commerce 'S' – 3D Secure authentication attempt 'U' – CNP 3D secure e-commerce 'F' – CNP account funding 'J' - Card not present–Recurring bill payment
Transaction ID	AN 15	As assigned by issuer on <u>original pre-auth response</u>
Validation Code	AN 4	As assigned by issuer on <u>original pre-auth response</u>
Response Code/ACI	AN 1	Same as Returned ACI above ( <b>'I' for Incremental Auth</b> )
Market Specific Indicator	ANS 1	CIF Market Specific Indicator - Example codes follow: '<space' – Retail 'H' – Lodging 'A' – Auto Rental 'B' – Bill Payment
POS Entry Mode	AN 2	Example codes follow: '01' – Original transaction did not include mag stripe data '07' – Original transaction contactless M/Chip or VISA chip read '81' – Original transaction manually keyed (e.g. MasterCard Internet transaction) '90' – Original transaction included mag stripe data '91' – Original transaction included contactless chip mag stripe read data
<p><b><i>The following fields are required for incremental auth requests and conditionally supported for incremental auth responses (Returned ACI = 'I' above). The fields must be padded with zeroes on all 0100 incremental auth requests. The below fields <u>may</u> be returned on the 0110 incremental auth response and are for use by the POS only. If present, these fields represent the original information supplied in the Field 63, Table 20 Transaction ID and Validation Code of the original (first) 0100 incremental auth request.</i></b></p>		
Additional Settlement Date (Validation Code)	AN 4	(Applicable only when ACI = I) <b>0100 – Incremental Request Message (Required)</b> Zero fill (Place holder only) <b>0110 – Incremental Response Message (Conditional)</b> If present, field will contain same value that was sent in field "Validation Code" in 0100 Incremental Request Message (Format "MMDD")
Additional Reference Number (Transaction ID)	AN 9	(Applicable only when ACI = I) <b>0100 – Incremental Request Message (Required)</b> Zero fill (Place holder only) <b>0110 – Incremental Response Message (Conditional)</b> If present, field will contain same value that was sent in field "Transaction

	ID" in 0100 Incremental Request Message
--	---

### 5.33.13 Field 63, Table 21 - Compliance Original Auth Amount (AN ...14)

Usage: 0100, 0110, 0220, 0310, 0320

For qualified transactions, this table is included in subsequent associated transactions such as incremental auth ('0100'), partial reversal ('0100'), sales completion ('0220'), batch download detail, ('0310') and batch upload detail ('0320'). Qualified transactions are transactions that received Field 63, Table 20 on the original authorization response. Note: For DCC accepted transactions, the amount is converted using the same FX rate used for the Field 4 conversion.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'21'
Original Amount	AN 12	Max value 99,999.99 (RJLZ)

### 5.33.14 Field 63, Table 22 - Response Display Text (ANS ...42)

Usage: 0110, 0210, 0410, 0230 and 0800 (Processing codes 940000, 990000, 010000 and 000000)

The Response Display Text can be received on **any** response and should be displayed as part of the response processing if received (normally includes descriptive text for an error scenario). **See Appendix G for error text associated specifically with TransArmor security processing.**

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'22'
Response Text	ANS 40	Alternate text to display (Two 20 character lines)

### 5.33.15 Field 63, Table 23 - Response Printer Text (ANS ...45)

Usage: Any response except '0510' settlement response

The response printer text can be received on any transaction response where a receipt or printed report applies and the text should be printed as additional footer lines (before the standard footer lines) and should be printed regardless of the Field 39 response code received. Multiple occurrences of Field 63, Table 23 may apply on a single response.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	ANS 2	'23'
Response Text	AN 40	Alternate text to print
Enhanced/Double Wide	AN 1	0=disabled, 1=enabled (print in bold if no of columns for printer allows)
Red/Inverse	AN 1	0=disabled, 1=enabled (print in red, inverse)
Center	AN 1	0=disabled, 1=enabled (strip leading/trailing spaces and center text)

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### 5.33.16 Field 63, Table 31 – Network Response Code (AN ...4)

Usage: 0210

The native network response code is mapped to ISO Bit Field 39 Response Code values and both values are returned to the terminal in the Canadian debit authorization response. Field 63, Table 31 contains the native code and can be used to display or print descriptive error text at the point-of-sale.

*Note: Currently network codes are defined only for the Canadian Debit (EverLink) network – see below.*

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'31'
Network Response Code	AN 2	Native network response code

EverLink Code	Response	Fault Allocation
00	Approved or completed successfully	Approved
05	Do not honor	Policy
06	Edit error	Policy
11	Invalid processing code	Policy
13	Invalid amount (edit error in amount)	Policy
14	Invalid card number (edit error in PAN)	Policy
19	RFI Error. Re-enter transaction	System
23	Invalid Transaction Fee (future)	Policy
40	Requested function not supported	Policy
51	Not sufficient funds	Policy
52	No checking account	Policy
53	No savings account	Policy
54	Expired card	Policy
55	Incorrect PIN	Policy
56	No card record (PAN not on authorizer's database)	Policy
57	Transaction not permitted to cardholder	Policy
58	Transaction not permitted to terminal	Policy
61	Exceeds withdrawal amount limit	Policy
62	Restricted card-temporarily disallowed from interchange	Policy
63	MAC security failure	System
65	Exceeds withdrawal frequency limit	Policy
68	Response received too late (timeout)	System
75	Allowable number of PIN entry tries exceeded	Policy
77	Invalid capture date	System
81	Invalid PIN block	System
82	PIN length error	System
85	No keys available	System
86	KME synch error	System
87	KPE synch error	System
88	KMAC synch error	System
91	Issuer or switch is inoperative	System
92	Financial institution or intermediate network facility cannot be found for routing	System
94	Duplicate transmission	System
96	System malfunction	System
Q0	Edit error on capture date	System
Q7	Exceeds RFI limit	System
	Response received that was not listed above	System

### 5.33.17 Field 63, Table 33 - DUKPT Key Serial Number (AN ...22)

Usage: 0200

This field holds the DUKPT key serial number and is included with ~~debit~~-sale and return transactions along with the Field 52 PIN Block when DUKPT key encryption method applies. *This field is omitted when a dummy PIN block of all Fs is submitted in Field 52. ~~if PIN entry is not required (i.e. debit contactless transactions under the 'no PIN required' floor limit).~~*

FIELD	ATTRIBUTE	COMMENT
Table Length	N 4	'0022' – BCD length of data to follow
Table ID	AN 2	'33'
DUKPT Key Serial #	AN 20	DUKPT Key Serial Number (terminal to host). <i>If key serial # is less than 20 characters, it must be right justified (padded) with lead 'F' characters to 20 characters. For example, if the serial # from the PIN pad is '031754715251520004E', the field must be populated with 'F031754715251520004E'.</i>

### 5.33.18 Field 63, Table 34 – Canadian Debit Keys (AN ...50)

Usage: 0210, 0810

This table holds the Canadian debit master session keys and is included with the Canadian key update response (Message Type 0810; Processing Codes 000000) and optionally included with other Canadian debit '0210' responses. The table defines values for the message authentication working key (TMAC), the PIN encryption working key (TKPE) and the message/balance encryption working key (TKME).

*Note: If the terminal receives new keys on a transaction response, the new keys must be used for that response and for all subsequent processing until new keys are received.*

FIELD	ATTRIBUTE	COMMENT
Table Length	N 4	'0050' – BCD length of data to follow
Table ID	AN 2	'34'
Message Authentication Working Key (TMAC)	AN 16	Ignore if spaces – do not overwrite existing key.
PIN Encryption Working Key (TKPE)	AN 16	Ignore if spaces – do not overwrite existing key.
Message Encryption Working Key (TKME)	AN 16	Ignore if spaces – do not overwrite existing key.

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### 5.33.19 Field 63, Table 35 – Canadian Debit Message Authentication Code/Check Digit (AN ...22)

Usage: 0200/0210, 0400/0410, 0810

The MAC is used to validate selected fields in a message. Currently, only the first 8 bytes are used and the last 8 bytes are always zeroes. Field 63, Table 35 is included in Canadian Debit authorization request/response, reversal request/response, balance inquiry request/response, and key update response messages.

FIELD	ATTRIBUTE	COMMENT
Table Length	N 4	'0022' – BCD length of data to follow
Table ID	AN 2	'35'
Message Authentication Code (MAC)	AN 16	MAC authentication is bypassed if the Field 63, Table 35 MAC in the response message is all spaces. <i>The message authentication code is created using the message authentication working key.</i>
Message Authentication Working Key Check Digits	AN 4	The check digits are validation characters associated with the message authentication working key. The check digits are used to distinguish a MAC synch (31) reversal error from a MAC verification (30) reversal error when MAC authentication fails. If the MAC authentication fails for a transaction and the check digits received in Field 63, Table 35 for the transaction do not match the check digits stored in the terminal from the last key update, then the Canadian Debit Reversal Code (Field 63, Table 38) is set to '31' for synch error; otherwise, the Reversal Code is set to '30' for verification failure.

### 5.33.20 Field 63, Table 37 – Canadian Debit Encrypted Balance (AN ...18)

Usage: 0210

The encrypted debit account balance must be sent to the PIN pad along with the Message Encryption Key (TKME) to obtain the decrypted account balance for displaying on the PIN pad.

FIELD	ATTRIBUTE	COMMENT
Table Length	N 4	'0018' – BCD length of data to follow
Table ID	AN 2	'37'
Encrypted Debit Account Balance	AN 16	Encrypted debit account balance for Canadian processing. See the decrypted debit account balance format below.

#### Decrypted Debit Account Balance:

##### **Balance Block: [sign] [balance]**

[sign]: 'D' = Debit (minus amount)  
'C' = Credit (positive amount)  
[balance]: 9(15), amount in cents, padded with leading zeroes

##### **Examples (64 bit hex data block):**

C000000000129959: \$1,299.59  
D000000000013952: -\$139.52



#### 5.33.21 Field 63, Table 38 – Reversal Reason Code (AN ...4)

Usage: 0400

This field may be included on 0400 reversal requests to indicate the reason for the reversal. This field is required for Canadian debit reversals and for partial approval transactions where the transaction was voided by the cashier or customer.

FIELD	ATTRIBUTE	COMMENT
Table Length	N 4	'0004' – BCD length of data to follow
Table ID	AN 2	'38'
Reversal Reason Code	AN 2	<u>Mandatory for all Canadian debit reversals and when the cardholder rejects a partial approval at the POS ('00' below). Values are:</u> <input type="checkbox"/> '00' – Transaction voided by cashier or customer <input type="checkbox"/> '01' - Timeout (no response received at the terminal) <input type="checkbox"/> '06' - Edit error (parse error at the terminal); also used if an INTERAC online chip approval is declined by the card <input type="checkbox"/> '30' - MAC Verification Error (terminal MAC is invalid or data used to verify the MAC is incorrect) <input type="checkbox"/> '31' - MAC Synch Error (terminal MAC is out of synch with host MAC) <input type="checkbox"/> '86' - Message Encryption Error (terminal message encryption key is out of synch with host message encryption key or there is an error with the input data) <input type="checkbox"/> '96' - System Error (all other errors such as communication error between the terminal and PIN pad).

#### 5.33.22 Field 63, Table 39 - Tax Amount (AN ...14)

Usage: 0100, 0200, 0220, 0310, 0320, 0400

This field holds the tax amount when global sales tax entry or calculation applies for all cards not just commercial cards. For commercial card transactions, the tax must also be included in Field 63, Table 68 or 69. *Note: For DCC accepted transactions, the amount is converted using the same FX rate used for the Field 4 conversion and as indicated in the Field 51 Currency Code..*

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0014' – BCD length of data to follow
Table ID	AN 2	'39'
Tax Amount	AN 12	Amount of tax included in the Field 4 transaction amount. <b>Note: Field 63, Table 'SD; Tag 'TI' can also be used to pass tax information.</b>

### 5.33.23 Field 63, Table 41 – Cash Back Amount (AN ...14)

Usage: 0100, 0200, 0220, 0310, 0320, 0400

The Cash Back Amount is included in any message session that contains transaction detail when a cash back amount applies.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0014' – BCD length of data to follow
Table ID	AN 2	'41'
Cash Back Amount	AN 12	Cash back amount included in the Field 4 transaction amount.

### 5.33.24 Field 63, Table 42 - Schedule Download (AN ...72 or AN ...89)

Usage: 0810

When integrated terminal management applies, this table holds information for host initiated program downloads. The schedule download table can be received on any 0810 initialization response.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0072' – BCD length of data to follow
Table ID	AN 2	'42'
Download Type	AN 2	'00' (Disabled): Auto download not required '01' (Timed): Initiate a program download at the next occurrence of the Download Time if the batch is closed. If auto settle is enabled, auto settle the batch and then download at the time indicated. '02' (Immediate): Initiate a program download immediately after the batch is closed.
Download Time	AN 4	hhmm: Time (military) to initiate a timed download
Init Telephone Number	AN 24	Used to set the initialization telephone #
Download Telephone #	AN 24	Used to set download telephone #
Confirm Download Flag	AN 1	'0' (Automatic): display warning prompt for 60 seconds but allow user abort '1' (Confirm): display confirmation prompt – allow user abort
No of Retries Allowed	AN 2	'00': Retry indefinitely based on Retry timer below as long as the batch is closed. Nn: Retry for a maximum of 'nn' times
Retry Delay	AN 6	'<hhmmss>': Retry a failed download after 'hh' hours, 'mm' minutes and 'ss' seconds have expired for the number of times indicated by the No of Retries Allowed (above) or until a new batch is opened.
Max Download Speed	AN 7	The maximum baud rate (bits per second) allowed for the download phone # above. Examples are (but not limited to):  <div style="display: flex; justify-content: space-between;"> <div> '0000300' – 300 baud  '0001200' – 1200 baud  '0002400' – 2400 baud  '0004800' – 4800 baud </div> <div> '0009600' – 9600 baud  '0014400' – 14.4K baud  '0056000' – 56K baud </div> </div>
The following fields are only present if the application is configured in TMS as capable of accepting the fields.		
Application Type	AN 2	'01' Financial application '02' Firmware for Contactless Capable Device <b>(FUTURE)</b>
Application Name	AN 30	Download system application identifier (e.g. TMS application name (*ZA); package name for GDS). Left justified with trailing spaces.
Download ID	AN 16	Download system terminal identifier (e.g. Nashville Terminal ID (*ZT) for VeriCentre; global DLDID for GDS). Left justified with trailing spaces.

### 5.33.25 Field 63, Table 43—Contactless Firmware Update (AN ...36 or AN ...83)

Usage: 0800

This message is used to upload the firmware version or firmware download information. A POS device includes this table in an 0800 Contactless Firmware Update request.

FIELD	ATTRIBUTE	COMMENT
Table Length	1. N4	2. '0036' or '0083'—BCD length of data to follow
3. Table ID	4. AN 2	5. '43'
6. Table Version #	7. AN 3	8. '001'—Version 1 (initial version)
9. Update Type	10. AN 1	11. '0'—Firmware Download Update '1'—Firmware Version Update
12. Contactless Firmware Version Indicator	13. AN 30	14. Firmware version of contactless-capable device installed at the POS (standalone reader or combination PIN and contactless reader). <i>The version indicator must be left justified with trailing spaces. Note: If the terminal cannot determine the version, the terminal will set this field to special descriptive status text (left justified with trailing spaces to 30).</i>  Example status text includes: <ul style="list-style-type: none"> <li>• 'READER NOT SETUP'—Reader not configured during parameter initialization</li> <li>• 'NO READER ATTACHED'—Reader configured but no reader attached</li> <li>• 'VERSION UNKNOWN'—Reader does not support version ID request</li> <li>• &lt;others tbd&gt;</li> </ul>
<b>15. Following fields only included for firmware download updates (Update Type = '0')</b>		
16. Download Application Name	17. AN 15	18. Application ID (e.g. 'RDRAPL'); spaces if not known
19. Download Date	20. AN 8	21. Format: mmdccyy (merchant date)
22. Download Time	23. AN 6	24. Format: hhmmss (merchant time)
25. Download Status	26. AN 2	27. 00—No error (download and firmware transfer to reader successful) 01—Download failed 02—Download complete but transfer failed 99—Other error

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#### 5.33.26 Field 63, Table 44 – Card Authentication Result Code (AN ...3))

Usage: 0110, 0210, 0220, 0310, 0320, 0400

This conditional table contains a code to indicate card authentication results for EMV chip transactions. When the POS device receives this code on an authorization response, it must echo it back in a subsequent related transactions such as 0220 adjustments/voids and 0320 batch upload transactions. The field will be returned on 0310 batch download transactions if the field applied on the original authorization response. *This field is currently only used by Visa.*

FIELD	ATTRIBUTE	COMMENT
Table Length	N 4	'0003' – BCD length of data to follow
Table ID	AN 2	'44'
Card Authentication Result Code	AN 1	(blank or not present) – Card authentication was not performed or some other problem prevented verification. For example, issuer is not participating in the Card Authentication service or a system or cryptographic error occurred. '1' – The Authorization Request Cryptogram (ARCQ) was checked but failed. '2' - The Authorization Request Cryptogram (ARCQ) was checked and passed verification.

#### 5.33.27 Field 63, Table 48 - # of Payments (AN ...4)

Usage: 0100, 0200, 0220, 0310, 0320, 0400

This table holds the number of payments when credit plan processing applies.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0004' – BCD length of data to follow
Table ID	AN 2	'48'
# of Payments	AN 2	Numeric data only

### 5.33.28 Field 63, Table 49 - Terminal Status (AN ...22)

Usage 0800 (Processing Code 930000)

This table is typically used when integrated terminal management applies. This table holds information on terminal configuration and is submitted with each parameter initialization request.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0022' – BCD length of data to follow
Table ID	AN 2	'49'
Batch Status	AN 1	(Not currently used by Nashville host) '0' – No transactions '1' – Transactions
Init Table Status	AN 1	(Not currently used by Nashville host – confirmed 5/08) '0' – Tables are good '1' – Tables are corrupted
EPROM Version	AN 10	Boot/firmware version (Used to set CMS Firmware Revision)
Eprom Printer Type	AN 2	'99'-Not applicable (typical usage) '00'-T7E '07'-T77S '01'-T7P '0A'-T7PT (T7P thermal) '06'-T77F '0B'-T77PT (T77 thermal) '10' –T7Plus (wide paper/graphics) (others defined as needed)
ECA Capable Indicator	AN 1	'0' – Not ECA capable '1' – ECA CPO Capable (only) '2' –ECA CPO and ECA Split Dial Capable '3' – ECA Split Dial Capable (only)
Printer New Line Characters	AN 2	Characters that force a carriage return/line feed for the attached printer (e.g. Hex '<0A><20>' for the T7Plus wide paper printer). Characters should be left justified with trailing spaces – trailing spaces should be ignored and not sent to the printer. Hex '<99><99>' means 'unknown' or 'not applicable'.
Printer Max # Columns	AN 3	The max number of columns supported on the attached printer. For example, '064' indicates the printer supports 64 columns.

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### 5.33.29 Field 63, Table 50 - Special Indicators (AN ...5)

Usage: 0100, 0200, 0220, 0310, 0320, 0400

This table holds the electronic commerce (internet) indicator and the transponder indicator when these features apply for a transaction.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0005' – BCD length of data to follow
Table ID	AN 2	'0050'
ECI Indicator	AN 2	'00' – Not an electronic commerce transaction '05' - Secure Electronic Transaction with cardholder certification '06' - Secure Electronic Transaction without cardholder certification '07' – Channel Encrypted electronic Commerce Transaction '08' – Non-secure Electronic Commerce Transaction
Transponder Transaction Indicator	AN 1	'0' – Not a transponder transaction '1' – Transponder transaction

**Note:** Other indicators may be added as needed.

### 5.33.30 Table 51 – Reserved (Legacy Usage - Discount Credit Frequency Qualification Data)

### 5.33.31 Table 52 - Reserved (Legacy Usage - Discount Credit Frequency Data)

### 5.33.32 Field 63, Table 53 - Compliance Total Amount Authorized (AN ...14)

Usage: 0100, 0220, 0310, 0320

The Compliance Total Amount Authorized is included for lodging, auto rental or direct marketing partial reversal transactions as well as all subsequent settlement transactions (adjustments, batch upload and batch download). The total authorized amount must equal the amount of the original pre-auth plus any subsequent incremental authorization amounts or the final settlement amount if a partial reversal applied. Note: For DCC accepted transactions, the amount is converted using the same FX rate used for the Field 4 conversion as indicated in the Field 63, Table 51 Currency Code.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0014' – BCD length of data to follow
Table ID	ANS 2	'53'
Total Amount Authorized	AN 12	

### 5.33.33 Field 63, Table 54 - Address Verification Zip and Address (AN ...31)

Usage: 0100, 0200

This field is included on online sale transactions when Address Verification applies.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0031' – BCD length of data to follow
Table ID	AN 2	'54'
ZIP Code	AN 9	As entered (or spaces if the ZIP is included in encrypted form in Field 63, Table SP, Tag 5).
Address	AN 20	As entered

*Note: For Canadian cards at U.S. Automated Fuel Dispensers, Postal Code should be formatted as: three digits from their postal code, in order, followed by two zeroes.*

### 5.33.34 Field 63, Table 55 - Address Verification Response Codes (AN ...5)

Usage: 0110, 0210, 0220, 0310, 0320

This field is returned on online sale transaction responses when Address Verification applies. The field is also included on subsequent advice, batch upload and batch download detail transactions to preserve the response code received on the original response. The field is required for direct marketing compliance qualification.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0005' – BCD length of data to follow
Table ID	AN 2	'55'
Address Match	AN 1	<space> - No response 'N' – No match 'Y' – Match 'X' – Service not available or not completed
ZIP Match	AN 1	Same as above
AVS Native Response Code	AN 1	As returned by the authorization processor (issuer)

#### Response Meaning

#### Address/ZIP Match

#### Native Response Code

Address & 5-Digit Zip Match	YY	Y
5-Digit Zip Match Only	NY	Z
Address Match Only	YN	A
Neither Address nor Zip Match	NN	N
Address & 9-Digit Zip Match	YY	X
Nine-Digit Zip Match Only	NY	W
Address information not verified for domestic transaction	XX	U
Retry / System Unavailable	XX	R
Service Not Supported	XX	S
Address verification not allowed for card type	XX	E
Global Non-AVS participant	XX	G
Street addresses match for international transaction; postal code not verified	YN	B
Street & postal code not verified for international transaction	NN	C
Street addresses and postal codes match for international transaction	YY	D
Street addresses & postal codes match for international transaction (UK only)	YY	F
Address information not verified for international transaction	NN	I
Street addresses and postal codes match for international transaction	YY	M
Postal codes match for international transaction; street address not verified	NY	P

**Note:** Values in column 'Address/ZIP Match' indicate independent matching of Address and Zip Code separately. Values under the 'Native Response Code' list inclusive result codes assigned by the Issuers. When applicable, AVS responses codes must be supported, unedited through final settlement.

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### 5.33.35 Field 63, Table 56 - Card Code Validation Value (CVV2, CVC2, CID) (AN ...7)

Usage: 0100, 0200

This field is included on online sale transactions when card code validation applies (Visa/CVV2, MasterCard/CVC2, Discover/CID, or Amex/CID).

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0007' – BCD length of data to follow
Table ID	AN 2	'56'
Card Code Indicator	AN 1	0 – Bypassed 1 – Card Code value is present 2 – Card Code value on card is illegible 9 – Card Code value is not imprinted on card
Card Code Value	AN 4	As entered from value imprinted on card (or spaces if the card code value is included in encrypted form in Field 63, Table SP, Tag 5); <b><i>Note: It is a violation of security requirements to store authentication data for possible future use in chargeback dispute resolution.</i></b>

### 5.33.36 Field 63, Table 57 - Card Code Validation Result Code (AN ...3)

Usage: 0110, 0210, 0220, 0310, 0320

This field is included on online sales responses, advices, batch upload requests and batch download responses when card code validation applies.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0003' – BCD length of data to follow
Table ID	AN 2	'57'
Card Code Validation Result Code	AN 1	Display/print and store without interpretation M - Match N - No match P - Not Processed S - Should be on card but not so indicated U - Issuer not certified and/or has not provided encryption key... X - No response from Association



### 5.33.37 Field 63, Table 58 - Field 63, MICR Data - Keyed or MICR Reader (ANS ...68)

Usage: 0100, 0200, 0320, 0310

This field holds MICR data and is included on check approval request messages if applicable as well as subsequent voids, batch uploads and batch downloads. This field is required for ECA.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'00nn' – BCD length of data to follow
Table ID	AN 2	'58'
MICR Entry Type	AN 1	'0' – Keyed '1' – Read via check reader
MICR Data	ANS V (max 65)	As read (all data read) or keyed (MICR #)

### 5.33.38 Field 63, Table 59, Transit/Bank Number (Keyed) (AN ...11)

Usage: 0100

This field holds the check transit/routing number and is Included on check approval messages if applicable. *This field is not supported for ECA.*

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0011' – BCD length of data to follow
Table ID	AN 2	'59'
Transit/Bank #	AN 9	Transit/bank number as keyed

### 5.33.39 Field 63, Table 60 - Checking Account Number – Keyed (AN ...21)

Usage: 0100

This field holds the checking account number and is included on check approval messages if applicable. *This field is not supported for ECA.*

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'00nn' – BCD length of data to follow
Table ID	AN 2	'60'
Account #	AN ..18	Account number as keyed

#### 5.33.40 Field 63, Table 61 - ID or Driver's License # - Keyed (ANS ...37)

Usage: 0100, 0200

This field holds the check writer's driver's license or ID number and is included on check approval request messages when the number is manually keyed into the terminal if applicable. Note: Track I and Track II Fields 35 and 45 are used to submit swiped driver's license/ID data.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'00nn' – BCD length of data to follow
Table ID	AN 2	'61'
ID or Driver's License #	ANS V (max 35)	As keyed

#### 5.33.41 Field 63, Table 62 - ID or State Code – Keyed (AN ...5)

Usage: 0100, 0200

This field holds the check writer's driver's license state/ID code and is included on check approval request messages if applicable.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'62'
ID or State Code	AN V (max 3)	2 and 3 digit codes supported – table length must be used to determine length of ID/State Code

#### 5.33.42 Field 63, Table 63 - Birth Date - Keyed (AN ...10)

Usage: 0100, 0200

This field holds the check writer's date of birth and is included on check approval request messages if applicable.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0010' – BCD length of data to follow
Table ID	AN 2	'63'
Date of Birth	AN 8	As keyed ('mmdyy' if 6 bytes or 'mmdccyy' if 8)

#### 5.33.43 Field 63, Table 64 - Check Number – Keyed (AN ...12)

Usage: 0100, 0200, 0320, 0310

This field holds the check number and is included on check approval request messages as well as batch upload and batch download messages if applicable.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'00nn' – BCD length of data to follow
Table ID	AN 2	'64'
Check #	AN V (max 10)	Check number as keyed

#### 5.33.44 Field 63, Table 65 - Deferred Billing Indicator (AN ...3) Check for Availability

Usage: 0200, 0220, 0310, 0320

This field holds the deferred billing indicator.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'65'
Deferred Billing Indicator	AN 1	0 – Not a deferred billing transaction 1 – Deferred billing transaction at POS

#### 5.33.45 Field 63, Table 66 - Card Type ID (AN ...4) (When Integrated Terminal Management Applies Only)

Usage: 0100, 0200, 0220, 0310, 0320, 0400

The Card Type ID is required for all transaction processing messages (authorization, advice, reversal, batch upload, and batch download) when Integrated Terminal Management (ITM) applies. This field identifies the card type selected at the point-of-sale. **Refer to ISO Dual Addendum A.**

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0004' – BCD length of data to follow
Table ID	AN 2	'66'
Card Type ID	AN 2	If integrated terminal management applies, the value is taken from the Field 60, Table 3, Card Type ID to identify which card type was selected when overlapping card ranges apply. See ISO Dual Addendum A.

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### 5.33.46 Field 63, Table 67 – Service Provider ID (*When Integrated Terminal Management Does Not Apply*)

The terminal will submit Field 63, Table 67 on every initial transaction request to specify the type of transaction (credit card vs. debit vs. check) when Integrated Terminal Management (ITM) does not apply. A service provider ID response value will be returned on the initial response that must be echoed by the merchant in subsequent messages to the FDCN host pertaining to this same transaction (i.e. incremental authorization, partial reversal, offline advice, adjustment, void, 0400 reversal, batch upload and batch reload transactions).

### 5.33.47 Field 63, Table 67 Request:

Usage: 0100, 0200, 0220, 0300, 0320, 0400

FIELD	ATTRIBUTE	COMMENT																
Table Length	N4	'0009' – BCD length of data to follow																
Table ID	ANS 2	'67'																
Table Version Number	AN 2	'01' – Original Version																
Provider Type	ANS 2	<p>Type of the request to be submitted:</p> <p><b><i>The following values are used on the initial request for a transaction:</i></b></p> <table><tr><td><u>Value</u></td><td><u>Comment</u></td></tr><tr><td>'UN'</td><td>Unknown (<i>Used for Batch Download Request</i>)</td></tr><tr><td>"CC"</td><td>Request the provider ID for a credit card transaction</td></tr><tr><td>"CK"</td><td>Request the provider ID for a check transaction</td></tr><tr><td>"DB"</td><td>Request the provider ID for a Debit or EBT transaction</td></tr><tr><td>&lt;td&gt;</td><td>Other request values to be added as needed</td></tr></table> <p><b><i>The following value is used on all requests for a transaction other than the initial request (i.e. incremental authorization, partial reversal, offline advice, adjustment, void, 0400 reversal, batch upload and batch download):</i></b></p> <table><tr><td><u>Value</u></td><td><u>Comment</u></td></tr><tr><td>"EC"</td><td>Echo the Provider ID for this transaction if a subsequent transaction. Must be echoed back for incremental authorization, partial reversals, offline advice, adjustments, voids, 0400 reversals, batch uploads and batch downloads when received in a prior Table 67 response for this transaction.</td></tr></table>	<u>Value</u>	<u>Comment</u>	'UN'	Unknown ( <i>Used for Batch Download Request</i> )	"CC"	Request the provider ID for a credit card transaction	"CK"	Request the provider ID for a check transaction	"DB"	Request the provider ID for a Debit or EBT transaction	<td>	Other request values to be added as needed	<u>Value</u>	<u>Comment</u>	"EC"	Echo the Provider ID for this transaction if a subsequent transaction. Must be echoed back for incremental authorization, partial reversals, offline advice, adjustments, voids, 0400 reversals, batch uploads and batch downloads when received in a prior Table 67 response for this transaction.
<u>Value</u>	<u>Comment</u>																	
'UN'	Unknown ( <i>Used for Batch Download Request</i> )																	
"CC"	Request the provider ID for a credit card transaction																	
"CK"	Request the provider ID for a check transaction																	
"DB"	Request the provider ID for a Debit or EBT transaction																	
<td>	Other request values to be added as needed																	
<u>Value</u>	<u>Comment</u>																	
"EC"	Echo the Provider ID for this transaction if a subsequent transaction. Must be echoed back for incremental authorization, partial reversals, offline advice, adjustments, voids, 0400 reversals, batch uploads and batch downloads when received in a prior Table 67 response for this transaction.																	
Service Provider ID Echo Value	ANS 3	If Provider Type = "EC", the value received back in the previous Field 63, Table 67 response, Otherwise, space filled																

### 5.33.48 Field 63, Table 67 Response:

Returned on a transaction response if the Field 63, Table 67 received on the request includes a provider type not equal to 'EC'. *Field 63, Table 67 will never be included in the 0330 batch upload detail response and the 0410 reversal response.*

Usage: 0110, 0210, 0230, 310

FIELD	ATTRIBUTE	COMMENT, 0330, 0330, 0410
Table Length	N4	'0009' – BCD length of data to follow
Table ID	ANS 2	'67'
Table Version Number	AN 2	'01' – Echoed from request
Provider Type	ANS 2	Always set to "EC" (Echo) in the response message.
Service Provider ID Echo Value	ANS 3	Host Service Provider ID value for this transaction. <b><i>Must be stored and echoed back in Table 67 with a Provider Type of "EC" on any subsequent transaction (incremental authorization, partial reversal, offline advice, adjustment, void, 0400 reversal, batch upload and batch download.).</i></b>

**5.33.49 Field 63, Table 68 - Commercial Card Data -12-digit amounts (AN ...75) – RESERVED**

Usage: 0200, 0220, 0310, 0320 (*Check for availability - currently not supported by FDCN host*)

This table must be used (regardless of whether the data was requested/entered or not) for purchase card, business card or corporate card settlement transactions. . The commercial card type is determined from a commercial card type associated for the card range or from the Commercial Card Type Indicator (Field 63, Table 74) included in the auth response. The commercial card type indicator included should be a '04' (for unknown) for force transactions when the commercial card type is unknown for the associated card range.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'00nn' – BCD length of data to follow
Table ID	AN 2	'68'
Commercial Card Type Indicator	AN 2	'01'=Purchase Card '02'=Corporate Card '03'=Business Card '04'=Unknown
Customer Code	AN 25	Spaces if not applicable or bypassed
Tax Amount	AN 12	Spaces if not applicable or bypassed
Tax Exempt/Zero Tax Confirmation	AN 1	Space if unknown, not applicable or <u>tax not equal to zero</u> '0' – Tax exempt not confirmed ('NO' to tax exempt/zero tax confirmation prompt) '1' – Tax exempt confirmed (tax exempt merchant or 'YES' to tax exempt/zero tax confirmation prompt)
<i>(the following fields are only present if applicable)</i>		
Ship to ZIP	AN 9	Spaces if not applicable or bypassed
Duty Amount	AN 12	Spaces if not applicable/ bypassed
Freight Amount	AN 12	Spaces if not applicable/ bypassed

### 5.33.50 Field 63, Table 69 - Commercial Card Data -7-digit amounts (AN ...60)

Usage: 0200, 0220, 0310, 0320

This table **must** be used (regardless of whether the data was requested/entered or not) for purchase card, business card or corporate card settlement transactions. . The commercial card type is determined from a commercial card type associated for the card range or from the Commercial Card Type Indicator (Field 63, Table 74) included in the auth response. The commercial card type indicator included should be a '04' (for unknown) for force transactions when the commercial card type is unknown for the associated card range.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'00nn' – BCD length of data to follow
Table ID	AN 2	'69'
Commercial Card Type Indicator	AN 2	'01'=Purchase Card '02'=Corporate Card '03'=Business Card '04'=Unknown (force)
Customer Code	AN 25	Spaces if not applicable or bypassed
Tax Amount	AN 7	Spaces if not applicable or bypassed
Tax Exempt/Zero Tax Confirmation	AN 1	Space if unknown, not applicable or <u>tax not equal to zero</u> '0' – Tax exempt not confirmed ('NO' to tax exempt/zero tax confirmation prompt) '1' – Tax exempt confirmed (tax exempt merchant or 'YES' to tax exempt/zero tax confirmation prompt)
(the following fields are only present if applicable)		
Ship to ZIP	AN 9	Spaces if not applicable or bypassed
Duty Amount	AN 7	Spaces if not applicable/ bypassed
Freight Amount	AN 7	Spaces if not applicable/ bypassed

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### 5.33.51 Field 63, Table 70 - Estimated Duration (AN ...5)

Usage: 0100

The duration is submitted for lodging and auto rental pre-authorization and incremental authorization request messages.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0005' – BCD length of data to follow
Table ID	AN 2	'70'
Estimated Duration	AN 3	Estimated number of days until settlement for original pre-authorization; estimated extended number of days until settlement for incremental authorizations ('00' for no additional days)



### 5.33.52 Field 63, Table 71 - Room Number (AN ...8)

Usage: 0100

The room number may be submitted for lodging pre-authorization and incremental authorization messages (if applicable).

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0008' – BCD length of data to follow
Table ID	ANS 2	'71'
Room Number	ANS 6	

### 5.33.53 Field 63, Table 72 - Customer Accounting # (AN ...12)

Usage: 0100

The customer accounting # may be submitted for lodging pre-authorization and incremental authorization messages (if applicable).

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0012' – BCD length of data to follow
Table ID	AN 2	'72'
Customer Accounting #	AN 10	Job code

### 5.33.54 Field 63, Table 73 - Request For Commercial Card Type (AN ...2)

Usage: 0200

This field may be submitted on an auth request to indicate that on the auth response, the host should indicate the commercial card type if one applies. This is used when the commercial card type is unknown for an account number card range.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0002' – BCD length of data to follow
Table ID	AN 2	'73'

#### 5.33.55 Field 63, Table 74 - Commercial Card Type Indicator (AN ...4)

Usage: 0210

This field may be returned on an auth response to indicate that the transaction should be treated as a purchase, business or corporate card. The commercial card data would be collected after the auth and reported to the host via an offline advice adjustment transaction using Field 63 Table 69, (Message 0220, Processing Code '02a0000').

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0004' – BCD length of data to follow
Table ID	AN 2	'74'
Commercial Card Type Indicator	AN 2	'00'=Not a commercial card or Commercial Card Processing disabled '01'=Purchase Card '02'=Corporate Card '03'=Business Card '04'=Unknown (host in stand in mode, etc.)

#### 5.33.56 Field 63, Table 76 - Check Type (AN ...4)

Usage: 0100, 0200

This field holds the check type and is included on check approval request messages if applicable.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0004' – BCD length of data to follow
Table ID	AN 2	'76'
Check Type	AN 2	'01'=Personal '02'=Not personal 'nn'=Manually keyed check type

### 5.33.57 Field 63, Table 77 - Alternate Check Approval IDs (AN ...87)

Usage: 0100, 0200

This field holds the alternate check approval ID and is included on check approval request messages if applicable. *A separate Table 77 must be submitted for each alternate ID that applies.*

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'00nn' – BCD length of data to follow
Table ID	AN 2	'77'
Alternate ID Code	AN 3	Example: '009' for SSN Refer to 'Appendix B: Check approval ID Codes' <i>Note: Currently only supported for ECA SSN by the FDCN host.</i>
Alternate ID Source	AN 2	1=Track I 2=Track II 3=Keyed 4=Check Reader (left justified with trailing spaces)
Alternate ID #	AN V (max 80)	Table 77 table length must be used to determine actual length of field.

### 5.33.58 Field 63, Table 78 - Transaction Reference # (AN ...30)

Usage: 0210, 0200, 0220, 0310, 0320

If this field is returned on any transaction response, it should be included with any subsequent host request message (adjustment, void, batch upload, batch download, ...) for that transaction. *This field is also used for the EBT Voucher Number. The max number of characters allowed for the EBT voucher number by the debit gateway is 15. The EBT voucher number must be left justified with trailing spaces in the Transaction Reference # field.*

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'00nn' – BCD length of data to follow
Table ID	AN 2	'78'
Transaction Reference #	AN ...26	Identifies transaction to processor

### 5.33.59 Field 63, Table 79 - Credit Plan/Terms ID and Keyed Invoice Indicator (AN ...8)

Usage: 0200, 0220, 0310, 0320

The Credit Plan # and Keyed Invoice # indicator should be included in any transaction to the host (except for balance inquiries) when credit plan prompting is enabled.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'79'
Keyed Invoice #	AN 1	'0'=No (assigned), '1'=Yes (keyed)
Credit Plan/Terms ID	AN V (Max 5)	Identifies the type of account (revolving, 90 days, ...). Table 79 table length must be used to determine actual length of field.

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### 5.33.60 Field 63, Table 80 - Service Development Indicator - Existing Debt Payment (AN ...3)

Usage: 0200, 0220, 0310, 0320

This table should be included for all transactions to the host when Existing Debt Payment is indicated at the point of sale for a transaction. The table is not required unless the transaction is a debt payment (i.e. the response is 'YES' to the Debt Payment?' prompt). The table does not need to be included if the response is 'NO' to the 'Debt Payment? Prompt.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0003' – BCD length of data to follow
Table ID	AN 2	'80'
Special Service Indicator	AN 1	'0'=Default - No special service '9'=Existing Debt Payment

### 5.33.61 Field 63, Table 81 - Processor Version Control # (AN ...69)

Usage: 0200, 0320

This field is used to identify a POS application, device and application version (defined by processor, e.g., TeleCheck for ECA).

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0069' – BCD length of data to follow
Table ID	ANS 2	'81'
Version Control #	ANS 67	For TeleCheck, see format that follows (left justified with trailing spaces)

#### TeleCheck Version Control:

FIELD #	FIELD NAME	MAX LENGTH	DESCRIPTION
1	Application ID	16	Assigned by TeleCheck and identifies the software vendor and product
2	Single space	1	
3	Software date (yyyymmdd)	12	
4	Single space	1	
5	Operating System (OS)/Platform Code	16	Assigned by TeleCheck and identifies the hardware and OS.
6	Single space	1	If the serial number is not known, insert "SNNK"
7	Serial number	16	(Serial Number Not Known)
8	Single space	1	
9	Check reader code	3	001 MagTek mini MICR 002 Encheck 3000 003 IVI 2500 004 IVI 430 005 IVI 431 006 ICE 5700 007 MagTek Imager 008 Eclipse

### 5.33.62 Field 63, Table 82 - MICR Reader Status (AN ...5)

Usage: 0200

This field is used to identify the status of a MICR read at the POS and is included in the ECA check approval request. Usage: 0200, 0220, 0310, 0320

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0005' – BCD length of data to follow
Table ID	AN 2	'82'
MICR Reader Status	AN 3	(left justified with trailing spaces) '5 ' - Check reader did not detect any magnetic ink on the document '3 ' - Magnetic ink present but check reader could not read all characters on the document '9 ' - Manual only - no read attempted by the check reader '15 ' - Valid read by the MICR reader '15I' ('I' as in 'Image') - Valid Read and image available

### 5.33.63 Field 63, Table 83 - ECA Response Data (AN ...14)

Usage: 0210

This fields holds special ECA response data returned by TeleCheck for CPO ECA response processing.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0014' – BCD length of data to follow
Table ID	AN 2	'83'
ECA Status	AN 1	0=Approved as standard check guarantee, ECA not offered 1=Approved, ECA offered 3=Declined, Code 3 4=Declined, Code 4
Denial Record #	AN 7	Generated by TeleCheck to assist the consumer in resolving non-approved transactions – MUST BE PRINTED ON A DENIAL RECEIPT (Denial receipt should not be printed if this field is all spaces)
Image to Capture	AN 4	Zone of check to capture if applicable: 'F': Full image 'xxxx': where 'x' is 'Y' = to capture zone, 'N' = to not capture zone Note: Spaces if not applicable – not returned by TeleCheck

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#### 5.33.64 Field 63, Table 84 - Billing Control # (AN ...26)

Usage: 0200, 0310, 0320

This field holds' merchant's cross reference data for CPO ECA transactions (authorization, void/adjust, batch upload, and batch download).

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0026' – BCD length of data to follow
Table ID	AN 2	'84'
Billing Control #	AN 24	(left justified with trailing spaces – spaces if not applicable)

#### 5.33.65 Field 63, Table 85 - Return Check Fee (ANS ...8)

Usage: 0210

This fields holds the return check fee that is printed on the consumer receipt for CPO ECA transactions  
This field is included on the ECA check approval response.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0008' – BCD length of data to follow
Table ID	AN 2	'85'
Return Check Fee	ANS 6	n.nn – nnn.nn (decimal included – left justified with trailing spaces)

#### 5.33.66 Field 63, Table 86 - Telephone # (AN ...12)

Usage: 0200

This field holds the check writer's telephone number and may be used as an alternate check writer ID for CPO ECA transactions.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0012' – BCD length of data to follow
Table ID	AN 2	'86'
Telephone #	AN 10	Typically keyed at terminal and submitted on ECA sale auth request

### 5.33.67 Field 63, Table 87 - ZIP Code (AN ...11)

Usage: 0200

This field holds the check writer's ZIP code and may be used as additional check writer ID for CPO ECA transactions.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'87'
ZIP Code	AN 9	Typically keyed at terminal and submitted on ECA sale auth request (left justified with trailing spaces)

### 5.33.68 Field 63, Table 88 - Trace ID (AN ...24)

Usage: 0210

This fields holds the response trace ID that is printed on consumer receipt for CPO ECA transactions  
This field is included on the ECA check approval response.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0024' – BCD length of data to follow
Table ID	AN 2	'88'
Trace ID	AN 22	Unique transaction identifier assigned by processing host (left justified with trailing spaces)

### 5.33.69 Field 63, Table 89 - Debit Authorization Information – *RESERVED FOR ISO TERM SPEC*

**NOTE: NOT USED FOR ISO DUAL PROCESSING – ONLY USED FOR TERMINAL CAPTURE PROCESSING (ISO TERM SEPC).**

This table is used at both authorization and settlement time. The Authorization table (0100, 0200, 0400) is sent to the terminal to be saved and sent back in at Settlement time (0320). It is used by terminal capture applications for back office reporting and authorization matching at settlement time.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0019' – BCD length of data to follow
Table ID	ANS 2	'89'
Debit Cards		
Version Number	AN 4	V001-V999*
Debit Receipt Number	N 6	Numeric characters, Right justified with leading zeroes.
Debit Network ID	AN 6	alphanumeric characters, Left justified with trailing spaces.
Reserved	AN 4	All zeroes *Current Version Number is 001

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**5.33.70 Field 63, Table 90 – Additional Account / Amount Information - Request Messages (ANS ...179)**

Usage: 0100, 0200

FDMS uses this table to determine the requestor's various capabilities with regard to receiving account information records in responses other than EBT type transactions. The table may apply for online authorization requests. These account information records are currently used in support of various prepaid product processing requirements. The requestor should use Version 2 of this table in request messages to indicate any or all of the following:

- The ability to accept balance information in non-EBT type response messages, such as prepaid card load and activation.
- The ability to accept partial authorization approval responses.
- The amount of cash back requested when partial approvals are allowed for cash disbursement transactions.
- The amount that applies for auto substantiation transactions.

FIELD	ATTRIBUTE	VALUE
Table Length	N 4	0nnn
Table ID	AN 2	'90'
Version	AN 1	'2' (Version 1 not supported by this specification)
Balance Information Capability	AN 1	'0' – Balance information is not supported in responses '1' – Balance information is supported in responses
Partial Authorization Approval Capability	AN 1	0 – Partial authorization approvals are not supported 1 – Partial authorization approvals are supported, however partial authorization of cash disbursement amount is not supported. Terminal should not prompt for cash back. 2 – Merchandise can be partially authorized, and cash disbursement amount can be partially authorized. * 3 – Merchandise can be partially authorized, but the cash disbursement amount <u>cannot</u> be partially authorized. * 4 – Merchandise <u>cannot</u> be partially authorized, but the cash disbursement amount can be partially authorized. * 5 – Merchandise <u>cannot</u> be partially authorized and the cash disbursement amount <u>cannot</u> be partially authorized. * <i>* Values '2'-'5' are converted to '1' at FDMS host if not supported by card association.</i>

Table continued on follow page



Table continued from previous page

FIELD	ATTRIBUTE	VALUE
<i>Table 90 should end here when included in transaction requests that do not need to include any additional amount fields such as auto substantiation, transit or cash disbursement (or other types defined in the future).</i>		
Filler	AN 8	Space fill
Number of Account Information Records	AN 1	This value indicates the number of account information records being provided. A single account information record is comprised of 20 bytes, as broken down below and on the following page. Although only 1 information record is <i>shown below</i> , applications can send in a minimum of one [1] and maximum of six [6] information records.
Account Type	AN 2	<u>Value</u> <u>Account Type</u> 00   Not specified
Amount Type	AN 2	<u>Value</u> <u>Amount Type</u> <u>Description</u> 4S   Healthcare <b>(future)</b> Qualified medical expenses  4T   Transit <b>(future)</b> (i.e. over-the-counter qualified medical items) Transit fare media such as commuter and parking passes, and mass transit vouchers and tickets.  40   Cash <b>(future)</b> Amount of cash back requested
Currency Code	AN 3	The 3-digit code defines the currency used in the amount field.
Sign Amount	AN 1	<u>Value</u> <u>Description</u> C   Positive Amount D   Negative Amount
Amount	ANS 12	12 digits – implied decimal position based on currency (for example, 000000009812 represents '\$98.12' in US dollars). For Auto-Substantiation transactions, this value reflects the qualified amount of the total purchase. For credit card cash disbursement transactions, this value reflects the cash amount of the total purchase amount.
<i>Repeat above fields (Account Type through Amount) for up to 5 additional amount types.</i>		

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### 5.33.71 Field 63, Table 90 – Additional Account / Amount Information - Response Messages (ANSB ...69)

Usage: 0110, 0210

#### EBT:

This table is used for EBT balance inquiry response processing – up to six balances can be included.

#### Non EBT:

In addition, this table will be returned to the requestor if Table 90 was included in the request message to indicate the POS device's ability to accept balance information and / or partial authorization approvals in response messages forwarded to them. If the POS device is identified as capable of receiving balance information and account balance information is available from the issuer, Table 90 will be included in the response message to the POS device. Similarly, if the POS device is identified as capable of accepting partially approved authorizations and the issuer approves only a portion of the requested amount, Table 90 will be included in the response message.

If the POS device sent an amount of cash disbursement in the request, Table 90 will return the cash disbursement amount that was approved.

FIELD	ATTRIBUTE	VALUE
Table Length	N 4	00 14 – Minimum length 00 69 – Maximum length
Table ID	AN 2	'90'
Number of Account Information Records	N 2	This value indicates the number of account information records being provided. A single account information record is comprised of 11 bytes as broken down below. Applications MUST be prepared to accept a minimum of one [1] and maximum of six [6] information records.
Account Type	N 2	00 – Not Specified                      28 – Load (Prepaid Acct) * 10 – Savings Account *                64 – Spending Power * 20 – Checking Account *              72 – Activate (Prepaid Acct) * 30 – Credit Card Account *          96 – Cash Benefit 40 – Universal Account *              98 – Food Stamp * Future – Check for Availability
Amount Type	N 2	00 – Prepaid Account Balance 01 – Ending Balance or Open-to-Buy Balance 02 – Available Balance or Credit Limit 18 – Beginning Balance 40 – Cash Disbursement Amount Approved (Future) 57 - Total Authorization Amount Requested
Currency Type	N4	Currently 0840 (U.S. Dollars)
+/- Amount	AN 1	'C' – Positive Amount 'D' – Negative Amount
Amount	N 12	12 digits – implied decimal position based on currency (for example, 000000009812 represents '\$98.12' in US dollars).
<i>Repeat above fields (Account Type through Amount) for up to 5 additional amount types.</i>		

### 5.33.72 Field 63, Table 91 – Return Check Fee Capable Indicator (AN ...5)

Usage: 0200 (ECA Check Sale Request, Processing Code 040000)

This field indicates to the TeleCheck host that the terminal is capable of receiving and processing the Return Check Fee (Field 63, Table 85) and the Return Fee Check Note (Field 63, Table 92) on the 0210 ECA sale response. Absence of the table implies the terminal is not capable of supporting these fields and the fields should not be included on the 0210 response.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0005' – BCD length of data to follow
Table ID	AN 2	'91'
Version Number	AN 2	'01' – Table ends with the Return Check Fee Capable Indicator
Return Check Fee Capable Indicator	AN 1	'0' - Terminal is not capable of receiving the return check fee and the return check fee note. ( <i>Table 91 not required if not capable</i> ) '1' – Terminal is capable of receiving and processing the return check fee and the return check fee note.

### 5.33.73 Field 63, Table 92 – Return Check Fee Note (AN ...104)

Usage: 0210 (ECA Check Sale Response, Processing Code 040000)

This field includes special verbiage that must be printed on the ECA sale receipt following the return check fee lines. Absence of the table implies there is no special data to print and should not cause an error at the point of sale.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0104' – BCD length of data to follow
Table ID	AN 2	'92'
Version Number	AN 2	'01' – Table ends with the Return Check Fee Note
Return Check Fee Note	AN 100	The terminal should manage printing of the data so that words are not broken between two lines. Words and sentences must be delimited by the space character. If there are too many characters to fit on a line, the terminal must print through the last full word (as delimited by the space character) that can fit on a line and then break to the next line. A leading space delimiter should not be printed on the new line.

#### Example:

**Return Check Fee Note:** 'If the record is less than 15 days old then charge flat fee \$30.00.'

40 Column Receipt Example	32 Column Receipt Example
111111111122222222233333333334 1234567890123456789012345678901234567890	11111111112222222223333 12345678901234567890123456789012
If the record is less than 15 days old then charge flat fee \$30.00.	If the record is less than 15 days old then charge flat fee \$30.00.

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### 5.33.74 Field 63, Table 93 – Agent Identification Service (AUAR/TPP ID) (AN ...59)

In conjunction with Visa regulatory change(s), First Data will require the Agent Identification Service from all Third Party Servicers (TPS) or Merchant Servicers (MS). This information should be passed for all card types. In addition First Data is requiring another identifier called the Third Party Processor Identifier. There can be a maximum of three entries, if there are other parties involved in the transaction flow. The first entry should always be the servicer that sends the data to First Data. Each subsequent servicer should be identified where they are in the chain. The Table is variable length based upon the number of entries provided.

The Agent Identifier is required for Visa Signature and PIN Debit (Interlink) transactions. It should be spaced filled for other card types. The Visa Agent Identifier is composed of three parts, the Visa ID, Visa Business ID (BID), and Visa Agent Unique Account Result (AUAR). Visa will provide this information to the Third-Party Servicer or Merchant Servicer.

The First Data Third Party Processor Identifier is required for all card types and is a 6-character identifier provided by First Data.

The Third Party Processor Identifier (TPP ID) must be provided on all Third Party Servicer or Merchant Servicer authorization requests.

Field	Attribute	Comment
Table Length	N 4	'0nnn' – BCD length of data to follow'
Table ID	AN 2	'93'
Table Version	AN 2	'01'
Number of Entries	AN 1	Number of Servicers contained in the table. <i>Valid values are 1, 2 or 3.</i>
Visa ID * {1}	AN 2	Visa ID is a constant value of ASCII '0B'(hex 30 42)
Visa BID * {1}	AN 5	Visa Business Identifier (BID)
Visa AUAR* {1}	AN 12	Visa's secret Agent Unique Account Result (AUAR)
First Data TPP ID {1}	AN 6	First Data assigned TPP/Vendor ID
Visa ID * {2}	AN 2	Visa ID is a constant value of ASCII '0B'(hex 30 42)
Visa BID * {2}	AN 5	Visa Business Identifier (BID)
Visa AUAR* {2}	AN 12	Visa's secret Agent Unique Account Result (AUAR)
First Data TPP ID {2}	AN 6	First Data assigned TPP/Vendor ID
Visa ID * {3}	AN 2	Visa ID is a constant value of ASCII '0B'(hex 30 42)
Visa BID * {3}	AN 5	Visa Business Identifier (BID)
Visa AUAR* {3}	AN 12	Visa's secret Agent Unique Account Result (AUAR)
First Data TPP ID {3}	AN 6	First Data assigned TPP/Vendor ID

**Example Table 93 Data (HEX):** 39 33 30 31 31 30 42 31 32 33 34 35 31 32 33 34 35 36 37 38 39 30 31 32 54 41 50 30 30 34

Hex Value:	ASCII Value	Field Name
39 33	'93'	Table ID
30 31	'01'	Version
31	'1'	Number of entries
30 42	'0B'	Visa ID
31 32 33 34 35	'12345'	Visa BID
31 32 33 34 35 36 37 38 39 30 31 32	'123456789012'	VISA AUAR
54 41 50 30 30 34	'TAP004'	TPPID

### 5.33.75 Field 63, Table 94 – Cash Advance Serial Number (AN ...12)

Usage: 0200, 0220, 0320, 0400, and 0310

This is the pre-printed form serial number from the cash advance draft. The number is read from the pre-printed form and hand keyed at the point-of-sale at the time of the transaction.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	AN 2	'94'
Cash Advance Serial Number	AN 10	Ten digit serial number from the pre-printed cash advance draft. The serial number must be all numeric and right justified with lead zeroes to 10 (i.e. '0012345678').

### 5.33.76 Field 63, Table F1, F2, F3, F4 and F5 –File Update Status (ANSB ...37)

Usage: 0100/0110, 0200/0210, 0800/0810

This table is sent on request messages from the POS device to determine whether a new version of a file is available on the host. The host will respond with a Field F1 Function Code that indicates whether an update to the file is available. In the request F1 table, the terminal will include information for the version of the file currently stored in the terminal if the file exists. In the response, the host will include the information for the latest version of the file stored on the host. Any file update session (0800/0810, Processing Code 940000) must start and end with the File Update Status exchange as well.

FIELD	ATTRIBUTE	VALUE
Table Length	N 4	'0037' – BCD length of data to follow
Table ID	AN 2	'F1' – 'F5'
Table Version #	AN 3	'001'
File Identifier	AN 10	File name indicator; supported files include: 'DCCFX' – Legacy DCC Exchange Rate File * <del>'DCC2FX' – Go-Forward DCC Exchange rate File **</del> 'DCCBIN' – Legacy DCC BIN File * <del>'DCC2BIN' – Go-Forward DCC BIN File **</del> 'EMVKEY' – Legacy EMV Public Key File * 'EMV2KEY' – Go-Forward EMV Public Key File ** 'LOCBINnnn' – LAC/Mexico Local BIN File (where 'nnn' is the numeric currency code of the account) 'LOCPVLnnn' – Mexico local private label BINs (where 'nnn' is the numeric currency code of the account) ** Refer to Section 12 for format of 'EMVKEY' file
Current File Creation Date	AN 14	Mmddyyyhhmmss (zeroes if not available)
File size	AN 5	Total size of file in bytes (zeroes if not available)
File CRC-16 ***	B16	2 byte CRC used to validate the file (zeroes if not available). <b>No CRC validation is required if this field is blank for Function Code 'U' below.</b>
Function Code	AN 1	'R' – Request Status (requester) 'S' – File transfer successful 'N' – No update available (sender) 'U' – Update available (sender)

The below table is used for Table Version # '002' for the new DCC files 'DCC2FX' and 'DCC2BIN' to accommodate the larger file size.

Field	ATTRIBUTE	VALUE
Table Length	N 4	'0037' – BCD length of data to follow
Table ID	AN 2	'F1' – 'F5'
Table Version #	AN 3	'002'
File Identifier	AN 10	File name indicator; supported files include: <b>DCC2FX' – Go-Forward DCC Exchange rate File **</b> <b>DCC2BIN' – Go-Forward DCC BIN File **</b>
Current File Creation Date	AN 14	Mmddyymmss (zeroes if not available)
File size	AN 7	Total size of file in bytes (zeroes if not available)
File CRC-16 ***	B16	2 byte CRC used to validate the file (zeroes if not available). <b>No CRC validation is required if this field is blank for Function Code 'U' below.</b>
Function Code	AN 1	'R' – Request Status (requester) 'S' – File transfer successful 'N' – No update available (sender) 'U' – Update available (sender)

\* The legacy EMV key file 'EMVKEY' contains the MasterCard, Visa and INTERAC keys – no new card association keys will be added to this file.

**\*\* The expanded go-forward EMV key file 'EMV2KEY' will contain all the latest keys and new card scheme keys will be added as needed. POS solutions must ignore any keys for card associations that they do not support.**

\*\*\* The standard' CRC-16 algorithm applies using the polynomial  $x^{16} + x^{15} + x^2 + 1$  with a seed value of 0.

**\*\* The go-forward DCC Exchange Rate File 'DCC2FX' file format is different from the legacy Exchange Rate file**

**\*\* The go-forward DCC BIN File 'DCC2BIN' file format is different from the legacy DCC BIN file**

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### 5.33.77 Field 63, Table FB – File Block Transfer Request (AN ...9)

Usage: 0800 (Processing Code 940000)

This table is included in a file update request to request the next block.

Fields	Attribute	Comment
Table Length	N 4	'0009' – BCD length of data to follow
Table ID	AN 2	'FB'
Table Version #	AN 3	'001'
Block Sequence #	AN 4	0001 – 9999

### 5.33.78 Field 63, Table FB–File Block Transfer Response (ANSB ....9999)

Usage: 0810 (Processing Code 940000)

This table is included on all file update responses when the FB table was present in the request message. The Table 63 FB Function Code indicates the action that applies.

Field	Attribute	Comment
Table Length	N 4	'nnnn' – BCD length of data to follow
Table ID	ANS 2	'FB'
Table Version #	AN 3	'001'
Block sequence #	AN 4	0001 – 9999
Function Code	AN 1	'C' – Continuation Block 'L' – Last block
File Block Data	ASNB ....nnnn	File data where length may vary depending on the 'Max Response Buffer Size' included in Field 60, Software ID/Revision included in the 0800 request.



### 5.33.79 Field 63, Table L1 - Loyalty Card Action Request

Usage: 0100, 0200, 0400

#### Version '01'

There are two versions of this table. Version 1 includes Loyalty Message Types 9324, 9400, and 9604. Version 2 (following page) excludes Loyalty Message Type 9604 because it is incompatible with the External Account Reference field.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	ANS 2	'L1'
<b>Table Version</b>	<b>AN 2</b>	<b>"01" – Version 1</b>
Message Type	AN 4	Loyalty Transaction Request Message Type 9324 – Card Action Request 9400 – Card Reversal Request 9604 – Totals Review Request
Response Limit	AN 1	Loyalty Response Message Limit Indicator 0 – No response message size limit 1 – Limit response message to 800 bytes
LAN	AN ..19	Loyalty Account Number Present for credit/debit transactions that include a separate Loyalty card. If not present, length should be zero (hex 00).
Transaction Request Code	AN 2	Code describing the reason for the request. Default to 01 for 9604 and 09 for 9400 messages. 01 – Sale or Terminal Report for Message Type 9604 (Totals Review) 05 – Points redemption 09 – Merchant Initiated Reversal (9400 only)
Loyalty Points Amount	AN ..8	The number of points to be redeemed from the account. Will be present if Loyalty Transaction Request Code is 05. <i>If not present, length should be zero (hex 00).</i>
LID	AN ..19	Loyalty Transaction ID should be sent only on 9400 messages and should be the ID from the original 9334 message. On 9324 and 9604 messages the length will be zero. <i>If not present, length should be zero (hex 00).</i>

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### 5.33.80 Field 63, Table L1 - Loyalty Card Action Request

Usage: 0100, 0200, 0400

#### Version '02', '03' and '04'

This table may include the LAN field and/or the External Account Reference field. Refer to those fields below for details.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	ANS 2	'L1'
Table Version	AN 2	'02' – Version 2 '03' – Version 3 (added Track Data & Tender Type) '04' – Version 4 (added merchant's local time and date)
Message Type	AN 4	Loyalty Transaction Request Message Type 9324 – Card Action Request 9400 – Card Reversal Request
Response Limit	AN 1	Loyalty Response Message Limit Indicator 0 – No response message size limit 1 – Limit response message to 800 bytes
LAN	AN ..19	Loyalty Account Number Present for credit/debit transactions that include a separate Loyalty card. <b><i>If not present, length should be zero (hex 00).</i></b>
Loyalty Track II Data	Z ..37	<b><i>Applies for Table Version 3 and later only.</i></b> (optional) May be present in transactions that include a separate loyalty card. <u><i>Set length to zero if data is not present.</i></u> Example: Track Data: '5435560000000007=120810123456' BCD Field Value: 29 54 35 56 00 00 00 00 07 D1 20 81 01 23 45 6F
External Account Reference	AN ..15	First 5 digits of street address number, plus 10 digit telephone number (area code plus number). Street address is right-justified and zero filled if less than 5 digits. <b><i>If not present, length should be zero (hex 00).</i></b>
Transaction Request Code	AN 2	Code describing the reason for the request. Default to 09 for 9400 messages. 01 – Sale 05 – Points redemption 09 – Merchant Initiated Reversal (9400 only)
Loyalty Points Amount	AN ..8	The number of points to be redeemed from the account. Will be present if Loyalty Transaction Request Code is 05. <b><i>If not present, length should be zero (hex 00).</i></b>
LID	AN ..19	LID
Loyalty Tender Type	AN .3	<b><i>Applies for Table Version 3 and later only.</i></b> (optional) Tender Type denoting the method of payment at the Point-of-Sale. This field is optionally included in the 9324 request. <u><i>Set length to zero if data is not present.</i></u> This field should be left justified and space filled. Possible values are as follows: MC - MasterCard VS - Visa AX - American Express DN - Diners DS - Discover DB - Debit PR - Proprietary FL - Fleet

		CK - Check CS - Cash GC - Gift Card PC - Phone Card EB - EBT Food EC - EBT Cash
<b>Version '03' fields end here – all fields below included for Version '04' and later.</b>		
Merchant's Local Date and Time	AN 14	Format: MMDDYYYYHHMMSS Example: Jan 1, 2009, 3:00 PM would be '01012009150000'.

Example Version '03 L1 Packet:

```

00\55\
4C\31\30\33\      ← "L1" w/ version "03"
39\33\32\34\
30\
16\36\32\37\32\32\38\32\32\32\30\30\30\33\35\37\30\
37\62\72\28\22\20\00\35\70\D0\00\01\00\06\10\00\00\00\00\0F\
00\
30\31\
00\00\
03\56\53\20\

```

### 5.33.81 Field 63, Table L2 - Loyalty Card File Update Request

Usage: 0100

#### Version '01' '02' and '03'

This message is used to perform a loyalty card file update request.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	ANS 2	'L2'
Table Version	AN 2	<b>'01' – Version 1</b> <b>'02' – Version 2 (added Track Data)</b> <b>'03' – Version 3 (added merchant's local date and time)</b>
Message Type	AN 4	Loyalty Transaction Request Message Type 9304 – Card File Update Request
Response Limit	AN 1	Loyalty Response Message Limit Indicator 0 – No response message size limit 1 – Limit response message to 800 bytes
LAN	AN ..19	Loyalty Account Number <b><i>If not present, length should be zero (hex 00).</i></b>
Loyalty Track II Data	Z ..37	<b><i>Included for Table Version 3 and later only.</i></b> (optional) May be present in transactions that include a separate loyalty card. <u><i>Set length to zero if data is not present.</i></u> Example: Track Data: '5435560000000007=120810123456' BCD Field Value: 29 54 35 56 00 00 00 00 07 D1 20 81 01 23 45 6F
External Account Reference	AN 15	First 5 digits of street address number, plus 10 digit telephone number (area code plus number). Street address is right-justified and zero filled if less than 5 digits. <i>Zero fill if not applicable.</i>
Account Management Code	AN 3	Indicates what action is to be taken on the account 001 – Add 002 – Update 003 – Delete 004 – Inquiry
<b><i>Version '02' fields end here – all fields below included for Version '03' and later.</i></b>		
Merchant's Local Date and Time	AN 14	Format: MMDDYYYYHHMMSS Example: Jan 1, 2009, 3:00 PM would be '01012009150000'.

### 5.33.82 Field 63, Table L3 - Loyalty Card Action Response

Usage: 0110, 0210, 0410

This message is used for the loyalty card action response.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	ANS 2	'L3'
Table Version	AN 2	"01" – Version 1
Message Type	AN 4	Loyalty Transaction Response Message Type 9334 – Card Action Response 9410 – Card Reversal Response 9614 – Totals Review Response
Loyalty Result	AN 1	Loyalty Host status for the transaction 1 – Loyalty Host Unavailable 2 – Loyalty Host Success Response 3 – Loyalty Host Failed Response 4 – Non Loyalty Account
Loyalty Response Code	AN 3	Response code from the Loyalty Host system. (See loyalty response code values below)
LID	AN 19	Loyalty Transaction ID. This field uniquely identifies the transactions to the Loyalty system.
Loyalty Amount	AN 12	Adjusted/revised authorization amount after any discount(s). Not applicable for 9614.
Loyalty Points Amount	AN ..8	The number of points to be redeemed from the account. Will be present if Loyalty Transaction Request Code was 05.
Loyalty Points Remaining Balance	AN ..8	Provides the balance in the designated points program for the loyalty member AFTER the action taken by this transaction. Not applicable for 9614.

#### Loyalty Response Codes:

CODE	DESCRIPTION
000	Success
010	Failed
100	Account not found
110	Account add failed
120	Duplicate card
130	Account already exists
140	Loyalty card is expired
150	Invalid Loyalty Request
160	Invalid Merchant
200	Loyalty processing failed
205	Loyalty reversal successful
210	Insufficient points in account
240	Loyalty timeout
300	Transaction not found
310	Transaction already reversed
320	Transaction found, but data doesn't match
330	Reversal failed
340	Loyalty credit failed
900	System failure

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### 5.33.83 Field 63, Table L4 - Loyalty Card File Update Response

Usage: 0110

This message is used for the loyalty card file update response.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	ANS 2	'L4'
Table Version	AN 2	"01" – Version 1
Message Type	AN 4	Loyalty Transaction Response Message Type 9314 – Card File Update Response
Loyalty Result	AN 1	Loyalty Host status for the transaction 1 – Loyalty Host Unavailable 2 – Loyalty Host Success Response 3 – Loyalty Host Failed Response 4 – Non Loyalty Account
Loyalty Response Code	AN 3	Response code from the Loyalty Host system. (Refer to the loyalty processing response code values on page 109 above)
LID	AN 19	Loyalty Transaction ID. This field uniquely identifies the transactions to the Loyalty system.

### 5.33.84 Field 63, Table L5 - Loyalty Display Response

Usage: 0110, 0210, 0410

This message is used for the loyalty display response.

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	ANS 2	'L5'
Table Version	AN 2	"01" – Version 1
Offer Lines	AN 3	Number lines of text to be printed
Line Length	AN 3	Width of each line to be printed
Loyalty Response Message	ANS ....1000	This information can be printed on the receipt and can be multiple lines. There are no printer control characters in this message. The size of this message can be limited by setting the appropriate limit value in the L1 or L2 table.

### 5.33.85 Field 63, Table SK - Amex SafeKey (AESK) – **RESERVED (E-Commerce Only)**

(Note: This table was added as a placeholder for consistency with other First Data specifications and is not used by standalone Class A POS solutions)

#### **Amex SafeKey Request:**

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	ANS 2	'SK'
Amex SafeKey Electronic Commerce Indicator (Mandatory)	AN 2	ECI is the level of security used when Card member provides payment information to the Merchant during AESK (American Express Safe Key) authentication. Valid Values include: 05 = Authenticated with AEVV 06 = Attempted with AEVV 07 = Not Authenticated
American Express Verification Value (AEVV) (Conditional)	AN 40	AEVV is a cryptographic value derived by the Issuer during the AESK payment authentication that can provide evidence of the results of payment authentication during an online purchase.  <b>Required only if the ECI is not "07"</b>
American Express SafeKey (AESK) Transaction ID Value (Optional)	AN 40	AESK Transaction Identifier is determined by the Merchant during AESK payment authentication. <i>Note: The AESK Transaction ID is <b>not</b> the same as the Acquired Reference Data – Transaction Identifier in Field 31 of the 0100/0110.</i>

#### **Amex SafeKey Request:**

FIELD	ATTRIBUTE	COMMENT
Table Length	N4	'0nnn' – BCD length of data to follow
Table ID	ANS 2	'SK'
SafeKey Response Value	AN 1	Value that corresponds to the SafeKey response value on the 0110 message : 0 = Reserved for future use 1 = AEVV Failed – Authentication Issuer Key 2 = AEVV Passed – Authentication Issuer key 3 = AEVV Passed – Attempt, Issuer Key 4 = AEVV Failed – Attempt, Issuer Key 5 = Reserved for future use 6 = Reserved for future use 7 = AEVV Failed – Attempt, Issuer not participating, Network Key 8 = AEVV Passed – Attempt, Issuer not participating, Network Key 9 = AEVV Failed – Attempt, Participating, ACS not available, Network Key A = AEVV Passed – Attempt, Participating, ACS not available, Network Key B = Reserved for future use C = Reserved for future use D = Reserved for future use U = AEVV Unchecked

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# 5.34 FIELD 63 - PRIVATE USE – FIELD IDENTIFIER (FID) TABLES

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## Field Identifier Tables (FID) Overview

The construction of the Field Identifier Table (otherwise known as FID table) has two parts, a fixed and a variable part. The first part is a fixed header portion providing the total table length and the table identifier. The second part is variable, where fields are provided using the Field Identifier (FID), the data, and a field separator [GS]. The fields provided are dependent on the type of transactions being processed.

The Field Separator used for these tables is a hexadecimal ‘1D’ GS character.

[Table Length]	[Table ID]	[FID]	[Data]	[GS]	[FID]	[Data]	[GS]	...
Fixed Header		Variable Field Data						

*It is important to note that this table is subject to change. Additional Field Identifiers may be added due to regulation changes. If a Field Identifier is not recognized, it should be ignored. By coding in this manner it will allow future processing changes to be introduced and allow the merchant to comply at a later date without major re-work.*



### 5.34.1 Field 63, Table AX - American Express Compliance Table

Usage: 0220 (offline advice), 0320 (batch upload)

The following table has been developed to comply with American Express compliance mandates. This table follows the Field Identifier Structure. Currently this table is defined as a settlement only table. This table is included on settlement messages when the Amex authorization was obtained from a system other than the settlement system. For instance, when the authorization was obtained from the Amex front-end but the settlement transaction is being submitted to the FDCS Nashville host.

#### Fixed Header

FIELD	ATTRIBUTE		REQ	VALUE
Table Length	N	...999	M	0n nn - Length of data in this field
Table ID	AN	2	M	Table 'AX' – American Express Compliance Data

#### Variable Fields

FID	FIELD	ATTRIBUTE		REQ	VALUE
01	FID	AN	2	C	FID for Transaction ID
	Transaction ID	AN	15	C	<p>This field contains the American Express Acquirer Reference Data/Transaction ID Field (bit 31) as supplied in the Amex authorization response. The acquirer reference data/transaction ID is a unique American Express assigned tracking number.</p> <p>This information is required for merchants who have a split-dial arrangement or authorize with another front-end and settle with FDCS. It is also required for merchants who are responsible for their own matching. If FDCS authorizes the transaction and matching is performed by FDCS, this field is optional.</p>
02	FID	AN	2	C	FID for POS Data
	POS Data	AN	12	C	<p>This field contains the American Express POS Data Field (bit 22) as supplied in the authorization request. This is a 12 position field that defines terminal capability, security data and special conditions that can apply.</p> <p>This information is required for merchants who have a split-dial arrangement or authorize with another front-end and settle with FDCS. It is also required for merchants who are responsible for their own matching. If FDCS authorizes the transaction and matching is performed by FDCS, this field is optional.</p>

(Continued on next page)

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FID	FIELD	ATTRIBUTE		REQ	VALUE
03	FID	AN	2	C	FID for Seller ID
	Seller ID	AN	20	C	<p>Merchant assigned Seller/Vendor unique identifier Left justified, space filled at right.</p> <p><i>Note: The Seller ID is mandatory to be used only by aggregators. Space filled for non-seller ID transaction by Aggregators.</i></p> <p><i>Please check with a Client Certification and Implementation (CC&amp;I) Group representative / Certification Analyst for additional details.</i></p>

***Note: It is important to note that this table is subject to change. Additional Field Identifiers may be added due to regulation changes. If a Field Identifier is not recognized, it should be ignored. By coding in this manner it will allow future processing changes to be introduced and allow the merchant to comply at a later date without major re-work.***

### 5.34.2 Field 63, Table EV - EMV Table

Usage: 0100, 0110, 0200, 0210, 0220 (advice request), 0320 (batch upload request)

The following table has been developed to return EMV specific response data not defined in other tables. This table follows the Field Identifier Structure (FID) defined above.

For 0100 and 0200 authorization request processing, the fixed header portion of the EMV Table is sent in on the request message from the POS Device as a trigger that the device can receive the 'EV' table in the 0110 or 0210 response message if applicable. For 0220 and 0320 advice and batch upload request processing, the 'EV' table data from the original 0110/0210 response is echoed back to the host. Note: The table will not be returned to the terminal during a batch download.

#### Fixed Header

FIELD	ATTRIBUTE		REQ	VALUE
Table Length	N	...999	M	0n nn - Length of data in this field
Table ID	AN	2	M	Table 'EV' – EMV Data

#### Variable Fields

FID	FIELD	ATTRIBUTE		REQ	VALUE
01	FID Identifier	AN	2	C	FID for X-Code Response Code
	X-Code Response Code	AN	6	C	Conditional for EMV (e.g. MC) chip transactions. Chip transactions that the MC X-Code system responds to will contain the value of '000000' in DE 121 (Authorizing agent ID Code). This value is used to notify the chip that the transaction was unable to go online. This will ensure proper processing by the chip card that is personalized for full grade processing.  <i>If this field is included on an authorization response, it should be echoed back to the host on any subsequent advice or batch upload request.</i>
02	Service Code	AN	3	C	Service Code extracted from track data in field 35.
03	POS Entry Mode	AN	2	C	POS Entry mode for fallback transactions (80 for MasterCard, 90 for Visa)
04	Application Expiration Date	AN	6	C	Tag 5F24 captured from the chip data in field 55 yymmdd
05	Card Authentication Result Code	AN	1	C	Card Authentication Results Code returned by Visa
06	Chip Crypto Value	AN	3	C	Additional Chip info returned by MasterCard

**Note:** It is important to note that this table is subject to change. Additional Field Identifiers may be added due to regulation changes. If a Field Identifier is not recognized, it should be ignored. By coding in this manner it will allow future processing changes to be introduced and allow the merchant to comply at a later date without major re-work.

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## 5.35 FIELD 63 - PRIVATE USE – TAG-LENGTH-DATA (TLD) TABLES

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### Tag-Length-Data (TLD) Tables Overview

The construction of the Tag-Length-Data Table (otherwise known as a TLD table) has two parts, a fixed and a variable part. The first part is a fixed header portion providing the total length of data that follows and the table identifier (i.e. 'SP' for Security Packet). The second part is variable, where a variable number of tag fields are provided using a tag identifier, followed by the length of the tag data followed by the tag data. The tag types and number of tags provided are dependent on the type of transactions being processed.

Field 63 Table Length	Field 63 Table ID (i.e. 'SP')	Tag <sub>1</sub>	Tag Data Length <sub>1</sub>	Tag Data <sub>1</sub>	Tag <sub>2</sub>	Tag Data Length <sub>2</sub>	Tag Data <sub>2</sub>	...	Tag <sub>n</sub>	Tag Data Length <sub>n</sub>	Tag Data <sub>n</sub>
Fixed Header		Variable Tag Data									

***Additional Tags may be added to a TLD table. If a Tag is not recognized, it should be ignored. By coding in this manner it will allow future processing changes to be introduced and allow the merchant to comply at a later date without major re-work.***

### Example TLD Table:

Below is a sample 'SP' Security Packet that would be sent to the terminal to return a token, provider ID and to request a key update at the POS.

Field 63, 'SP' Table Example: '<00><29>SP07016345783456835678808001U1000212' where:

Field	Value
Length of data that follows (including Table ID) – BCD Packed	<00><29>
Table ID	SP
Tag (Token)	07
Length of tag data to follow	016
Tag Data	3457834568356788
Tag (Key Update Request)	08
Length of tag data to follow	001
Tag Data	U
Tag (Provider ID)	10
Length of tag data to follow	002
Tag Data	12

### 5.35.1 Field 63, Table OP – Offers Packet

Usage: 0100/0110(Auth Only), 0200/0210 (Auth/Capture), 0400 (Reversal), 0220 (Void)

The presence of this packet in a request or response message means special offers processing applies. This packet can be used to indicate any of the following offer processing conditions:

<b>Offer Function</b>	<b>Message Types</b>	<b>Applicable Tags</b>
<b>POS Sending 'Offer Processing' Control Tags:</b> POS sends these tags when Offer Processing is allowed for the merchant, transaction and card type.	<b>Request:</b> 0100, 0200,	01-POS Offer Capability 03-Local Transaction Date and Time
<b>Host Returning Offer Data on Authorization Response:</b> Host returns applicable tags if Offer Data is being returned to the POS.	<b>Response:</b> 0110, 0210	02 – Offer Description 05 - Offer Result Indicator 06 – Offer Response Reason Code 07 – Offer ID 08 – Offer Provider Name 09 – Offer Amount 10 – Variable Customer Receipt Text 12 – Offer Provider ID 13 – Offer Publisher ID 14 – Offer Publisher Name
<b>POS Sending Offer Data on 0400 Comm Error Reversal Request:</b> POS sends these tags when performing a communication errors, user initiated reversal or voids.	<b>Request:</b> 0400, 0220	01 - POS Offer Capability

#### POS Notes on Offer Processing:

- The 'OP' Offer Packet should be omitted by the terminal if Offer processing is not supported at both the terminal and card type level (based on ISO Dual parameter options) or if Offer processing is not supported for a transaction type.
- Offers 'OP' tables and loyalty 'LP' tables should not be present in the same message. Offers and Loyalty processing features are mutually exclusive.

#### Host Notes on Offer Processing:

- Absence of the 'OP' table on the request from the terminal implies offers are not supported on the response.
- The host will only include the 'OP' Offer Packet on the response if the request included an 'OP' Offer Packet.
- The Offers provider can return variable text to print on the receipt regardless of whether an offer applies or not.

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### Fixed Header for 'OP' Offer Packet

FIELD	ATTRIBUTE		REQ	VALUE
Table Length	N	...999	M	0n nn - Length of 'OP' table
Table ID	AN	2	M	'OP' – Offer Packet

See following page for variable fields that can be included in the 'OP' Offer Packet.

### Variable Tags for 'OP' Offer Packet

**Note:** It is important to note that this table is subject to change. Additional tag identifiers may be added. If a tag identifier is not recognized, it should be ignored. By coding in this manner it will allow future processing changes to be introduced and allow the merchant to comply at a later date without major re-work.

TAG	FIELD	DATA TYPE	MIN SIZE	MAX SIZE	VALUE
01	Tag	AN	2	2	<b>'01' - POS Offer Capability</b> <additional types may be defined in the future>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Offer Capability	AN	1	3	This field defines the types of offers supported.  '000' – None '001' – Offers only  <other combinations of capabilities may be offered in the future>
02	Tag	AN	2	2	<b>'02' – Offer Description</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Offer Description	AN	1	80	Variable receipt text to print on the merchant and customer receipt copies. The text is returned as a block of text. The terminal formats the data based on content and receipt formatting characteristics (i.e. maximum number of characters per line, font size, etc.).
03	Tag	AN	2	2	<b>'03' – Local Transaction Date and Time</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Local Transaction Date and Time	AN	14	14	Format: MMDDYYYYHHMMSS  Example: Jan 1, 2009, 3:00 PM → '01012009150000'.
05	Tag	AN	2	2	<b>'05' – Offer Result Status Indicator</b>
	Tag Data Length	AN	3	3	Length of tag data that follows

TAG	FIELD	DATA TYPE	MIN SIZE	MAX SIZE	VALUE
	Offer Result Status Indicator	AN	1	3	Specifies the status of the offer and whether or not it could be processed.  '1' – Offer Host Unavailable (unknown whether offer available or not) '2' – Offer Host Success Response '3' – Offer Host Failed Response '4' – <del>Offers Not Supported</del> '5' – Offer available but offer can't be processed 'S' – <del>Merchant setup for settlement redemption only</del>
06	Tag	AN	2	2	<b>'06' – Offer Response Reason Code</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Offer Response Reason Code	AN	1	3	A response reason code that identifies the reason that there was no pending offer for the transaction. <i>If supplied, it should print on the customer and merchant receipt copies.</i>
07	Tag	AN	2	2	<b>'07' – Offer ID</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Offer ID	AN	1	20	Identifies the offer to the offer provider. <i>If supplied, should print on the receipt copies.</i>
08	Tag	AN	2	2	<b>'08' – Offer Provider name</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Offer Provider Name	AN	1	20	Identifies the offer provider.
09	Tag	AN	2	2	<b>'09' – Offer Amount</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Offer Amount	AN	1	12	Identifies the amount of the offer that applied to the transaction.
10	Tag	AN	2	2	<b>'10' – Variable Customer Receipt Text</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Receipt Copy	AN	1	1	Controls on which receipt copy the variable receipt text will be printed. 1 – Merchant Copy 2 – Customer Copy 3 – Both
	Variable Customer Receipt Text	ANS	1	998	Variable receipt text to print on the selected receipt copy or copies. <i>The text is returned as a block of text. The terminal formats the data based on content and receipt formatting characteristics (i.e. maximum number of characters per line, font size, etc.).</i>
12	Tag	AN	2	2	<b>'12' – Offer Provider ID</b>

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TAG	FIELD	DATA TYPE	MIN SIZE	MAX SIZE	VALUE
	Tag Data Length	AN	3	3	Length of tag data that follows
	Offer Provider ID	AN	4	8	The ID or name of the Offer Provider. (4 – 8 characters and/or digits)
13	Tag	AN	2	2	'13' – Offer Publisher ID
	Tag Data Length	AN	3	3	Length of tag data that follows
	Offer Publisher ID	AN	4	8	The ID or name of the Offer Publisher. If the ID/name is provided, it should be printed on the merchant and customer receipt copies. (4 – 8 characters and/or digits)
14	Tag	AN	2	2	'14' – Offer Publisher name
	Tag Data Length	AN	3	3	Length of tag data that follows
	Offer Publisher Name	AN	1	20	Identifies the offer publisher. If supplied, should print on the receipt copies.



**5.35.2 Field 63, Table SD - Supplemental Data Table** (*Check for Availability*)

Supplemental request data can be submitted in one or more of the following tags which reside in Table SD.

The length attribute field, appearing at the beginning of Table SD, indicates the entire length of the data presented in Table SD.

The format of this table is TLD format.

*Note:*

1. Presence of Table SD in request message will be trigger to receive Table SD in response messages. Merchants sending “Table SD” in request messages must be able to handle “Table SD” in response messages. Merchants must ignore the unknown tags (the tags not mentioned here) received in “Table SD” in response messages.
2. It is important to note that this table is subject to change. **Additional tag identifiers may be added. If a tag identifier is not recognized, it should be ignored. By coding in this manner it will allow POS solutions to comply with future changes without any re-work.**

**Example:**

Field 63, Table 'SD', Tag 'TC' Terminal Capability: '40011000000000' (len 15)

Results in the following:

00\22\	('SD' Table length)
53\44\	('SD')
54\43\	('TC' Tag)
30\31\35\	(Tag Length '015')
34\30\30\31\31\31\30\30\30\30\30\30\30\30\30	(Tag Data '4001110000000000')

<p><b>Note</b></p>	<p><i>To receive SD table in response, minimum of one SD tag should be sent in request. Tag “DM” (Data Marker) can be used if merchant does not have any SD tag data to send in request but expects a SD tag data in response.</i></p> <p>Every tag in the SD table sets an “SD_table_enabled” flag at the switch. This flag is checked when building the response message to ensure SD response table data can be included.</p> <p>The DM tag was designed solely as a trigger to set the “SD_table_enabled” flag if no other SD tags are present in the request. <i>There is no negative effect if the ‘DM’ tag is included in the request along with other SD tags.</i></p>
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### Fixed Header for SD (Supplemental Data) Table

Field	Attribute		Req	Length
Table Length	N	...999	M	0n nn - Length of 'SD' table
Table ID	AN	2	M	'SD' - Supplemental Data

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**Variable Tags of SD (Supplemental Data) Table**

Tag	Field	Attribute	Value	Comment
A1	Tag	AN 2	'A1'	For Request Message Only. <i>If Tag A1 is included Tags A2, A3 and A4 must be included as well.</i>
	Data Length	AN 3	Max length = 30	
	Aggregator Merchant Name	AN 1..nnn	Merchant Name	<p>Merchant name will be processed as it received.</p> <p>For Payment Service Providers (Aggregators), this field must contain a unique, alphanumeric, <b>seller account ID=seller business name</b> as the SELLERID portion of "SELLERID\STREET\TELEPHONE\EMAIL". Example: <b>1234QR7890=KATISBEACHUMBRELLAS\1234~ABC~STREET\5551112222\KATIBEACHUM@ME.COM\</b></p>
A2	Tag	AN 2	'A2'	For Request Message Only. <i>If Tag A2 is included Tags A1, A3 and A4 must be included as well.</i>
	Data Length	AN 3	Max length = 25	
	Aggregator Merchant Street Address	AN 1..nnn	Street Address	
A3	Tag	AN 3	'A3'	For Request Message Only. <i>If Tag A3 is included Tags A1, A2 and A4 must be included as well.</i>
	Data Length	AN 3	Max length = 20	
	Aggregator Merchant City	AN 1..nnn	City	
A4	Tag	AN 2	'A4'	For Request Message Only. <i>If Tag A4 is included Tags A1, A2 and A3 must be included as well.</i>
	Data Length	AN 3	Max length = 2	
	Aggregator Merchant Alphabetic State	AN 1..nnn	Alphabetic State	
A5	Tag	AN 2	'A5'	For Request Message Only
	Data Length	AN 3	Max length = 3	
	Aggregator Merchant (Seller) Region	AN 1..nnn	Region	
A6	Tag	AN 2	'A6'	For Request Message Only
	Data Length	AN 3	Max length = 9	
	Aggregator Merchant Zip Code	AN 1..nnn	Zip Code	
A7	Tag	AN 2	'A7'	For Request Message Only
	Data Length	AN 3	Length = 3 (fixed)	
	Aggregator Merchant (Seller) Country	AN 3	Merchant Country code in Alpha	
A8	Tag	AN 2	'A8'	For Request Message Only
	Data Length	AN 3	Max length = 15	

Tag	Field	Attribute	Value	Comment
	Aggregator Merchant Service Entitlement Number	AN 1..nnn	Service Entitlement Number	
A9	Tag	AN 2	'A9'	For Request Message Only
	Data Length	AN 3	Max length = 10	
	Aggregator Merchant Contact Number	AN 1..nnn	Merchant Phone#	
AA	Tag	AN 2	'AA'	For Request Message Only
	Data Length	AN 3	Max length = 19	
	Aggregator Merchant Email ID	AN 1..nnn	Merchant Email ID	
AD	Tag	AN 2	'AD'	For Request Message Only
	Data Length	AN 3	Max length = 50	
	Ship to Address	AN 1..nnn	Ship to Address	
AN	Tag	AN 2	'AN'	For Request Message Only
	Data Length	AN 3	Max length = 10	
	Customer ANI	AN 1..nnn	Customer ANI	
BT	Tag	AN 2	'BT'	For Request Message Only
	Data Length	AN 3	Max length = 60	
	HTTP Browser Type	AN 1..nnn	HTTP Browser Type	
CC	Tag	AN 2	'CC'	For Request Message Only
	Data Length	AN 3	Length = 003 (fixed)	
	Ship to Country Code	AN 3	Ship to Country Code	
CD	Tag	AN 2	'CD'	For Request Message Only
	Data Length	AN 3	Length = 002 (fixed)	
	Customer II digits	AN 2	Customer II digits	
CF	Tag	AN 2	'CF'	For Request Message Only
	Data Length	AN 3	Max length = 35	
	Cardholder First Name	AN 1..nnn	Cardholder First Name	Billing cardholder's first name. <del>Used for AMEX and Discover AVS data.</del>  <i>Note: Tag CF and CL should be sent only with AVS request. If Tag CF is included, Tags CL must be included as well. If Tag CL is included, Tags CF must be included as well.</i>
CL	Tag	AN 2	'CL'	For Request Message Only
	Data Length	AN 3	Max length = 35	

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Tag	Field	Attribute	Value	Comment
	Cardholder Last Name	AN 1..nnn	Cardholder Last Name	Billing cardholder's last name. <del>Used for AMEX and Discover AVS data.</del>  <i>Note: Tag CF and CL should be sent only with AVS request. If Tag CF is included, Tags CL must be included as well. If Tag CL is included, Tags CF must be included as well.</i>
CN	Tag	AN 2	'CN'	0100, 0200, 0220, 0400, 0320 Request 0310 Response ( <i>Ensure SD Tag included in 0300 request-use Tag 'DM' if no other tags apply</i> )
	Data Length	AN 3	13 (fixed)	
	Customer Reference Number	AN 13	Keyed at POS	Customer Reference Number for Canadian terminals. Left justified with trailing spaces to 13.
DC	Tag	AN 2	'DC'	For 0200 request message only.
	Data Length	AN 3	001	
	Credit/Debit Indicator	AN 1	'D' or 'C'	C: Credit (Dual Message ) D: Debit (Single Message)  Required for all Global AID Credit EMV transactions with a PIN Block.  <b>Credit indicator 'C' is required for Common AID transactions with Online PIN CVM and pre-dispositioned to route to Credit network as final amount is not known (eg: Open Tip and Open Tab transactions where amount will be adjusted after successful authorization)</b>  Optional for all other 0200 transactions.
DM	Tag	AN 2	'DM'	For Request Message Only
	Data Length	AN 3	Fixed Length = 1	
	Data Marker	AN 1	Data Marker	One byte data. Example "Y"
EP	Tag	AN 2	'EP'	For response messages only ( <i>Ensure SD Tag included in request-use Tag 'DM' if no other tags apply</i> )
	Data Length	AN 19	Max length = 19	ExpressPay Translation PAN for Transit Access Terminals. Present in response message, only if Function Code 194 was sent Inbound. This data field contains the disposition for the PAN. The first two digits are the Variable Length Indicator (VLI) followed by one digit alpha PAN request result followed by the PAN if valid. Valid PAN response codes include the following: Y = PAN returned N = PAN not found/does not exist R = Reattempt PAN request  Example of PAN response: PAN Returned LLX123456789012345 LL = Two-digit, VLI, Right Justified and zero filled X = PAN response code 123456789012345 = PAN

Tag	Field	Attribute	Value	Comment
	ExpressPay Translation PAN			
FN	Tag	AN 2	'FN'	For Request Message Only
	Data Length	AN 3	Max length = 15	
	Ship to First Name	AN 1..nnn	Ship to First Name	
GS	Tag	AN 2	'GS'	For request messages only
	Data Length	AN 3		
	Goods Sold Code			This field is specific to Card Present Goods Sold data. This contains Card Present information identifying the product being purchased. For example: Gift Card <b>Value      Description</b> 1000      Gift Card
HN	Tag	AN 2	'HN'	For Request Message Only
	Data Length	AN 3	Max length = 60	
	Customer Hostname	AN 1..nnn	Customer Hostname	
IA	Tag	AN 2	'IA'	For Request Message Only
	Data Length	AN 3	Max length = 15	
	Cardholder IP Address	AN 1..nnn	Cardholder IP Address	
IP	Tag	AN 2	'IP'	0200 Auth Request 0220 Offline Advice Request 0320 Batch Upload Request 0400 Reversal Request 0310 Batch Download Response ( <i>Ensure SD Tag included in 0300 request-use Tag 'DM' if no other tags apply</i> )
	Data Length	AN 3		
	# of Installment Payments	AN 2	'02' – '99'	Indicates that number of installment payments that apply if a transaction is an installment payment. <i>This tag must be omitted if the transaction is not an installment payment.</i>
LN	Tag			Reserved for internal use
MA	Tag	AN 2	'MA'	0210, 0110 Auth Response ( <i>Ensure SD Tag included in request-use Tag 'DM' if no other tags apply</i> )
	Data Length	AN 3		
	Mobile Account #	AN 19	Numeric account # up to 19 digits	The real account # associated with a mobile payment transaction initiated by input of a mobile phone # at the POS. <i>This tag must be omitted if the transaction is not a mobile initiated transaction.</i>
MC	Tag	AN 2	'MC'	For settlement messages only <del>0220 Offline Advice Request</del> 0320 Batch Upload Request

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Tag	Field	Attribute	Value	Comment
	Data Length	AN 3	Fixed Length = 2	
	Multiple Clearing Sequence Count	AN 2	'02-99' (Default value 00)	Applicable for multiple clearing transactions for a single card-not-present authorization. Each clearing transaction must include Multiple Clearing Sequence Number and Count.
MI	Tag	AN 2	'MI'	0100, 0200 Auth Request 0220 Offline Advice Request 0320 Batch Upload Request 0400 Reversal Request 0310 Batch Download Response ( <i>Ensure SD Tag included in 0300 request-use Tag 'DM' if no other tags apply</i> )
	Data Length	AN 3		
	Mobile Initiated Transaction Indicator	AN 1	'1' – Phone #	Indicates the method used for a transaction that is initiated via a mobile phone. <i>This tag must be omitted if the transaction is not a mobile initiated transaction.</i>
MN	Tag	AN 2	'MN'	For settlement messages only  <del>0220 Offline Advice Request</del> 0320 Batch Upload Request
	Data Length	AN 3	Fixed Length = 2	
	Multiple Clearing Sequence Number (MCSN)	AN 2	'00-99' (Default value 00)	Applicable for multiple clearing transactions for a single card-not-present authorization. Each clearing transaction must include Multiple Clearing Sequence Number and Count.
NL	Tag	AN 2	'NL'	For 0210 (auth), 0310 (batch download) response messages only
	Data Length	AN 3	Variable length (max 10)	
	Network Label	AN 1..nnn	Without leading or trailing spaces	Network label that shows the network where the transaction was routed for authorization (e.g. 'NYCE', 'PULSE', 'STAR').
NR	Tag	AN 2	'NR'	For Response Message Only ( <i>Ensure SD Tag included in request-use Tag 'DM' if no other tags apply</i> )
	Data Length	AN 3	Max length = 1	
	Cardholder Full Name Result Code	AN 1	Cardholder Full Name Result Code	Result of First and Last Name verification. Used for Discover AVS.  Valid values: M - First Name and Last Name match F - First Name Matches, Last Name does not match L - First Name does not match, Last Name matches N - Nothing matches W - No data from Issuer/Authorization system U - Retry, system unable to process
OC	Tag	AN 2	'OC'	0100 Auth Only Request 0200 Auth Request 0220 Offline Advice Request 0310 Batch Download Response ( <i>Ensure SD Tag included in 0300 request-use Tag 'DM' if no other tags apply</i> ) 0320 Batch Upload Request

Tag	Field	Attribute	Value	Comment
				0400 Reversal Request
	Data Length	AN 3	0015 (fixed)	
	Other Terminal Capabilities	AN 15	See Section 5.35.2.1 below.	Defines other terminal capabilities (features) as defined in Section 0 below.
PC	Tag	AN 2	'PC'	For Request Message Only
	Data Length	AN 3	Max length = 9	
	Ship to Postal Code	AN 1..nnn	Ship to Postal Code	
PF	Tag	AN 2	'PF'	For Request Message Only
	Data Length	AN 3		
	Final Authorization Indicator			Used when merchant wishes to override default value.  <b>Note:</b> Final Authorization indicator is currently applicable for Europe Merchants only.  <b>Value      Description</b> 1          Final Authorization 0          Pre-Authorization
PN	Tag	AN 2	'PN'	For Request Message Only
	Data Length	AN 3	Max length = 10	
	Ship to Phone Number	AN 1..nnn	Ship to Phone Number	
PP	Tag	AN 2	'PP'	For Request Message Only
	Data Length	AN 3	Fixed Length = 2	
	Payment Plan	AN 2	00 – 99	Number of months in which payment is to be divided (with or without interest). Right justify zero fill. <b>Value      Description</b> 03          No interest for card-holder 05          Interest for card-holder 07          Buy today, pay later <b>AX Value      Description (Amex Plan N)</b> 03          Plan N 05          DPP
RI	Tag	AN 2	'RI'	0210, 0110 Auth Response ( <i>Ensure SD Tag included in 0300 request-use Tag 'DM' if no other tags apply</i> )
	Data Length	AN 3	0015 (fixed)	
	Response Indicators	AN 15	See Section 5.35.2.2 below.	Defines supported response indicators as defined in Section 5.35.2.2 below.
SK	Tag	AN 2	'SK'	For Request Message Only
	Data Length	AN 3	Max length = 15	
	Merchant Product SKU	AN 1..nnn	Merchant Product SKU	
SL	Tag	AN 2	'SL'	For Request Message Only

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Tag	Field	Attribute	Value	Comment
	Data Length	AN 3	Max length = 30	
	Ship to Last Name	AN 1..nnn	Ship to Last Name	
SM	Tag	AN 2	'SM'	For Request Message Only
	Data Length	AN 3	Max length = 2	
	Shipping Method	AN 1..nnn	Shipping Method	Two-byte, shipment-type code: 01 = Same Day 02 = Overnight / Next Day 03 = Priority, 2-3 days 04 = Ground, 4 or more days 05 = Electronic Delivery 06 = Ship-to Store
SQ	Tag	AN 2	'SQ'	For Response Message Only - ( <i>Ensure SD Tag included in request-use Tag 'DM' if no other tags apply</i> )
	Data Length	AN 3		
	Data Length	AN 3	Fixed length = 1	
	Spend Qualification Indicator	AN 1	Spend Qualification Indicator	A field used by VISA to establish annual point-of-sale spending requirements.  <space> Spend processing does not apply N Spend assessment threshold requirement defined by Visa has not been met. Q Spend assessment threshold defined by VISA has been met. B Spend assessment threshold requirement defined by Visa has been met
T1	Tag	-	'T1'	<i>Reserved for transit support in authorization – Not required for Class A solutions</i>
T2	Tag	-	'T2'	<i>Reserved for transit support in authorization – Not required for Class A solutions</i>
T3	Tag	-	'T3'	<i>Reserved for transit support in authorization – Not required for Class A solutions</i>
TC	Tag	AN 2	'TC'	0100 Auth Only Request 0200 Auth Request 0220 Offline Advice Request 0310 Batch Download Response ( <i>Ensure SD Tag included in 0300 request-use Tag 'DM' if no other tags apply</i> ) 0320 Batch Upload Request 0400 Reversal Request
	Data Length	AN 3	0015 (fixed)	
	Terminal Type/Capability	AN 15	<i>See Section 5.35.2.3 below.</i>	Defines type of terminal and terminal input capabilities as defined in Section 0 below.
TF	Tag	AN 2	'TF'	For request messages only
	Data Length	AN 3		



Tag	Field	Attribute	Value	Comment
	Transit Access Terminal Function Code			<p>Transit Access Terminal (TAT) Function Code present in inbound messages and applicable only when tag TT value = '1' indicating a TAT.</p> <p><b><u>Value Description:</u></b></p> <p><b>190:</b>Account Status Check — Transit Merchants requesting an account status check on transit transactions only.</p> <p><b>191:</b>ATC Synchronization — Indicates an Application Transaction Counter (ATC) value is being provided to the Issuer. Issuers can use this synchronization feature to maintain their internal ATC data.</p> <p><b>194:</b>Expresspay Translation (PAN request) — Indicates the Primary Account Number (PAN) associated with an ExpressPay-enabled card/device is being requested from the Issuer. The response will be returned in Amex Data Field 34 for Transit transactions only.</p>
TI	Tag	AN 2	'TI'	<p>0100 Auth Only Request</p> <p>0200 Auth Request</p> <p>0220 Offline Advice Request</p> <p>0310 Batch Download Response</p> <p>0320 Batch Upload Request</p> <p>0400 Reversal Request</p>
	Data Length	AN 3		
	ITBIS Tax Amount	AN 12	All zeroes to all nines.	Indicates the country specific tax amount calculated. A value of '0' means the merchant is tax exempt. This tag must be omitted if ITBIS tax does not apply.
TT	Tag	AN2	'TT'	For request messages only
	Data Length	AN 3	Fixed length = 1	
	Transit Access Terminal Indicator	AN 1		Request Message Value should be ='1' to identify a TAT terminal.
TY	Tag	AN 2	'TY'	<p>Tag 'TY' will only be returned on the response when request includes Tag 'OC', and Signature Debit ( bit 2 ) is set to '1'</p> <p>0110 Auth Response</p> <p>0210 Auth Response</p>
	Data Length	AN 3	001 (fixed)	
	Transaction Type	AN 1	C, D, S	<p>C: Credit (Dual Message )</p> <p>D: Debit (Single message)</p> <p>S: Signature Debit (Dual message )</p>
XB	Tag	AN2	'XB'	<del>For 0100, 0200, 0220, 320 and 400 request messages only</del>
	Data Length	AN 3	<del>Fixed Length = 10</del>	
	BDU # (Mexico)	AN 10		<del>Prosa or eGlobal #. Numeric only. Left justified with trailing spaces.</del>

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Tag	Field	Attribute	Value	Comment
XC	Tag	AN2	'XC'	For 0100, 0200, 0220, 0320, and 400 request messages; For 0310 response message. <i>(Ensure SD Tag included in 0300 request-use Tag 'DM' if no other tags apply)</i>
	Data Length	AN 3	Fixed Length = 1	
	Cardholder Identification Method	AN 1	'0' – '5'	Prosa/eGlobal code indicating the form to identify cardholder in service point: 0 Unknown (default) 1 Signature 2 PIN 3 Terminal not served 4 Mail order, telephone order 5 QPS transaction (Quick Payment Service), voucher without signature
XN	Tag	AN2	'XN'	For 0100, 0200, 0220, 0310, 0320, and 0400 request messages only <i>(Ensure SD Tag included in 0300 request-use Tag 'DM' if no other tags apply)</i>
	Data Length	AN 3	Fixed Length = 2	
	Deferred Number of Payments (Mexico)	AN 2	00 – 99	Number of months in which payment is to be divided (with or without interest). Right justify zero fill. <i>Also used for Amex Plan N &amp; DPP transactions.</i>
XP	Tag	AN2	'XP'	For 0100, 0200, 0220, 0310, 0320, and 0400 request messages only <i>(Ensure SD Tag included in 0300 request-use Tag 'DM' if no other tags apply)</i>
	Data Length	AN 3	Fixed Length = 2	
	Deferred Payment Plan (Mexico)	AN 2	00 – 99	Specifies payment plan. Also used for Amex Plan N and DPP transactions.  <b>Specifies plan:</b> 03 = No interest for cardholder 05 = Interest for card-holder 07 = Buy today, pay later  <b>For Amex:</b> 03 = Plan N 05 = DPP
XR	Tag	AN2	'XR'	For 0110 and 0210 response messages only <i>(Ensure SD Tag included in request-use Tag 'DM' if no other tags apply)</i>
	Data Length	AN 3	Max Length 70	
	Receipt Response Text (Mexico)	AN 1..nnn	Variable receipt text	Issuer receipt information that is received on an authorization response. Issuer text must be printed on the merchant and customer receipt copies. <i>The issuer receipt text is free-form text of variable length, containing type of card (i.e. credit or debit), issuing bank information and card brand (i.e. Visa, MasterCard, Amex, JCB or PVL) – each field separated by a forward slash ('/').</i>
XT	Tag	AN2	'XT'	For 0100, 0200, 0220, 0310, 0320, and 0400 response messages only <i>(Ensure SD Tag included in 0300 request-use Tag 'DM' if no other tags apply)</i>
	Data Length	AN 3	Fixed Length = 2	

Tag	Field	Attribute	Value	Comment
	Deferred Payment Time Period (Mexico)	AN 2	00 – 99	Number of months for which payment shall not be enforceable (buy today, pay later). Right justify zero fill.

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#### 5.35.2.1 Other Capabilities Subfields (Field 63, Table SD, Tag 'OC'):

The 'OC' tag subfield values below define other terminal capabilities. Values in position 1 through 15 must equal '1' or '0' where '1' means the terminal supports that feature and '0' means the terminal does not support that feature. *For example, if a terminal supports the PINless POS/Common AID and Signature Debit features, the value would be '110000000000000'.*

TAG TC Position	Subfield Name	Length	Value
1	<i>Alternate Routing Indicator (Previously called PINLess POS Indicator. Used for PINLess POS/Common AID routing to Single/Dual network)</i>	1	'1' – Supported, '0' – Not Supported
2	<i>Signature Debit</i>	1	'1' – Supported, '0' – Not supported
3	<i>Future Use</i>	1	'0'
4	<i>Future Use</i>	1	'0'
5	<i>Future Use</i>	1	'0'
6	<i>Future Use</i>	1	'0'
7	<i>Future Use</i>	1	'0'
8	<i>Future Use</i>	1	'0'
9	<i>Future Use</i>	1	'0'
10	<i>Future Use</i>	1	'0'
11	<i>Future Use</i>	1	'0'
12	<i>Future Use</i>	1	'0'
13	<i>Future Use</i>	1	'0'
14	<i>Future Use</i>	1	'0'
15	<i>Future Use</i>	1	'0'

### 5.35.2.2 Response Indicators Subfields (Field 63, Table SD, Tag 'RI'):

The 'RI' tag subfield values below define indicators that can be returned on an authorization response. Values in position 1 through 15, *with the exception of Position 3 Signature Debit Route Indicator*, must equal '1' or '0' where '1' means the response indicator applies and '0' means response indicator does not apply. *For example, if a transaction was rerouted as debit and a signature line is not required, the value would be '100000000000000'. If a transaction was rerouted as debit and a signature line is required on the merchant receipt copy, the value would be '110000000000000'. Position 3 'Signature Debit Route Indicator' will allow values 0-9 and A-Z for use in supporting future signature debit networks. For example, '2' – Routed as NYCE Dual Signature Debit, '3' – Routed as PULSE Signature Debit, etc.*

*Note:* If received during initial auth response, merchant should send in this Tag RI for all subsequent transactions, including incremental authorization, partial reversal, void, and capture only msgs.

TAG TC Position	Subfield Name	Length	Value
1	<i>Alternate Routing Indicator (Previously called PINless POS Indicator)</i>	1	'1' – Rerouted as debit '0' – Not rerouted as debit or not applicable
2	<i>Signature Line Indicator</i>	1	'1' – Print signature line on merchant receipt copy (does not apply for customer receipt copy) '0' – Do not print signature line (only applies when PINless POS Indicator is '1' above – otherwise ignored)
3	<i>Signature Debit Route Indicator</i>	1	'0' – Not routed as Signature Debit or not applicable '1' – Routed as Star Access Dual Signature Debit
4	<i>Future Use</i>	1	'0'
5	<i>Future Use</i>	1	'0'
6	<i>Future Use</i>	1	'0'
7	<i>Future Use</i>	1	'0'
8	<i>Future Use</i>	1	'0'
9	<i>Future Use</i>	1	'0'
10	<i>Future Use</i>	1	'0'
11	<i>Future Use</i>	1	'0'
12	<i>Future Use</i>	1	'0'
13	<i>Future Use</i>	1	'0'
14	<i>Future Use</i>	1	'0'
15	<i>Future Use</i>	1	'0'

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### 5.35.2.3 Terminal Type and Capabilities Subfields (Field 63, Table SD, Tag 'TC'):

The 'TC' tag subfield values below define the terminal type and capabilities of the terminal. Values in position 2 through 15 must equal '1' or '0' where '1' means the terminal supports that type of input and '0' means the terminal does not support that type of input. *For example, if a dial/IP terminal supports manual keyed, mag stripe and contact chip inputs, the 'TC' tag value would be '700111000000000'.*

TAG TC Position	Subfield Name	Length	Value
1	POS Type	1	'4' = Electronic Cash Register '7' = Dial Terminal / Register Device '9' = mPOS Acceptance Device/Mobile
2	Unknown	1	'1' – Supported, '0' – Not Supported
3	No Terminal Used / VRU	1	'1' – Supported, '0' – Not Supported
4	Manual Keyed	1	'1' – Supported, '0' – Not Supported
5	Magstripe	1	'1' – Supported, '0' – Not Supported
6	Contact Chip	1	'1' – Supported, '0' – Not Supported
7	Contactless Chip (EMV Mode)	1	'1' – Supported, '0' – Not Supported
8	Bar Code	1	'1' – Supported, '0' – Not Supported
9	OCR	1	'1' – Supported, '0' – Not Supported
10	Terminal does not read card data	1	'1' – Supported, '0' – Not Supported
11	QR Code	1	'1' – Supported, '0' – Not Supported
12	Contactless Chip (MSD Mode)	1	'1' – Supported, '0' – Not Supported
13	Future Use	1	'0'
14	Future Use	1	'0'
15	Future Use	1	'0'

### 5.35.3 Field 63, Table SP – Security Packet

Usage: 0100/0110, 0200/0210, 0220/0230, 0400/0410, 0320/0330, 0310 and 0800/0810

The presence of this packet in a request or response message means special security processing applies. This packet can be used to indicate any of the following security conditions:

Security Function	Message Types	Tags Required
<b>Sending Encrypted Data:</b> POS is sending PAN, Track I or Track II data encrypted rather than in the clear.	<b>Request:</b> 0100, 0200, 0220, 0400	01-Security Level 02-Encryption Type 03-Encryption Target 04-Key ID 05-Encryption Block
<b>Requesting Token:</b> POS is requesting a token be returned on the transaction response.	<b>Request:</b> 0100, 0200, 0220, 0400	01-Security Level 06-Token Type
<b>Returning Token:</b> Token is being returned to the POS. For these message types, if a request includes the Token Type a token will be included in the response. <i>A new token is <u>always</u> returned if a token <u>was not</u> included in the request.</i>	<b>Response:</b> 0110, 0210, 0230, 0310, 0410	07-Token 10 – Provider ID
<b>Sending Token in Place of PAN:</b> POS is sending a token in place of the PAN.	<b>Request:</b> 0100 (i.e. inc auth, partial reversal), 0200 (i.e. EBT Void), 0220, 0320, 0400	01-Security Level 06-Token Type 07-Token 10 – Provider ID
<b>Requesting Working Verification Key Information:</b> POS is requesting <b>Working Verification Key</b> in the form of an <b>Intermediate CA Certificate</b> which once validated by the Boot Verification key yields the Working Verification Key.	<b>Request:</b> 0800 (PC: 010000)	01-Security Level 02-Encryption Type 08-Security Key Update Indicator = 'S'
<b>Returning Working Verification Key Information:</b> Host is sending Intermediate CA Certificate and Signing Key ID/CA-ID to the POS (Intermediate CA Certificate yields <b>Working Verification Key</b> ).	<b>Response:</b> 0810 (PC: 010000)	09-Intermediate CA Certificate 12-Signing Key ID/CA-ID
<b>Requesting Signed Data Encryption Key Information:</b> POS is requesting signed data encryption key information in the form of the TA Key Certificate which is validated by the Working Verification Key to yield the <b>Data Encryption Key</b> .	<b>Request:</b> 0800 (PC: 010000)	01-Security Level 02-Encryption Type 08-Security Key Update Indicator = 'U' 12-Signing Key ID/CA-ID
<b>Returning Signed Data Encryption Key Information (valid Signing Key ID/CA-ID):</b> If the Signing Key ID/CA-ID is valid, Host is sending TA Key Certificate and Data Encryption Key ID to the POS (TA Key Certificate yields the <b>Data Encryption Key</b> ).	<b>Response:</b> 0810 (PC: 010000)	04-Data Encryption Key ID 09-TA Key Certificate 12-Signing Key ID/CA-ID (optional – if present, echoed from request)
<b>Responding to Signed Data Encryption Key Request with Key Update Request:</b> If the Signing Key ID/CA-ID in the Data Encryption Request is not valid, Host is requesting POS to submit a key update request for a new Working Verification Key/Intermediate CA Certificate.	<b>Response:</b> 0810 (PC: 010000)	08-Security Key Update Indicator = 'S'
<b>Requesting Unsigned Data Encryption Key Information (LEGACY):</b> POS is requesting unsigned data encryption key information.	<b>Request:</b> 0800 (PC: 010000)	01-Security Level 02-Encryption Type 08-Security Key Update Indicator = 'U'
<b>Returning Unsigned Data Encryption Key Information:</b> Host is sending unsigned data encryption key information to the POS.	<b>Response:</b> 0810 (PC: 010000)	04-Data Encryption Key ID 09-Unsigned Data Encryption Key
<b>Requesting POS to Perform Key Update on Authorization Response:</b> Host is requesting POS to submit a key update request.	<b>Response:</b> 0110, 0210, 0230, 0410	08-Security Key Update Indicator = 'U'

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### **POS Notes on Security Processing:**

- The 'SP' Security Packet should be omitted if no security functions are being performed (i.e. neither encryption nor tokenization is enabled or applicable to a transaction type).
- If encryption is enabled, the POS will never send account # or track data information in the clear (except as noted for batch uploads below). This means that for subsequent types of transactions (advice, void, adjustment, incremental auth, or partial reversal), the PAN will always be encrypted if a token does not exist (i.e. when encryption is enabled after the original transaction was performed or when the original transaction was authorized to the Amex host).
- The POS will never send encrypted data for 0320 batch upload transactions. Only real account #'s or tokens (with provider ID) will be accepted for batch upload transactions. A token will never be returned on the 0330 batch upload response.
- If multiple security functions apply for the same transaction, only one occurrence of a tag will be included even if the same tag is required for more than one function
- If the expiration date (Field 14) is required for a transaction when submitting the real PAN, then the expiration date is required when a token replaces the real PAN.
- If the host triggers a key update on a response, the POS will attempt to perform the key update request at the completion of the function in progress at the POS (i.e. authorization or settlement). If the update fails, the POS will continue using the same key until it receives another key update trigger from the host.

### **Host Notes on Security Processing:**

- The host will never include the 'SP' Security Packet on the response to the POS if the request did not include an 'SP' Security Packet except for batch download transactions (see note below).
- For batch downloads, the host will return a token if a token exists and tokenization is enabled in TMS (Security Level = '01' or '03'). Otherwise, the host will return the real PAN.
- The host will return the key update trigger to the POS any time the Key ID submitted by the POS in the request is considered expired.



### Fixed Header for 'SP' Security Packet

FIELD	ATTRIBUTE		REQ	VALUE
Table Length	N	...999	M	0n nn - Length of 'SP' table
Table ID	AN	2	M	'SP' – Security Packet

See following page for variable fields that can be included in the 'SP' Security Packet.

### Variable Tags for 'SP' Security Packet

**Note: It is important to note that this table is subject to change. Additional tag identifiers may be added. If a tag identifier is not recognized, it should be ignored. By coding in this manner it will allow future processing changes to be introduced and allow the merchant to comply at a later date without major re-work.**

TAG	FIELD	DATA TYPE	MIN SIZE	MAX SIZE	VALUE
01	Tag	AN	2	2	<b>'01' - Account # Security Level Indicator</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Account # Security Level Indicator	AN	1	3	This field defines the security level being supported at the POS:  '1' – Encryption and Tokenization '2' – Encryption Only ( <b>Reserved for future use</b> ) '3' – Tokenization Only ( <b>Reserved for future use</b> )
02	Tag	AN	2	2	<b>'02' - Encryption Type</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Encryption Type	AN	1	2	Specifies method used to encrypt the data.  '1' – Public/Private Keys (RSA)
03	Tag	AN	2	2	<b>'03' - Encryption Target</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Encryption Target	AN	1	2	Specifies the data that is included in the encryption block. <i>If Track I, Track II, PAN, exp date, card code or ZIP data is included in encrypted form, the standard table must be omitted or the data space filled if there is other data included in the standard table (Field 45/omit, Field 35/omit, Field 2/omit, Field 14/omit, Field 54/blank fill ZIP or Field 56/blank fill card code respectively).</i>  '1' – Track I '2' – Track II '3' – Primary Account # (TID+PAN) '3' – Alternate Usage for Manually Keyed Data (TID+PAN, Exp date, card code, ZIP)

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TAG	FIELD	DATA TYPE	MIN SIZE	MAX SIZE	VALUE
04	Tag	AN	2	2	<b>'04' – Data Encryption Key ID</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Data Encryption Key ID	AN	1	nnn	Specifies the Data Encryption Key ID that is used to retrieve the private key required to decrypt the encryption block. <i>Note: RSA key length is 11 bytes.</i>
05	Tag	AN	2	2	<b>'05' - Encryption Block</b>
	Tag Data Length	AN	3	3	Length of tag data that follows

TAG	FIELD	DATA TYPE	MIN SIZE	MAX SIZE	VALUE
	Encryption Block	AN	1	nnn	<p>Before encryption, the data block consists of the first 8 bytes of the <u>Nashville terminal ID</u> (right justified with lead zeroes to 8) followed by the <u>data specified by the Encryption Target</u> above (i.e. PAN, Track I or Track II).</p> <p>For example when only including TID and PAN:</p> <p>TID: '123456' PAN: '4001270000000000'</p> <p>Resulting Data Block (before encryption):</p> <p>'001234564001270000000000'</p> <p><i>Note 1: Encrypted data block must be in Base64 format if Encryption Type is '1' (Public/Private Key – RSA).</i></p> <p><i>Note 2: Track I and Track II data is encrypted as received from the reading device (the data should not be converted to Field 35 or Field 45 format first). The decrypted output should always be ASCII data for either Track I or Track II. For example, for Track II, the decrypted data will include the "=" as the field separator.</i></p> <p><i>If Track I, Track II, PAN, exp date, card code or ZIP data is included in encrypted form, the standard table must be omitted or the data space filled if there is other data included in the standard table (Field 45/omit, Field 35/omit, Field 2/omit, Field 14/omit, Field 54/blank fill ZIP or Field 56/blank fill card code respectively).</i></p> <p><b><u>Format for Alternate Usage Target Type '3' (pre-encryption):</u></b></p> <p><b>posIdPAN expirationDate cvv zip</b></p> <p><b>posid</b> (mandatory): North/Nashville Terminal ID Fixed length 8, numeric Right justified with leading zeroes to 8</p> <p><b>PAN</b> (mandatory): Primary account # Variable length to 19, numeric Omit Field 2</p> <p>' ' (hex 7C) – Separator (optional if no Tag 5 data follows)</p> <p><b>expirationDate</b> (optional): Card expiration date Fixed length 4, numeric (YYMM) Omit Field 14</p> <p>' ' (hex 7C) – Separator (optional if no Tag 5 data follows)</p> <p><b>cvv</b> (optional): Card security code (CVV2, CVC2, CID, 4DBC) Variable length to 4, numeric Space fill card code in Field 63, Table 56</p> <p>' ' (hex 7C) – Separator (optional if no Tag 5 data follows)</p> <p><b>zip</b> (optional): Customer ZIP code Variable length from 5 to 9, alpha/numeric Space fill ZIP in Field 63, Table 54</p>

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TAG	FIELD	DATA TYPE	MIN SIZE	MAX SIZE	VALUE
	Encryption Block (continued)				<b><u>Examples of Alternate Usage '3':</u></b>  <u>Data before Encryption:</u>  '023456781234567890123456 1703 967 33073'  posId/TID=2345678 PAN=1234567890123456 Expiration date=1703 Card security code=967 AVS Zip=33073  <u>Data before Encryption:</u>  '023456781234567890123456  967 ' or '023456781234567890123456  967'  posId/TID=2345678 PAN=1234567890123456 Card security code=967  <u>Data before Encryption:</u>  '023456781234567890123456   ' or '023456781234567890123456'  posId/TID=2345678 PAN=1234567890123456
06	Tag	AN	2	2	<b>'06' - Token Type</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Token Type	AN	1	nn	Values include: '1' – Static
07	Tag	AN	2	2	<b>'07' – Token</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Token	AN	2	nn	Token that can be used in place of the real PAN at the POS. <i>The token has the same length and last 4 digits as the real PAN.</i>
08	Tag	AN	2	2	<b>'08' - Security Key Update Indicator</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Security Key Update Indicator	AN	1	1	<b>'U'</b> – Update Data Encryption Key Unsigned Data Encryption Key if Tag 12 CA-ID is not present Signed Data Encryption Key (TA Key Certificate) if Tag 12 Signing Key ID/CA-ID is present <b>'S'</b> –Working Signing Key (Intermediate CA Certificate)
09	Tag	AN	2	2	<b>'09' – Security Key/CA Certificate</b>
	Tag Data Length	AN	3	3	Length of tag data that follows

TAG	FIELD	DATA TYPE	MIN SIZE	MAX SIZE	VALUE
	Security Key or CA Certificate	AN	1	nnn	Specifies TA public key information (Data Encryption Key) or CA Certificate (Signed TA Key Certificate or Signed Intermediate CA Certificate). <i>Key is Base64 encoded if Encryption Type is '1'.</i>
10	Tag	AN	2	2	<b>'10' – Provider ID (numeric only)</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Provider ID	AN	1	3	Specifies the provider ID that applies. <i>This field is numeric only. Host returns with token on 0110, 0210, 0230, 0310 or 0410 response. POS includes with token on subsequent 0320 batch upload.</i>
11	Tag	--	--	--	<b>'11' – Expiration Date</b> (Reserved for VSP solutions supported by other First Data specifications)
12	Tag	AN	2	2	<b>'12' – Signing Key ID (CA-ID)</b>
	Tag Data Length	AN	3	3	Length of tag data that follows
	Signing Key ID/CA-ID	AN	2	2	2 character ID for Intermediate CA Certificate.

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#### 5.35.4 Field 63, Table TH – Terminal to Host Packet

Usage: 0800/0810 Initialization Request (PC = '930000')

The presence of this packet means the terminal has information to impart to the host.

##### Fixed Header for 'TH' Terminal to Host Packet

FIELD	ATTRIBUTE		REQ	VALUE
Table Length	N	...999	M	0n nn - Length of 'TH' table
Table ID	AN	2	M	'TH' – Terminal to Host Packet

##### Variable Tags for 'TH' Terminal to Host Packet

**Note:** It is important to note that this table is subject to change. Additional tag identifiers may be added. If a tag identifier is not recognized, it should be ignored. By coding in this manner it will allow future processing changes to be introduced and allow the merchant to comply at a later date without major re-work.

TAG	FIELD	DATA TYPE	MIN SIZE	MAX SIZE	VALUE
01	Tag	AN	2	2	<b>'IP' - IP Type Update</b>
	Tag Data Length	AN	2	2	Length of tag data that follows
	IP Communication Type	AN	2	2	The presence of this field alerts the host that the terminal has completed a change from IP_Communication_Type '03' (Apriva) to IP_Communication_Type '01' (Datawire). Refer to PRJ-029995 Reprieve: FD400/410 Direct to Datawire 01 – Datawire

# 6 MESSAGE FORMATS AND PROTOCOL

## 6.1 ISO TRANSACTION TYPES SUPPORTED

This interface will support the following subset of the standard Message Types and Processing Codes only:

MESSAGE TYPE	PROCESSING CODE	COMMENT
0100/0110		Authorization Only Transactions (not captured for settlement)
	00a00x	Authorization Only
	28a00x	Load or Load/Activate Prepaid Card (VISA Only)
	30a00x	Pre-authorization
	31a00x	Balance Inquiry (Available Funds Inquiry)
	38a00x	Incremental Auth
	72a00x	Activate Prepaid Card (VISA Only)
	20a00x	Partial Reversal
	04a00x	Check Guarantee Approval (Paper Check)
0200/0210		Online Financial Authorization Transactions (captured for settlement)
	00a00x	Online Sale Authorization
	17a00x	Online Force Sale
	18a00x	Online Void (host will determine type from original)
	20a00x	Online Refund Authorization, Online Refund Force (authorization vs. force determined by presence of Auth Code Field 38 for a force)
	21a00x	Online Deposit (Credit Payment)
	01a00x	Online Cash Only Debit Sale Authorization
	09a00x	Online Debit Sale with Cash Authorization
	02a00x	Online Adjust Sale
	22a00x	Reserved
	04a00x	ECA Check Authorization
	05a00x	Acceptance Status Update Message
	Canadian Debit: Sale	'001000' (savings) '002000' (checking) '000000' (contactless – account type not specified)
	Refund	'200010' (savings) '200020' (checking) '200000' (contactless – account type not specified)
	Adjust/Void of Refund	'021000' (savings) '022000' (checking) '020000' (contactless – account type not specified)
	Adjust/Void Sale	'220010' (savings) '220020' (checking) '220000' (contactless – account type not specified)
	Balance Inquiry	'301000' (savings) '302000' (checking) '300000' (contactless – account type not specified)
0220/0230		Offline Financial Advice Transactions
	00a00x	Force Sale Advice, Sales Completion Advice

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MESSAGE TYPE	PROCESSING CODE	COMMENT
	20a00x	Force Refund Advice
	02a00x	Force Adjust/Void Sale Advice
	22a00x	Force Adjust/Void Refund Advice
0300/0310	00000x nna00x	Batch Download Detail Request Batch Download Detail Response (see processing codes defined below)
	00a00x	Sale (Online or Offline Force based on original message type in Field 60)
	17a00x	Online Force Sale
	20a00x	Refund (Online or Offline Force based on original message type in Field 60)
	21a00x	Deposit
	01a00x	Cash Only Debit Sale
	09a00x	Debit Sale with Cash
	05a00x	ECA Check Sale – Approved and accepted
	04a00x	ECA Check Sale – Approved but not accepted (terminal must queue up accept msg.)
0320/0330	nna00x	Batch Upload Detail
0400/0410	nna00x	Reversal
0500/0510		Settlement
	92000x	Settlement Totals Request
	96000x	Settlement Batch Upload Totals Request
0800/0810		Network Management
	000000	Update Canadian Debit MAC, PIN Encryption And Message Encryption Keys
	910000	Statistics
	930000	Host Parameter Initialization (Refer to ISO Dual Addendum A for details)
	940000	File Processing
	990000	Test Transaction
0900/0910	00000x	Healthcare Message

**Where:**

**'nn' = Same as original transaction**

**'a' = Default Account** – For debit, as selected from PIN pad if account type selection at the PIN pad applies; otherwise, use default as defined in ISO Dual Addendum A or B depending on whether integrated terminal management (ITM) applies or not.

*Note: For Canadian debit processing, position 3 of the processing code represents the 'from' account and position 5 represents the 'to' account. An account type of '1' indicates savings and '2' indicates checking.*

*Note: For EBT transactions, the 3<sup>rd</sup> and 4<sup>th</sup> positions of the processing code are used to distinguish a Food Stamp transaction ('98') from a Cash Benefit transaction ('96').*

**'x' = Processing/flow control where:**

'0' – Default – (host response expected)

'1' – More messages (i.e. initialization response from host or upload batch detail request from terminal)

'4' – Force initialization of parameters (Refer to ISO Dual Addendum A for details)



## 6.2 COMMUNICATION PROTOCOL

This interface uses the de facto standard ISO 8583 communications protocol — bit synchronous SDLC — as currently implemented on the First Data Nashville host. In the First Data environment, until further notice, such devices will be configured to submit messages via supported dial and IP networks.

The terminal should be implemented such that the host reply time-out should be set at no less than 30 seconds.

## 6.3 DATA FIELD REQUIREMENT INDICATIONS

In the message layouts described in this document, the column marked “Req” indicates under what conditions the field is included:

<b>M</b>	<b>Mandatory</b>	Required to be present in the message being described.
<b>O</b>	<b>Optional/Conditional</b>	Included under certain conditions as explained in Comments.

If a Bit Indicator is not shown in the layout, it is not to be used for the message type(s) being described.

## 6.4 AUTHORIZATION ONLY TRANSACTIONS (0100/0110)

### 6.4.1 Auth Only Request (0100)

This transaction is submitted to the card association for approval but is not captured at the Nashville host.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0100'
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number (PAN)	N ..19	O	Mandatory if account # manually keyed <i>Omit Field 2 if encrypted PAN included in Field 63, Table 'SP'.</i>
3		Processing Code	N 6	M	'00a000'
4		Transaction Amount	N 12	M	Authorization amount
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
14		Expiration Date	N 4	O	Mandatory if account # manually keyed
22		POS Entry Mode	N 3	M	
23		Card Sequence Number	N 3	O	Required for EMV / CHIP transactions if provided by the card in Tag 5F34. <i>The field should be omitted if Tag 5F34 is not supplied by the card.</i>
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
35		Track II Data	Z ..37	O	Mandatory if Track II data is available <i>Omit Field 35 if encrypted Track II data included in Field 63, Table SP.</i>
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
45		Track 1 Data	ANS ..76	O	Mandatory if Track I data is available when Track II data is not available. <i>Omit Field 45 if encrypted Track I data included in Field 63, Table SP.</i>
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
54		Tip Amount	AN ...12	O	Optional if tip entry applies.
55		EMV / CHIP Data	ANSB ...999	O	Required for EMV / CHIP transactions.
62		Invoice/Folio/RA/Order #	AN ...10	M	
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	O	
	10	Clerk/Server Data	AN ...10	O	Optional if server entry applies.
	54	AVS ZIP and Address	AN ...31	O	Mandatory if AVS ZIP or address entry apply
	56	Card Code Value	AN ...7	O	Mandatory if card code entry applies
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider ID – mandatory if Integrated Terminal Management does not apply
	79	Credit Plan/Terms ID	AN ...8	O	Mandatory if ID entry applies
	90	Additional Account / Amount	ANS ...5	O	Mandatory to enable balance information and / or

		Information			partial authorization approvals on auth response.
	93	Visa Agent Identification Service/ FDMS TPP ID	AN ...59	O	If applicable for Visa transactions provided by Third Party Processors and VARS
	EV	EMV Response Data	AN ..V	O	Mandatory for EMV transactions (fixed header portion only – no FID tables).
	SD	Supplemental Data	AN ...V	O	Required if submitting special supplemental data.
	SP	Security Packet	AN ...V	O	Required if submitting encrypted PAN, Track I or Track II data or if requesting a token on the response. See Section 5.35.1 for required tags (fields).

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## 6.4.2 Pre-Auth Request (0100)

This transaction is submitted to the card association for approval but is not captured at the Nashville host. It is up to the POS application to submit a final completion transaction for settlement. *Note: All amount fields are in the currency indicated in Field 51 if Field 51 is present. If Field 51 is not present, all amounts must be in US dollars. The applicable currency determines the number of implied decimal places.*

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0100'
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number	N ..19	O	Mandatory if account # manually keyed <i>Omit Field 2 if encrypted PAN included in Field 63, Table SP.</i>
3		Processing Code	N 6	M	'30a000'
4		Transaction Amount	N 12	M	Estimated amount.
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	O	Mandatory for lodging or auto rental if 'Confirm Check In/Out Date' enabled when integrated terminal management applies  Mandatory for DCC converted transactions and must reflect the actual time of the currency conversion
13		Transaction Date	N 4	O	Mandatory for lodging or auto rental if 'Confirm Check In/Out Date' enabled when integrated terminal management applies  Mandatory for DCC accepted transactions and must reflect the actual date of the currency conversion
14		Expiration Date	N 4	O	Mandatory if account # manually keyed
22		POS Entry Mode	N 3	M	
23		Card Sequence Number	N 3	O	Required for EMV / CHIP transactions if provided by the card in Tag 5F34. <i>The field should be omitted if Tag 5F34 is not supplied by the card.</i>
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
35		Track II Data	Z ..37	O	Mandatory if Track II data is available <i>Omit Field 35 if encrypted Track II data included in Field 63, Table SP.</i>
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
45		Track 1 Data	ANS ..76	O	Mandatory if Track I data is available but Track II data is not available <i>Omit Field 45 if encrypted Track I data included in Field 63, Table SP.</i>
51		Transaction Currency Code	AN 3	O	Mandatory for DCC converted transactions or

					when currency is not in US Dollars.
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
55		EMV / CHIP Data	ANSB ...999	O	Required for EMV / CHIP transactions
62		Folio #, Rental Agreement # or Order #	AN ...10	M	Numeric only allowed
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	O	If applicable
	10	Clerk/Server Data	AN ...10	O	Optional if server entry applies.
	54	AVS ZIP and Address	AN ...31	O	Mandatory if AVS ZIP or address entry apply
	56	Card Code Value	AN ...7	O	Mandatory if card code entry applies
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	70	Duration	AN ...5	M	Estimated time until settlement for lodging, auto rental and mail order
	71	Room Number	AN ...8	O	If applicable for lodging
	72	Customer Accounting #	AN ...12	O	If applicable for lodging
	93	Visa Agent Identification Service/ FDMS TPP ID	AN ...59	O	If applicable for Visa transactions provided by Third Party Processors and VARS
	F1 – F5	File Update Status	ANSB ...37	O	Mandatory if DCC enabled – used to confirm status of DCC FX file stored in terminal.
	EV	EMV Response Data	AN ..V	O	Mandatory for EMV transactions (fixed header portion only – no FID tables).
	SD	Supplemental Data	AN ...V	O	Required if submitting special supplemental data.
	SP	Security Packet	AN ...V	O	Required if submitting encrypted PAN, Track I or Track II data or if requesting a token on the response. <i>See Section 5.35.1 for required tags (fields).</i>

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### 6.4.3 Balance/Available Funds Inquiry Request (0100)

This message is used to request an account balance.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0100'
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number	N ..19	O	Mandatory if account # manually keyed <i>Omit if encrypted PAN included in Field 63, Table SP.</i>
3		Processing Code	N 6	M	'31a000' – Non EBT balance inquiry '319800' – EBT food stamp balance inquiry '319600' – EBT cash benefit balance inquiry
4		Transaction Amount	N 12	O	Mandatory for EBT - must be zero
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	O	Time transaction entered
13		Transaction Date	N 4	O	Date transaction entered
14		Expiration Date	N 4	O	Mandatory if account # manually keyed
22		POS Entry Mode	N 3	M	
23		Card Sequence Number	N 3	O	Required for EMV / CHIP transactions if provided by the card in Tag 5F34. <i>The field should be omitted if Tag 5F34 is not supplied by the card.</i>
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
35		Track II Data	Z ..37	O	Mandatory if Track II data is available <i>Omit Field 35 if encrypted Track II data included in Field 63, Table SP.</i>
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
45		Track 1 Data	ANS ..76	O	Mandatory if Track I data is available but Track II data is not available. <i>Omit Field 45 if encrypted Track I data included in Field 63, Table SP.</i>
52		PIN Block	N 16	O	Mandatory for Debit and EBT - all F's when PIN verified offline (e.g. INTERAC chip);
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	10	Clerk/Server Data	AN ...10	O	If applicable
	33	DUKPT Key Serial #	AN ...22	O	Mandatory for Debit and EBT
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier–mandatory if Integrated Terminal Management does not apply
	90	Additional Account/Amount Info	AN ...5	O	Mandatory for non EBT/Debit balance inquiries
	93	Visa Agent Identification Service/ FDMS TPP ID	AN ...59	O	If applicable for Visa transactions provided by Third Party Processors and VARS
	SD	Supplemental Data	AN ...V	O	Required if submitting special supplemental data.
	SP	Security Packet	AN ...V	O	Required if submitting encrypted PAN, Track I or Track II data or if requesting a token on the response. <i>See Section 5.35.1 for required tags (fields).</i>

#### 6.4.4 Incremental Authorization Request (0100)

This message is used to increase the authorization for a pre-authorized transaction. *Note: All amount fields are in the currency indicated in Field 51 if Field 51 is present. If Field 51 is not present, all amounts must be in US dollars. The applicable currency determines the number of implied decimal places.*

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0100'
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number (PAN)	N ..19	M	From original pre-auth <i>Omit Field 2 if encrypted PAN or token included in Field 63, Table SP.</i>
3		Processing Code	N 6	M	'38a000'
4		Transaction Amount	N 12	M	Additional amount to authorize (over previously authorized amount)
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	O	From original pre-auth if applicable
13		Transaction Date	N 4	O	From original pre-auth if applicable
14		Expiration Date	N 4	O	From original pre-auth if applicable <i>Note: If the expiration date field is required when the real account # is included in Field 4, then the field is also required when Field 4 is omitted and a token is included the Field 63 SP Packet instead.</i>
22		POS Entry Mode	N 3	M	Always '01' for manually keyed in the first two positions of the POS Entry Mode.
23		Card Sequence Number	N 3	O	Required for EMV / CHIP transactions if provided by the card in Tag 5F34. <i>The field should be omitted if Tag 5F34 is not supplied by the card.</i>
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	From original pre-auth
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
51		Transaction Currency Code	AN 3	O	Mandatory for DCC converted transactions or when currency is not in US Dollars.
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
62		Folio/Rental Agreement #	AN ...10	M	From original pre-auth
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	O	From original pre-auth if applicable
	10	Clerk/Server Data	AN ...10	O	From original pre-auth if applicable
	20	Compliance Response Data	AN ...26	M	Compliance response data from original 0110 pre-auth response. <b><u>'Returned ACI' and 'ACI' must be set to 'I'. 'Additional Settlement Date' and 'Additional Reference Number' must be filled with zeroes.</u></b>
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies

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	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	70	Extended Duration	AN ...5	M	Estimated time until settlement - '00' if no additional duration applies
	71	Room Number	AN ...8	O	From original pre-auth if applicable
	93	Visa Agent Identification Service/ FDMS TPP ID	AN ...59	O	If applicable for Visa transactions provided by Third Party Processors and VARS
	F1 – F5	File Update Status	ANSB ...37	O	If DCC enabled – used to confirm status of DCC FX file stored in terminal.
	SD	Supplemental Data	AN ...V	O	Required if submitting special supplemental data.
	SP	Security Packet	AN ...V	O	Required if submitting encrypted PAN, submitting token in place of PAN or if requesting a token on the response. <i>See Section 5.35.1 for required tags (fields).</i>



#### 6.4.5 Partial Reversal Request (0100)

This message is used to decrease the amount authorized for a pre-authorized transaction so that the final settlement amount and the total amount authorized are the same. Only one partial reversal is allowed for a transaction.

*Note: All amount fields are in the currency indicated in Field 51 if Field 51 is present. If Field 51 is not present, all amounts must be in US dollars. The applicable currency determines the number of implied decimal places.*

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	Same as transaction being reversed
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number (PAN)	N ..19	M	From original auth <i>Omit Field 2 if encrypted PAN or token included in Field 63, Table SP.</i>
3		Processing Code	N 6	M	'20a000'
4		Transaction Amount	N 12	M	Final settlement amount
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	O	From original pre-auth if applicable
13		Transaction Date	N 4	O	From original pre-auth if applicable
14		Expiration Date	N 4	O	From original pre-auth if applicable <i>Note: If the expiration date field is required when the real account # is included in Field 4, then the field is also required when Field 4 is omitted and a token is included the Field 63 SP Packet instead.</i>
22		POS Entry Mode	N 3	M	Always '01' for manually keyed in the first two positions of the POS Entry Mode.
23		Card Sequence Number	N 3	O	Required for EMV / CHIP transactions if provided by the card in Tag 5F34. <i>The field should be omitted if Tag 5F34 is not supplied by the card.</i>
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	From original pre-auth
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
38		Approval Code	AN 6	M	From original pre-auth 0110 response
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
51		Transaction Currency Code	AN 3	O	Mandatory for DCC converted transactions or when currency is not in US Dollars.
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
62		Invoice/Ticket, Folio, Rental Agreement or Order Number	AN ...10	M	From original pre-auth
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	O	From original pre-auth if applicable
	10	Clerk/Server Number	AN ...10	O	From original pre-auth if applicable
	20	Compliance Response Data	AN ...26	M	Compliance response data from original 0110 pre-auth response

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	53	Total Amount Authorized	AN ...14	M	Original pre-auth amount + all incremental auth amounts
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	93	Visa Agent Identification Service/ FDMS TPP ID	AN ...59	O	If applicable for Visa transactions provided by Third Party Processors and VARS
	SD	Supplemental Data	AN ...V	O	Required if submitting special supplemental data.
	SP	Security Packet	AN ...V	O	Required if submitting encrypted PAN, submitting token in place of PAN or if requesting a token on the response. <i>See Section 5.35.1 for required tags (fields).</i>

#### 6.4.6 Activate, Load, or Load/Activate Prepaid Card Request (0100)

This message is used for prepaid card activate and load requests.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0100'
		Primary Bit Map	B 64	M	Refer to ISO 8583
2		Primary Account Number (PAN)	N ..19	O	Mandatory if account # manually keyed <i>Omit Field 2 if encrypted PAN included in Field 63, Table SP.</i>
3		Processing Code	N 6	M	'72a000' – Activate '28a000' – Load or Load/Activate
4		Transaction Amount	N 12	M	
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
14		Expiration Date	N 4	O	Mandatory if account # manually keyed
22		POS Entry Mode	N 3	M	
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	From original pre-auth
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
35		Track II Data	Z ..37	O	Track II data if available <i>Omit Field 35 if encrypted Track II data included in Field 63, Table SP.</i>
41		Terminal ID	AN 8	M	FDMS Nashville merchant ID
42		Merchant ID	AN 15	O	FDMS Nashville processing NII
45		Track 1 Data	ANS ..76	O	Mandatory if Track I data is available but Track II data is not available <i>Omit Field 45 if encrypted Track I data included in Field 63, Table SP.</i>
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
62		Invoice/Folio/RA/Order #	AN ...10	M	Numeric only allowed
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	O	If applicable
	10	Clerk/Server Data	AN ...10	O	If applicable
	54	AVS ZIP and Address	AN ...31	O	Mandatory if AVS applies
	56	Card Code Value	AN ...7	O	Mandatory if Card code validation applies
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Mandatory if Integrated Terminal Management (ITM) does not apply
	90	Additional Account / Amount Information	AN ...5	O	Mandatory to enable balance information and / or partial authorization approvals on auth response.
	93	Visa Agent Identification Service/ FDMS TPP ID	AN ...59	O	If applicable for Visa transactions provided by Third Party Processors and VARS
	SP	Security Packet	AN ...V	O	Required if submitting encrypted PAN, Track I or Track II data or if requesting a token on the response. <i>See Section 5.35.1 for required tags (fields).</i>

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#### 6.4.7 Auth Only, Pre-Auth, Incremental Auth, Balance Inquiry or Partial Reversal Response (0110)

#### 6.4.8 Activate, Load, or Load/Activate Prepaid Card Response (0110)

This message is used in responses to the various 0100 authorization only request messages.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0110'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	Echoed from request
4		Transaction Amount	N 12	O	Echoed from request unless the transaction was approved for a partial amount (Field 39 – Response Code = '10'). For partial approvals, this field will contain the actual amount approved and should be used for settlement purposes. Field 63, Table 90 – Additional Account / Amount Information, will house the value from Field 4 of the request message.
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	M	Echoed from request if present; otherwise generated by the FDCN host.
13		Transaction Date	N 4	M	Echoed from request if present; otherwise generated by the FDCN host.
24		NII	N 3	M	Echoed from request
37		Reference Number	AN 12	M	Assigned by host
38		Authorization Code	AN 6	O	Mandatory if Field 39 is '00' or '10' for approved
39		Response Code	AN 2	M	'00'-Approved, '01'-Referral, '10' -Partial Approval, '51'-Declined, '54'-Expired, ...
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
55		EMV / CHIP Data	ANSB ...999	O	Required for EMV / CHIP transactions
<del>63</del>		<del>Response Display Text</del>	<del>ANS ...40</del>	<del>O</del>	<del>If received, this is the last field</del>
63		Additional Data Length	N 3	O	'0nnn' – BCD length of data to follow
	20	Compliance Response Data	AN...26	O	For interchange compliance processing. <b><u>For incremental auth response, may include 'Additional Settlement Date' and 'Additional Reference Number'.</u></b>
	22	Response Display Text	ANS ...42	O	If applicable
	23	Response Print Text	ANS ...45	O	If applicable
	44	Card Authentication Result Code	ANS ...3	O	If applicable for EMV chip transactions
	55	AVS Response Code Data	AN ...5	O	If applicable
	57	Card Code Validation Result Code	AN ...7	O	If applicable
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Field 63, Table 67 included in request with a provider ID type not equal to 'EC'.
	90	Additional Account / Amount Information	ANSB ...69	O	Mandatory for EBT Balance Inquiry  May be returned on prepaid card type transactions

					<p>if Table 90 was included in the request to indicate balance support AND the issuer response includes balance information.</p> <p>May also be returned if Table 90 was included in the request to indicate partial authorization approval capability and the issue approves only a portion of the transaction amount requested.</p>
	F1 – F5	File Update Status	ANSB ...37	O	Mandatory if any F1 – F5 tables were included on 0100 request
	EV	EMV Response Data	AN ..V	O	May be present if supplied by issuer to indicated response generated by X-Box system.
	SD	Supplemental Data	AN ...V	O	Required if sending supplemental data.
	SP	Security Packet	AN ...V	O	<p>Required if a token/provider ID is being returned or if requesting POS to perform a security key update. See Section 5.35.1 for required tags (fields).</p> <p><i>Note: If a token is included in the request, the same token will be echoed back in the response. A new token will not be created if a token already exists.</i></p>

#### 6.4.9 Check Approval Request (0100)

This message is used to process an auth only (non ECA) check approval request.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0100'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'04a000'
4		Check/Transaction Amount	N 12	M	Check amount
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
22		POS Entry Mode	N 3	M	'022' for mag stripe swiped ID '012' for manually keyed ID (DLN)
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	'00' – Normal presentment
31		Acquirer Reference Data	AN ..1	O	First byte determines format of Field 41 – mandatory if entire TID is included in Field 41
35		ID Number Track 2 Data	Z..37	O	Mandatory if ID/DLN obtained from Track II mag stripe read (Track II preferred over Track I)
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
45		ID Number Track I Data	ANS ..76	O	Mandatory if ID/DLN obtained from Track I mag stripe read when Track II data is not available
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	58	MICR Data	AN ...68	O	Mandatory if MICR # is read via check reader or manually keyed.
	59	Transit/Bank Number	AN ...11	O	If applicable
	41	Cash Back Amount	AN ...14	O	If applicable
	60	Checking Account Number	AN ...21	O	If applicable
	61	Keyed ID/Driver's License #	AN ...37	O	If applicable
	62	ID/State Code	AN ...5	O	If applicable (2 and 3 digit codes supported)
	63	Birth Date	AN ...10	O	If applicable
	64	Check Number	AN ...12	O	If applicable
	75	Transaction Code	AN ...4	O	If applicable
	76	Check Type	AN ...4	O	If applicable
	77	Alternate Check Approval ID	AV ...87	O	Repeat as many times as applicable

#### 6.4.10 Check Approval Response (0110)

This message is used to process an auth only (non ECA) check approval response.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0110'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	Echoed from request
4		Transaction Amount	N 12	O	Echoed from request
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	M	Generated by the FDCN host.
13		Transaction Date	N 4	M	Generated by the FDCN host.
24		NII	N 3	M	Echoed from request
37		Reference Number	AN 12	M	Assigned by FDMS Nashville host
38		Authorization Code	AN 6	O	Mandatory if Field 39 is '00' for approved
39		Response Code	AN 2	M	'00' – Approved '96' - Display response display text returned in Field 63 or Field 63, Table 22.
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
63		Response Display Text	ANS ...40	O	
or 63		Additional Data Length	N 3	O	'0nnn' – BCD length of data to follow
	22	Response Display Text	ANS ...42	O	Typically, check approval response text to display

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## 6.5 ONLINE FINANCIAL TRANSACTIONS (0200/0210)

### 6.5.1 Online Financial Authorization Request (0200)

This message is used to obtain an online credit card, debit, EBT and private label authorization from the FDMS Nashville host. Note: All amount fields are in the currency indicated in Field 51 if Field 51 is present. If Field 51 is not present, all amounts must be in US dollars. The applicable currency determines the number of implied decimal places.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0200'
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number (PAN)	N ..19	O	<i>PAN (Field 2) is required unless the encrypted PAN or token is included in Field 63, Table 'SP' in which case Field 2 must be omitted.</i>
3		<b>Processing Codes:</b> Sale (Credit/Debit/EBT) Open Tab Refund Deposit/Payment Cash Only (Debit/EBT) Sale with Cash (Debit/EBT) Force/Voucher Clear Sale Force/Voucher Clear Refund Void Sale/Refund (EBT) Adjust/Void Sale Adjust/Void Refund	N 6	M	'00a000' * '00a000' (Field 25 POS Condition Code = '51') '20a000' * '21a000' '01a000' * '09a000' * '17a000' * '20a000' * '18a000' * '02a000' – Reserved for future use '22a000' – Reserved for future use  <i>* For EBT transactions, the 3<sup>rd</sup> and 4<sup>th</sup> positions of the processing code are used to distinguish a Food Stamp transaction ('98') from a Cash Benefit transaction ('96').</i>
		<b>Canadian Debit Processing Codes:</b> Sale  Refund  Adjust/Void of Refund  Adjust/Void Sale  Balance Inquiry			'001000' (savings) '002000' (checking) '000000' (contactless – account type not specified)  '200010' (savings) '200020' (checking) '200000' (contactless – account type not specified)  '021000' (savings) '022000' (checking) '020000' (contactless – account type not specified)  '220010' (savings) '220020' (checking) '220000' (contactless – account type not specified)  '301000' (savings) '302000' (checking) '300000' (contactless – account type not specified)
4		Transaction Amount	N 12	M	Settlement amount. <i>For Canadian Debit balance inquiries, the amount must be zero. For Canadian Debit voids, the amount must be the actual amount to reverse.</i>
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	O	Mandatory for DCC accepted transactions and must reflect the actual time of the currency conversion. Mandatory when loyalty is enabled for the merchant..
13		Transaction Date	N 4	O	Mandatory for DCC accepted transactions and must reflect the actual date of the currency conversion.
14		Expiration Date	N 4	O	Mandatory for credit card If account # manually keyed (not



BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
					usually required for debit or EBT) <i>Required for credit card transactions if POS is sending an encrypted PAN or token (Field 63, Table SP) in place of the real account # (Field 2).</i>
22		POS Entry Mode	N 3	M	
23		Card Sequence Number	N 3	O	Required for EMV / CHIP transactions if provided by the card in Tag 5F34. <i>The field should be omitted if Tag 5F34 is not supplied by the card.</i>
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	For capture open tab transactions this field should be '51' so that open tabs can be distinguished from other sales during a subsequent batch download if required.
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ...1	O	Mandatory if entire (non-truncated) TID is included in Field 41
35		Track II Data	Z ...37	O	Mandatory if Track II data is available. <i>Omit Field 35 if encrypted Track II data included in Field 63, Table 'SP'.</i>
37		Reference Number	AN 12	O	Mandatory for EBT voids (must match reference # returned on original EBT authorization) and for all Canadian debit transactions.
38		Approval Code	AN 6	O	If applicable (applicable for force sale, EBT voucher clear and Canadian Debit void/correction).
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
45		Track I Data	ANS ...76	O	Mandatory if Track I data is available but Track II data is not available. <i>Omit Field 45 if encrypted Track I data included in Field 63, Table 'SP'.</i>
51		Transaction Currency Code	AN 3	O	Mandatory for DCC converted transactions or when currency is not in US Dollars.
52		PIN Block	N 16	O	<del>Supported Typically mandatory</del> for credit, debit and EBT transactions (not required for EBT voucher clear transactions). Send dummy PIN block with all bits set when PIN verified offline for EMV debit chip or PIN is not required (no CVM) for EMV debit chip.
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
54		Tip Amount	AS ...12	O	If applicable.
55		EMV / CHIP Data	ANSB ...999	O	Required for EMV / CHIP transactions
62		Invoice/Ticket, Folio, Rental Agreement or Order Number	AN ...10	M	Numeric only allowed
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	O	If applicable
	10	Clerk/Server Data	AN ...10	O	If applicable
	12	Lodging Data (Legacy)	AN ...49	O	If applicable for lodging transactions (legacy)
	13	Lodging Data	AN ...79	O	Mandatory for lodging transactions
	15	Auto Rental Data	AN ...76	O	Mandatory for auto rental transactions
	18	Debit Key Synch Counters	AN ...11	O	Mandatory if participating in debit key synchronization processing (i.e. for Canadian debit)
	19	Dynamic Currency Conversion Data (DCC)	AN ...31	O	Mandatory if DCC offered regardless of whether consumer accepts or declines conversion
	33	DUKPT Key Serial #	AN ...22	O	Mandatory if DUKPT online PIN encryption applies
	35	Canadian Debit Message Authentication Code (MAC) and	AN ...22	O	Mandatory for Canadian debit sales, refunds, adjust/voids and balance inquiries. The MAC is calculated using the

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BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		MAC check digit			following fields: <ul style="list-style-type: none"> <li>Account Number (from Track II)</li> <li>Processing Code (Bit 3)</li> <li>Transaction Amount (Bit 4)</li> <li>Trace Number (Bit 11)</li> <li>Terminal RRN (Bit 37)</li> </ul>
	39	Tax Amount	AN ...14	O	If global sales tax applies for all transactions (consumer and commercial). Note: For commercial card transactions, tax must be included in Field 63, Table 69).
	41	Cash Back Amount	AN ...14	O	If cash back entry applies
	48	# of Payments	AN ...4	O	If credit plan processing applies
	50	Special Indicators	AN ...5	O	Mandatory if ECI indicator applies
	54	AVS ZIP and Address	AN ...31	O	If applicable
	56	Card Code Value	AN ...7	O	If applicable
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	69	Commercial Data	AN ...60	O	Mandatory If commercial card (amounts 7 digits or less apply)
	73	Request Commercial Card Type	AN ...2	O	Mandatory if requesting the commercial card type indicator (Field 63, Table 74) on the auth response (applies when the commercial card type is unknown)
	78	Transaction Reference # (EBT Voucher #)	AN ...30	O	If applicable (mandatory for voids and EBT voucher clear transactions)
	79	Credit Plan/Terms ID	AN ...8	O	If credit plan processing applies
	80	Service Development Indicator	AN ...3	O	Mandatory if including existing debt indicator
	90	Additional Account / Amount Information	AN ...5	O	Required to identify the terminal's ability to accept balance information and / or partial authorization approvals if support for these features applies.
	93	Visa Agent Identification Service/ FDMS TPP ID	AN ...59	O	If applicable for Visa transactions provided by Third Party Processors and VARS
	94	Cash Advance Serial Number	AN ...12	O	Ten digit serial number from pre-printed cash advance form.
	F1 – F5	File Update Status	ANSB ...37	O	May be included if DCC applies to confirm/update status on DCC FX file stored in terminal.
	EV	EMV Response Data	AN ..V	O	Mandatory for EMV transactions (fixed header portion only – no FID tables).
	OP	Offer Redemption Packet	AN ...V	O	Supports offer redemption processing at the point-of-sale
	SD	Supplemental Data	AN ...V	O	Required if submitting special supplemental data.
	SP	Security Packet	AN ...V	O	Required if submitting encrypted PAN, Track I or Track II data, if submitting a token (i.e. EBT Void) or if requesting a token to be returned on the response. See Section 5.35.1 for required tags (fields).

## 6.5.2 Online Financial Authorization Response (0210)

BIT	TB L	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0210'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	Echoed from request
4		Transaction Amount	N 12	O	Echoed from request unless the transaction was approved for a partial amount (Field 39 – Response Code = '10'). For partial approvals, this field will contain the actual amount approved and should be used for settlement purposes. Field 63, Table 90 – Additional Account / Amount Information, will house the value from Bit 4 of the request message.
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	M	Echoed from request if present; otherwise generated by the FDCN host.
13		Transaction Date	N 4	M	Echoed from request if present; otherwise generated by the FDCN host.
24		NII	N 3	M	Echoed from request
37		Reference Number	AN 12	M	For Canadian debit, echoed from request; otherwise, assigned by host
38		Authorization Code	AN 6	O	Mandatory if Field 39 is '00' or '10' for approved
39		Response Code	AN 2	M	'00'-Approved, '01'-Referral, '10' -Partial Approval '51'-Declined, '54'-Expired, '57' Declined (Canadian Debit), ...
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
55		EMV / CHIP Data	ANSB ...999	O	Required for EMV / CHIP transactions
63		<del>Response Display Text</del>	<del>ANS ...40</del>	<del>O</del>	<del>If received, this is the last field</del>
63		Additional Data Length	N 3	O	'0nn-' - BCD length of data to follow
	18	Debit Key Synch Counters	AN ...11	O	Mandatory if Field 63, Table 18 included in the 0200 request <b>and</b> new keys are returned in Field 63, Table 34 of the 0210 response (i.e. for Canadian debit).
	20	Compliance Response Data	AN...26	O	For interchange compliance processing
	22	Response Display Text	ANS ...42	O	If applicable
	23	Response Print Text	ANS ...45	O	If applicable
	31	Network Response Code	AN ...4	O	Mandatory for Canadian debit
	34	Canadian Debit Keys	AN ...50	O	New keys should be used on all subsequent processing including MAC authentication and balance decryption for the current response.
	35	Canadian Debit Message Authentication Code (MAC) and MAC Check Digit	AN...22	O	Mandatory for Canadian Debit. The MAC is calculated using the following fields: <ul style="list-style-type: none"> <li>Account Number (from Track II)</li> <li>Processing Code (Bit 3)</li> <li>Transaction Amount (Bit 4)</li> <li>Trace Number (Bit 11)</li> </ul>

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					<ul style="list-style-type: none"> <li>Terminal RRN (Bit 37)</li> <li>Response Code (Bit 39)</li> <li>Terminal MAC key (if new key received above)</li> <li>Terminal KME key (if new key received above)</li> <li>Terminal KPE key (if new key received above)</li> </ul>
	37	Canadian Debit Encrypted Balance (EKME)	AN ...18	O	Mandatory for Canadian debit balance inquiry response.
	44	Card Authentication Result Code	ANS ...3	O	Required if received on original authorization response for EMV chip transactions
	55	AVS Response Code Data	AN ...5	O	If applicable
	57	Card Code Validation Result Code	AN ...3	O	If applicable
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Field 63, Table 67 included in request with a provider ID type not equal to 'EC'.
	74	Commercial Card Type Indicator	AN ...4	O	Mandatory if Request for Commercial Card Type Field 63 Table 73 was included in auth request
	78	Transaction Reference #	AN ...30	O	If applicable
	90	Additional Account / Amount Information	ANSB ...69	O	<p>May be returned for EBT transactions</p> <p>May be returned on prepaid card type transactions if Table 90 was included in the request to indicate balance support AND the issuer response includes balance information.</p> <p>May also be returned if Table 90 was included in the request to indicate partial authorization approval capability and the issuer approves only a portion of the transaction amount requested.</p>
	F1 – F5	File Update Status	ANSB ...37	O	Mandatory if any F1 – F5 tables were included on 0200 request
	EV	EMV Response Data	AN ..V	O	May be present if supplied by issuer to indicated response generated by X-Box system.
	OP	Offer Redemption Packet	AN ...V	O	Supports offer redemption processing at the point-of-sale
	SD	Supplemental Data	AN ...V	O	Required if returning special supplemental data.
	SP	Security Packet	AN ...V	O	<p>Required if a token/provider ID is being returned or if requesting POS to perform a security key update. <i>See Section 5.35.1 for required tags (fields).</i></p> <p><i>Note: If a token is included in the request, the same token will be echoed back in the response. A new token will not be created if a token already exists.</i></p>

### 6.5.3 Online Financial ECA Sale Authorization Request (0200)

This message is used to obtain an online ECA check authorization from the FDMS Nashville host.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0200'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'04a000'
4		Check/Transaction Amount	N 12	M	Check amount
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	M	<hhmmss>
13		Transaction Date	N 4	M	<mmdd>
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
35		Track II Data (ID Number)	Z..37	O	Mandatory for swiped ID's
41		FDMS Terminal ID	AN 8	M	FDMS Nashville terminal ID
45		Track I Data (ID Number)	ANS ..76	O	Optional but desired for swiped ID's
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
62		Invoice/Ticket	AN ...10	M	Sent to TeleCheck as Billing Control Number (BCN ) if BCN (Field 63, Table 84) not included below
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	10	Clerk Data	AN ...10	O	If applicable
	58	MICR Data	AN ...68	M	From check reader or keyboard
	61	Keyed ID/Driver's License #	AN ...37	O	Mandatory if second ID manually keyed
	62	ID/State Code	AN ...5	O	Mandatory if second ID required
	63	Birth Date	AN ...10	O	If applicable
	64	Check Number	AN ...12	O	Mandatory if MICR # manually keyed
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	76	Check Type	AN ...4	M	Personal or Business
	77	Alternate Check ID	AN ...87	O	SSN/ID Code if applicable
	81	Vendor Version Control #	AN ...69	M	Assigned by TeleCheck
	82	MICR Reader Status	AN ...5	O	Mandatory for imaging devices (integrated or standalone)
	84	Billing Control #	AN ...26	O	Default value or as keyed if applicable
	86	Telephone #	AN ...12	O	If applicable
	87	ZIP Code	AN ...11	O	If applicable
	91	Return Check Fee Capable Indicator	AN ...5	O	Mandatory if ECA return check fee processing is supported by the terminal

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#### 6.5.4 Online Financial ECA Sale Authorization Response (0210)

This message relays the authorization response information for an ECA sale authorization request.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0210'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	Echoed from request
11		Systems Trace Number	N 6	M	Echoed from request
24		NII	N 3	M	Echoed from request
38		Authorization Code	AN 6	O	Mandatory if ECA Status is '0' or '1' in Field 63, Table 83
39		Response Code	AN 2	M	'00' – no error, look at ECA status in Field 63, Table 83 to determine ECA response; otherwise process as error
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password if integrated terminal management applies.
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	22	Response Display Text	ANS ...42	O	TeleCheck response display text – display if ECA Status not equal to '0' or '1' in Field 63, Table 83
	64	Check Number	AN ...12	O	Mandatory if ECA Status = '1' in Field 63, Table 83; terminal should store this check # if present and include it with subsequent transactions such as voids, adjustments and batch upload detail
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Field 63, Table 67 included in request with a provider ID type not equal to 'EC'.
	83	ECA Response Data	AN ...14	M	Includes ECA Status, Denial Record #, Image Zone to Capture
	85	Return Check Fee	AN ...8	O	Mandatory if ECA Status = '1' in Field 63, Table 83; must be printed on customer receipt copy
	88	Trace ID	ANS...24	O	Mandatory if ECA Status = '1' in Field 63, Table 83; terminal should store this number and use it when referencing this transaction for adjustments, voids and batch uploads
	92	Return Check Fee Note	AN ...104	O	Only returned if applicable; if returned, must be printed on ECA customer receipt copy

### 6.5.5 ECA Acceptance Status Update Request (0200)

This message confirms that the POS device has received and processed approval sale authorization 0210 response information for a transaction.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0200'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'05a000'
4		Check/Transaction Amount	N 12	M	From original ECA sale 0210 response
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	M	<hhmmss>
13		Transaction Date	N 4	M	<mmdd>
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
41		FDMS Terminal ID	AN 8	M	FDMS Nashville terminal ID
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	81	Vendor Version Control #	AN ...69	M	From original ECA sale 0210 response
	88	Trace ID	AN ...24	M	From original ECA sale 0210 response

### 6.5.6 ECA Acceptance Status Update Response (0210)

This message is the response to the 0200 ECA acceptance status update request message.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0210'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	Echoed from request
11		Systems Trace Number	N 6	M	Echoed from request
24		NII	N 3	M	Echoed from request
39		Response Code	AN 2	M	'00' – No error, acceptance accepted; otherwise process as error and re-send/queue acceptance request until this field is '00'
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password if integrated terminal management applies.
63		Additional Data Length	N 3	O	'0nnn' – BCD length of data to follow
	22	Response Display Text	ANS ...42	O	TeleCheck response display text
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Field 63, Table 67 included in request with a provider ID type not equal to 'EC'.

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### 6.5.7 Online Adjust/Void ECA Sale Request (0200)

This message is an online request to adjust or void an ECA sale.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0200'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'18a000' – Online Void '02a000' – Online Adjustment ( <i>future - check for availability</i> )
4		Transaction/Check Amount	N 12	M	Adjusted amount
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	M	<hhmmss>
13		Transaction Date	N 4	M	<mmdd>
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
38		Authorization Code	AN 6	M	From original ECA accepted response
41		FDMS Terminal ID	AN 8	M	FDMS Nashville terminal ID
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
60		Original Amount	AN ...12	M	Always from original approved ECA accepted transaction (regardless of the number of subsequent adjustments)
62		Invoice/Ticket	AN ...10	M	
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	10	Clerk Data	AN ...10	O	If applicable
	58	MICR Data	AN ...68	M	From original authorization
	64	Check Number	AN ...12	O	From original ECA accepted response
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	81	Vendor Version Control #	AN ...69	M	From original authorization
	84	Billing Control #	AN ...26	O	From original authorization
	85	Return Check Fee	AN ...8	O	From original ECA accepted response
	86	Telephone #	AN ...12	O	From original authorization
	87	ZIP Code	AN ...11	O	From original authorization
	88	Trace ID	AN ...24	M	From original ECA accepted response



### 6.5.8 Online Adjust/Void ECA Sale Response (0210)

This message is the response to an online request to adjust or void an ECA sale.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0210'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	Echoed from request
11		Systems Trace Number	N 6	M	Echoed from request
24		NII	N 3	M	Echoed from request
39		Response Code	AN 2	M	'00' – No error, void accepted; otherwise process as error and DO NOT void transaction
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
63		Additional Data Length	N 3	O	'0nnn' – BCD length of data to follow
	22	Response Display Text	ANS ...42	O	TeleCheck response display text
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Field 63, Table 67 included in request with a provider ID type not equal to 'EC'.

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## 6.6 OFFLINE FINANCIAL ADVICE (0220/0230)

### 6.6.1 Financial Advice Offline Request (0220)

This message is used for transactions that were not authorized online to the FDMS Nashville host. *Note: All amount fields are in the currency indicated in Field 51 if Field 51 is present. If Field 51 is not present, all amounts must be in US dollars. The applicable currency determines the number of implied decimal places.*

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0220'
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number (PAN)	N ..19	O	PAN (Field 2) is required unless the encrypted PAN or token is included in Field 63, Table 'SP' in which case Field 2 must be omitted.
3		<b>Processing Code:</b> Force Sale Force Refund	N 6	M	'00a000' '20a000'
4		Transaction Amount	N 12	M	Settlement amount
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	O	<hhmmss>
13		Transaction Date	N 4	M	<mmdd>
14		Expiration Date	N 4	O	If applicable <i>Note: If the expiration date field is required when the real account # is included in Field 4, then the field is also required when Field 4 is omitted and a token is included the Field 63 SP Packet instead.</i>
22		POS Entry Mode	N 3	M	
23		Card Sequence Number	N 3	O	Required for EMV / CHIP transactions if provided by the card in Tag 5F34. The field should be omitted if Tag 5F34 is not supplied by the card.
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
37		Reference #	AN 12	O	
38		Approval Code	AN 6	M	Zeroes/spaces if not applicable
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
51		Transaction Currency Code	AN 3	O	Mandatory for DCC converted transactions or when currency is not in US Dollars.
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
54		Tip Amount	AN ...12	O	If applicable
55		EMV / CHIP Data	ANSB ...999	O	Required for EMV / CHIP transactions
62		Invoice/Ticket, Folio, Rental Agreement or Order Number	AN ...10	M	Numeric only allowed
63		Additional Data Length	N 3	M	'0nn-' - BCD length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	M	If applicable

	10	Clerk/Server Data	AN ...10	O	If applicable
	12	Lodging Data (Legacy)	AN ...49	O	Mandatory for lodging transactions (legacy)
	13	Lodging Data	AN ...79	O	Mandatory for lodging transactions
	15	Auto Rental Data	AN ...76	O	Mandatory for auto rental transactions
	19	Dynamic Currency Conversion Data (DCC)	AN ...31	O	Mandatory if DCC offered regardless of whether accepted or not (DCC only applies for refunds – not for off-line sales).
	39	Tax Amount	AN ...14	O	If global sales tax applies for all transactions (consumer and commercial). Note: For commercial card transactions, tax must be included in Field 63, Table 69).
	44	Card Authentication Result Code	ANS ...3	O	Required if received on original authorization response for EMV chip transactions
	48	# of Payments	AN ...4	O	If Credit Plan Prompt applicable
	50	Special Indicators	AN ...5	O	Mandatory if ECI indicator applies
	55	AVS Response Code	AN ...5	O	From original transaction response when original auth sent to split dial host (e.g. Amex)
	57	Card Code Validation Result Code	AN ...3	O	From original transaction response if applicable
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	69	Commercial Card Data	AN ...60	O	Mandatory If commercial card (amounts 7 digits or less apply)
	80	Service Development Indicator	AN ...3	O	Mandatory if including existing debt indicator
	94	Cash Advance Serial Number	AN ....12	O	Ten digit serial number from pre-printed cash advance form.
	AX	American Express Compliance	AN ..V	O	Mandatory for Amex transaction if transaction was authorized online to a different host from the settlement host. For example, the transaction was authorized to the Amex host but is being settled to the Nashville FDCS host.
	SD	Supplemental Data	AN ...V	O	Required if submitting special supplemental data.
	SP	Security Packet	AN ...V	O	Required if submitting encrypted PAN, if submitting a token in place (referral/voice approval) of the PAN or if requesting a token on the response. See <i>Section 5.35.1 for required tags (fields)</i> .

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## 6.6.2 Financial Advice Adjustment/Void Request (0220)

A void is an adjustment with Field 4 set to zero. An adjustment applies when the original transaction was a capture transaction (sale, open tab, etc.). A sale completion applies when the original transaction was an auth only or pre-auth transaction (check-in, auto rental pick-up, mail order, etc.). *Note: All amount fields are in the currency indicated in Field 51 if Field 51 is present. If Field 51 is not present, all amounts must be in US dollars. The applicable currency determines the number of implied decimal places.*

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0220'
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number (PAN)	N ..19	O	PAN (Field 2) is required unless the encrypted PAN or token is included in Field 63, Table 'SP' in which case Field 2 must be omitted.
3		Processing Code: Sale Completion Sale Adjustment/Void Close Tab Refund Adjustment/Void	N 6	M	'00a000' '02a000' * '02a000' (if open tab submitted as 0200) '22a000' * Used when commercial card tax and/or customer code entered after the authorization to the host or for submitting the final EMV data(Field 23 and 55) for EMV transactions that were approved online.
4		Transaction Amount	N 12	M	Zero for voids with the exception of Canadian debit voids which must be the actual amount to reverse
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	O	Echoed from request if present; otherwise generated by the FDCN host.
13		Transaction Date	N 4	M	Echoed from request if present; otherwise generated by the FDCN host.
14		Expiration Date	N 4	O	If applicable <i>Note: If the expiration date field is required when the real account # is included in Field 4, then the field is also required when Field 4 is omitted and a token is included the Field 63 SP Packet instead.</i>
22		POS Entry Mode	N 3	M	From original transaction
23		Card Sequence Number	N 3	O	Required for EMV / CHIP transactions if provided by the card in Tag 5F34. The field should be omitted if Tag 5F34 is not supplied by the card.
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	From original transaction
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
37		Reference #	AN 12	O	Mandatory if received on the original auth response. <i>Not applicable if the original auth was an offline/force.</i>
38		Authorization Code	AN 6	O	From original transaction if applicable
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
51		Transaction Currency Code	AN 3	O	From original transaction
53		Logon Password	N 16	O	Mandatory if integrated terminal management

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
					applies (see ISO Dual Addendum A).
54		Tip Amount	AN ...12	O	If applicable
55		EMV / CHIP Data	ANSB ...999	O	Required for EMV / CHIP transactions
60		Original Amount	AN ...12	O	Mandatory for adjusted transactions (not required for voids)
62		Invoice/Ticket, Folio, Rental Agreement or Order Number	AN ...10	M	From original transaction
63		Additional Data Length	N 3	M	'0nn-' - BCD length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	M	If applicable
	10	Clerk/Server Data	AN ...10	O	From original transaction if applicable
	12	Lodging Data (legacy)	AN ...49	O	From original transaction if applicable (legacy)
	13	Lodging Data	AN ...79	O	From original transaction if applicable
	15	Auto Rental Data	AN ...76	O	From original transaction if applicable
	19	Dynamic Currency Conversion Data (DCC)	AN ...31	O	From original transaction if applicable
	20	Compliance Response Data	AN...26	O	From original transaction response if received
	21	Compliance Original Auth Amount	AN...14	O	Amount from original authorization request if Field 63, Table 20 included above
	39	Tax Amount	AN ...14	O	If global sales tax applies for all transactions (consumer and commercial). Note: For commercial card transactions, tax must be included in Field 63, Table 69).
	41	Cash Back Amount	AN ...14	O	From original transaction if applicable
	44	Card Authentication Result Code	ANS ...3	O	Required if received on original authorization response for EMV chip transactions
	50	Special Indicators	AN ...5	O	From original transaction if applicable
	53	Total Amount Authorized	AN ...14	O	As applicable, for interchange compliance processing; required for completion transactions when Field 63, Table 20 received on the original authorization response.
	55	AVS Response Code	AN ...5	O	From original transaction response if applicable
	57	Card Code Validation Result Code	AN ...3	O	From original transaction response if applicable
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	69	Commercial Data	AN ...60	O	Mandatory If commercial card (amounts 7 digits or less apply)
	80	Service Development Indicator	AN ...3	O	Existing debt indicator from original transaction if applicable
	94	Cash Advance Serial Number	AN ....12	O	Ten digit serial number from pre-printed cash advance form.
	AX	American Express Compliance	AN ..V	O	Mandatory for Amex transaction if transaction was authorized online to a different host from the settlement host. For example, the transaction was authorized to the Amex host but is being settled to the Nashville FDCS host.
	OP	Offer Redemption Packet	AN ...V	O	Supports offer redemption processing at the point-of-sale (for voids)
	SP	Security Packet	AN ...V	O	Required if submitting encrypted PAN, if submitting a

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BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
					token in place of the PAN or if requesting a token on the response. <i>See Section 5.35.1 for required tags (fields).</i>

### 6.6.3 Financial Advice Response (0230)

This message is the response to an 0220 advice request message.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0230'-Financial Advice Response
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	Echoed from request
4		Transaction Amount	N 12	O	Echoed from request
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	M	Echoed from request if present; otherwise generated by the FDCN host.
13		Transaction Date	N 4	M	Echoed from request if present; otherwise generated by the FDCN host.
24		NII	N 3	M	Echoed from request
37		Reference Number	AN 12	M	Assigned by host
39		Response Code	AN 2	M	'00' – accepted Refer to Appendix B for other codes
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
<del>63</del>		<del>Response Display Text</del>	<del>ANS ...40</del>	<del>Θ</del>	<del>If received, this is the last field</del>
or 63		Additional Data Length	N 3	O	'0nn-' - BCD length of data to follow
	22	Response Display Text	ANS ...42	O	If applicable
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Field 63, Table 67 included in request with a provider ID type not equal to 'EC'.
	SP	Security Packet	AN ...V	O	Required if a token/provider ID is being returned or if requesting POS to perform a security key update. <i>See Section 5.35.1 for required tags (fields).</i>  <i>Note: If a token is included in the request, the same token will be echoed back in the response. A new token will not be created if a token already exists</i>

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## 6.7 FILE UPDATE/TRANSFER TRANSACTIONS (0300/0310 AND 0320/0330)

### 6.7.1 Batch Download Detail Request (0300)

This message is used to request a batch download from the host. The host will load any transactions stored in the latest open batch at the host if an open batch exists.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0300'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'000000'
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
63			Additional Data Length	N 3	'0nnn' - BCD length of data to follow
67		Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply ( <b><i>Provider Type should be set to 'UN' to trigger return of Field 63, Table 67 Service Provider ID in the batch download detail response</i></b> )



### 6.7.2 Batch Download Detail Response – Non ECA (0310)

This message is in response to the 0300 batch download request and contains information for non ECA transactions from an open batch at the host if one exists. If the last position of the processing code in the 0310 response is 1, the terminal should submit another 0300 request to pick up the next transaction. If the last position of the processing code in the 0310 response is 0, the terminal should not submit another 0300 request since there are no more transactions to load. *Note: All amount fields are in the currency indicated in Field 51 if Field 51 is present. If Field 51 is not present, all amounts must be in US dollars. The applicable currency determines the number of implied decimal places.*

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0310'
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number (PAN)	N ..19	O	<i>PAN (Field 2) is required unless the encrypted PAN or token is included in Field 63, Table 'SP' in which case Field 2 must be omitted.</i>
3		Processing Code	N 6	M	<ul style="list-style-type: none"> <li>• 00a00x *: Sale (Online or Offline Force based on original message type in Field 60 and/or presence of auth code)</li> <li>• 17a00x *: Online Force Sale</li> <li>• 20a00x *: Refund (Online or Offline Force based on original message type in Field 60)</li> <li>• 21a00x : Deposit</li> <li>• 01a00x *: Cash Only Debit/EBT Sale</li> <li>• 09a00x *: Debit/EBT Sale with Cash</li> </ul> <p>'x' is 0 for batch download complete or 1 for more transactions to download</p> <p>* For EBT transactions the 3<sup>rd</sup> and 4<sup>th</sup> positions of the processing code are used to distinguish a Food Stamp transaction ('98') from a Cash Benefit transaction ('96')</p>
4		Transaction Amount	N 12	M	From original transaction
11		Systems Trace Number	N 6	M	From batch download request
12		Transaction Time	N 6	O	From original transaction
13		Transaction Date	N 4	M	From original transaction
14		Expiration Date	N 4	O	From original transaction
22		POS Entry Mode	N 3	M	From original transaction
23		Card Sequence Number	N 3	O	Required for EMV / CHIP transactions if provided by the card in Tag 5F34. <i>The field should be omitted if Tag 5F34 is not supplied by the card.</i>
24		NII	N 3	M	Echoed from request
25		POS Condition Code	N 2	M	From original transaction
37		Retrieval Reference #	AN 12	M	From original transaction
38		Authorization Code	AN 6	O	From original transaction
39		Response Code	AN 2	M	From original transaction or '97' if there aren't any transactions to reload.
41		Terminal ID	AN 8	M	Echoed from request
51		Transaction Currency Code	AN 3	O	From original transaction if applicable
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.

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BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
54		Tip Amount	AN ...12	O	From original transaction
55		EMV / CHIP Data	ANSB ...999	O	Required for EMV / CHIP transactions.
60		Original Data	AN ...22	M	Original message type and amount; Message Type: '0200' – Online Message Type: '0220' – Offline Note: Processing Code (above) defines transaction type
62		Invoice/Ticket, Folio, Rental Agreement or Order Number	AN ...10	M	From original transaction
63		Response Display Text	ANS ...40	O	If received, this is the last field
or 63		Additional Data Length	N 3	O	'0nnn' - BCD length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	O	From original transaction if applicable
	10	Clerk/Server Data	AN ...10	O	From original transaction if applicable
	12	Lodging Data	AN ...49	O	From original transaction if applicable
	13	Lodging Data	AN ...79	O	From original transaction if applicable
	15	Auto Rental Data	AN ...76	O	From original transaction if applicable
	19	Dynamic Currency Conversion Data (DCC)	AN ...31	O	From original transaction if applicable
	20	Compliance Response Data	AN...26	O	From original transaction if applicable
	21	Compliance Original Auth Amount	AN...14	O	From original transaction if applicable
	22	Response Display Text	ANS ...42	O	Display at terminal
	39	Tax Amount	AN ...14	O	From original transaction if applicable
	41	Cash Back Amount	AN ...14	O	From original transaction if applicable
	48	# of Payments	AN ...4	O	From original transaction if applicable
	44	Card Authentication Result Code	ANS ...3	O	Required if received on original authorization response for EMV chip transactions
	50	Special Indicators	AN ...5	O	From original transaction if applicable
	53	Total Amount Authorized	AN ...14	O	From original transaction if applicable
	55	AVS Response Code	AN ...5	O	From original transaction if applicable
	57	Card Code Validation Result Code	AN ...3	O	From original transaction if applicable
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Field 63, Table 67 included in request with a provider ID type = 'UN'.
	69	Commercial Data	AN ...60	O	From original transaction if applicable
	70	Duration	AN ...5	O	From original transaction if applicable
	71	Room Number	AN ...8	O	From original transaction if applicable
	72	Customer Accounting #	AN ...12	O	From original transaction if applicable
	78	Transaction Reference #	AN ...30	O	From original transaction if applicable
	79	Credit Plan/Terms ID	AN ...8	O	From original transaction if applicable
	80	Service Development Indicator	AN ...3	O	From original transaction if applicable
	94	Cash Advance Serial Number	AN ....12	O	Ten digit serial number from pre-printed cash advance form.
	AX	American Express Compliance	AN ..V	O	Mandatory for Amex transaction if transaction was authorized online to a different host from the

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
					settlement host. For example, the transaction was authorized to the Amex host but was settled to the Nashville FDCS host.
	SD	Supplemental Data	AN ...V	O	Required if submitting special supplemental data.
	SP	Security Packet	AN ...V	O	Required if a token/provider ID is being returned. <i>See Section 5.35.1 for required tags (fields).</i>

### 6.7.3 Batch Download Detail Response – ECA (0310)

This message is in response to the 0300 batch download request and contains information for ECA transactions from an open batch at the host if one exists. If the last position of the processing code in the 0310 response is 1, the terminal should submit another 0300 request to pick up the next transaction. If the last position of the processing code in the 0310 response is 0, the terminal should not submit another 0300 request since there are no more transactions to load.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0310'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'05000x' – ECA Sale (Accepted) '04000x' – ECA Sale (Not Accepted – terminal must queue up acceptance message)  'x' is 0 for batch download complete or 1 for more transactions to download
4		Transaction Amount	N 12	M	From original transaction
11		Systems Trace Number	N 6	M	From batch download request
12		Transaction Time	N 6	O	From original transaction
13		Transaction Date	N 4	M	From original transaction
24		NII	N 3	M	Echoed from request
38		Authorization Code	AN 6	M	From original transaction
39		Response Code	AN 2	O	From original transaction
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
60		Original Data	AN ...22	M	Original message type and amount Message Type: '0200' – Online <i>Note: Processing Code (above) defines transaction type</i>
62		Invoice/Ticket	AN ...10	M	From original transaction
63		Additional Data Length	N 3	M	'0nnn' - BCD length of data to follow
	10	Clerk/Server Data	AN ...10	O	From original transaction if applicable
	58	MICR Data	AN ...68	M	From original transaction
	64	Check Number	AN ...12	M	From original transaction
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Field 63, Table 67 included in request with a provider ID type = 'UN'.
	88	Trace ID	AN ...24	M	From original transaction
	84	Billing Control #	AN ...26	O	From original transaction if applicable
	85	Return Check Fee	ANS ...8	O	From original transaction if applicable
	86	Telephone #	AN ...12	O	From original transaction if applicable
	87	ZIP Code	AN ...11	O	From original transaction if applicable

#### 6.7.4 Batch Upload Request – Non ECA (0320)

This message is used to upload non ECA transactions to the host in an out-of-balance situation. An out-of-balance situation occurs when the host returns a Field 39 response code of '95' in the 0510 settlement totals response. Note: All amount fields are in the currency indicated in Field 51 if Field 51 is present. If Field 51 is not present, all amounts must be in US dollars. The applicable currency determines the number of implied decimal places.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0320'
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number (PAN)	N ..19	O	PAN (Field 2) is required unless the encrypted PAN or token is included in Field 63, Table 'SP' in which case Field 2 must be omitted.
3		Processing Code	N 6	M	Same as original transaction  Note: For EBT transactions the 3 <sup>rd</sup> and 4 <sup>th</sup> positions of the processing code are used to distinguish a Food Stamp transaction ('98') from a Cash Benefit transaction ('96').
4		Transaction Amount	N 12	M	From original transaction
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	O	From original transaction
13		Transaction Date	N 4	M	From original transaction
14		Expiration Date	N 4	O	From original transaction if applicable. Note: If the expiration date field is required when the real account # is included in Field 4, then the field is also required when Field 4 is omitted and a token is included the Field 63 SP Packet instead.
22		POS Entry Mode	N 3	M	From original transaction
23		Card Sequence Number	N 3	O	Required for EMV / CHIP if available from original transaction.
24		NII	N 3	M	FDMS Nashville processing NII
25		POS Condition Code	N 2	M	From original transaction
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
37		Retrieval Reference #	AN 12	M	From original transaction
38		Authorization Code	AN 6	O	From original transaction if applicable
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
51		Transaction Currency Code	AN 3	O	From original transaction if applicable
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
54		Tip Amount	AN ...12	O	From original transaction if applicable
55		EMV / CHIP Data	ANSB ...999	O	Required for EMV / CHIP transactions
60		Original Message Data	AN ...22	M	The original Message Type
62		Invoice/Ticket, Folio, Rental Agreement or Order Number	AN ...10	M	From original transaction
63		Additional Data Length	N 3	M	'0nnn' - BCD length of data to follow

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BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
	09	Alternate Invoice/Ticket #	AN ...12	M	From original transaction if applicable
	10	Clerk/Server Data	AN ...10	O	From original transaction if applicable
	12	Lodging Data	AN ...49	O	From original transaction if applicable
	13	Lodging Data	AN ...79	O	From original transaction if applicable
	15	Auto Rental Data	AN ...76	O	From original transaction if applicable
	19	Dynamic Currency Conversion Data (DCC)	AN ...31	O	From original transaction if applicable
	20	Compliance Response Data	AN...26	O	From original transaction if applicable
	21	Compliance Original Auth Amount	AN...14	O	From original transaction if applicable
	39	Tax Amount	AN ...14	O	From original transaction if applicable
	41	Cash Back Amount	AN ...14	O	From original transaction if applicable
	44	Card Authentication Result Code	ANS ...3	O	Required if received on original authorization response for EMV chip transactions
	48	# of Payments	AN ...4	O	From original transaction if applicable
	50	Special Indicators	AN ...5	O	From original transaction if applicable
	53	Total Amount Authorized	AN ...14	O	From original transaction if applicable
	55	AVS Response Code	AN ...5	O	From original transaction if applicable
	57	Card Code Validation Result Code	AN ...3	O	From original transaction if applicable
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	69	Commercial Card Data	AN ...60	O	From original transaction if applicable
	78	Transaction Reference # (Voucher #)	AN ...30	O	From original transaction if applicable
	79	Credit Plan/Terms ID	AN ...8	O	From original transaction if applicable
	80	Service Development Indicator	AN ...3	O	From original transaction if applicable
	94	Cash Advance Serial Number	AN ....12	O	Ten digit serial number from pre-printed cash advance form.
	AX	American Express Compliance	AN ..V	O	Mandatory for Amex transaction if transaction was authorized online to a different host from the settlement host. For example, the transaction was authorized to the Amex host but is being settled to the Nashville FDGS host.
	SD	Supplemental Data	AN ...V	O	Required if submitting special supplemental data.
	SP	Security Packet	AN ...V	O	Required if submitting a token/provider ID in place of the PAN. <i>See Section 5.35.1 for required tags (fields). Provider ID is required if token replaces the PAN.</i>

### 6.7.5 Batch Upload Request – ECA (0320)

This message is used to upload ECA transactions to the host in an out-of-balance situation.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0320'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'04000x' – Original Sale '18000x' – Void '02000x' – Adjustment
4		Transaction Amount	N 12	M	Final settlement amount
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	M	<hhmmss>
13		Transaction Date	N 4	M	<mmdd>
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
38		Authorization Code	AN 6	M	From original transaction if applicable
41		FDMS Terminal ID	AN 8	M	FDMS Nashville Terminal ID
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
60		Original Data	AN ...22	M	Original message type and amount (original) Message Type: '0200' – Online Note: Processing Code (above) defines transaction type
62		Invoice/Ticket	AN ...10	M	From original transaction
63		Additional Data Length	N 3	M	'0nnn' – BCD length of data to follow
	10	Clerk Data	AN ...10	O	From original transaction if applicable
	58	MICR Data	AN ...68	M	From original transaction
	64	Check Number	AN ...12	M	From original transaction
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	81	Vendor Version Control #	AN ....69	M	From original transaction if applicable
	84	Billing Control #	AN ...26	O	From original transaction if applicable
	85	Return Check Fee	AN ...8	O	From original transaction if applicable
	86	Telephone #	AN ...12	O	From original transaction if applicable
	87	ZIP Code	AN ...11	O	From original transaction if applicable
	88	Trace ID	AN ...24	M	From original transaction

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### 6.7.6 Batch Upload Response (0330)

This message is in response to the 0320 batch upload request.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0330'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	Same as original transaction
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	O	Echoed from request if present; otherwise generated by the FDCN host.
13		Transaction Date	N 4	M	Echoed from request if present; otherwise generated by the FDCN host.
24		NII	N 3	M	FDMS Nashville processing NII
37		Reference Number	AN 12	M	Assigned by host
39		Response Code	AN 2	M	'00' – No error
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
63		Response Display Text	ANS ...40	O	If received, this is the last field
63		Additional Data Length	N 3	O	'0nnn' - BCD length of data to follow
	22	<del>Response Display Text</del>	<del>ANS ...42</del>	<del>O</del>	<del>Display at terminal</del>



## 6.8 REVERSAL TRANSACTIONS (0400/0410)

### 6.8.1 Reversal Request (0400)

This message is used to reverse a financial transaction processed to the FDMS Nashville host. *Note: All amount fields are in the currency indicated in Field 51 if Field 51 is present. If Field 51 is not present, all amounts must be in US dollars. The applicable currency determines the number of implied decimal places.*

#### Canadian Debit:

For Canadian debit error reversal processing, the POS device should only attempt to send the reversal three times. After the third attempt, the POS application should delete the reversal and resume normal processing. 0400 reversals do not apply for on-line Canadian debit void and adjustment transactions.

*Note: The PIN block should never be included for debit reversals except as noted below.*

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0400'
		Primary Bit Map	B 64	M	Refer ISO 8583
2		Primary Account Number (PAN)	N ..19	O	PAN is mandatory for all reversals including swiped transactions <del>for non-debit</del> . Track data should never be stored in the terminal; <del>Track II data is required for debit reversals.</del> Omit Field 2 if encrypted PAN or token included in Field 63, Table 'SP'.
3		Processing Code	N 6	M	From original transaction
4		Transaction Amount	N 12	M	From original transaction
11		Systems Trace Number	N 6	M	From original transaction
14		Expiration Date	N 4	O	From original transaction if applicable. <i>Note: If the expiration date field is required when the real account # is included in Field 4, then the field is also required when Field 4 is omitted and a token is included the Field 63 SP Packet instead.</i>
22		POS Entry Mode	N 3	M	From original transaction
23		Card Sequence Number	N 3	O	Required for EMV / CHIP transactions if present on original transaction.
24		NII	N 3	M	FDMS Nashville Terminal ID
25		POS Condition Code	N 2	M	From original transaction
27		Additional POS Information	N2	O	Mandatory for Canadian applications that support chip processing – even if the transaction is not a chip transaction
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
35		Track II Data	Z ..37	O	Mandatory for debit reversals (domestic and Canadian)
37		Reference Number	AN 12	O	From original transaction if applicable.
39		Response Code	AN 2	O	From original auth response for reversal of a partial approval (must be '10')
41		Terminal ID	AN 8	M	FDMS Nashville Terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville Merchant ID
51		Transaction Currency Code	AN 3	O	From original transaction if applicable
52		PIN Block	N 16	O	From original transaction if applicable; if included and the PIN block is no longer valid or available, a dummy PIN Block with all bits set (Packed Numeric

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					<i>Format: ff&gt;&lt;ff&gt;&lt;ff&gt;&lt;ff&gt;&lt;ff&gt;&lt;ff&gt; should be populated in this table. Examples where a PIN is not valid or available include resubmission of Canadian debit reversal after new keys received on the first reversal attempt; reversal for the void of a debit approval; offline PIN applies).</i>
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
54		Tip Amount	AN ...12	O	From original transaction if applicable
55		EMV / CHIP Data	ANS ...999	O	Required for EMV / CHIP transactions
62		Invoice Number	AN ...10	M	From original transaction
63		Additional Data Length	N 3	O	'0nnn' - BCD length of data to follow
	09	Alternate Invoice/Ticket #	AN ...12	O	From original transaction if applicable
	10	Clerk/Server Data	AN ...10	O	If applicable
	13	Lodging Data	AN ...79	O	If applicable
	15	Auto Rental Data	AN ...76	O	If applicable
	18	Debit Key Synch Counters	AN ...11	O	Mandatory if participating in debit key synchronization processing (i.e. for Canadian debit).
	19	Dynamic Currency Conversion Data (DCC)	AN ...31	O	If applicable
	20	Compliance Response Data	AN...26	O	Mandatory for reversal of a partial auth reversal if present on the original auth response.
	35	Canadian Debit Message Authentication Code (MAC) and MAC Check Digit	AN ...22	O	Mandatory for Canadian Debit. The MAC is calculated using the following fields: <ul style="list-style-type: none"> <li>• Account Number (Bit 2)</li> <li>• Processing Code (Bit 3)</li> <li>• Transaction Amount (Bit 4)</li> <li>• Trace Number (Bit 11)</li> <li>• Terminal RRN (Bit 37)</li> </ul>
	38	Reversal Reason Code	AN ...4	O	Mandatory for Canadian debit reversals and reversals of partial approvals.
	44	Card Authentication Result Code	ANS ...3	O	Required if received on original authorization response for EMV chip transactions
	50	Special Indicators	AN ...5	O	If applicable
	66	Card Type ID	AN ...4	O	Nashville card type identifier – mandatory if Integrated Terminal Management (ITM) applies
	67	Service Provider ID	AN ...9	O	Nashville service provider identifier – mandatory if Integrated Terminal Management (ITM) does not apply
	OP	Offers Redemption Packet	AN ...V	O	Supports inclusion of offer data
	SD	Supplemental Data	AN ...V	O	Required if submitting special supplemental data.
	SP	Security Packet	AN ...V	O	Required if submitting encrypted PAN, if submitting a token or if requesting a token on the response. See Section 5.35.1 for required tags (fields).
		<other fields ignored by host but may be present>			

## 6.8.2 Reversal Response (0410)

This message is in response to the 0400 reversal request.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0410'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	Echoed from request
4		Transaction Amount	N 12	M	Echoed form request
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	M	Echoed from request if present; otherwise generated by the FDCN host.
13		Transaction Date	N 4	M	Echoed from request if present; otherwise generated by the FDCN host.
24		NII	N 3	M	Echoed from request
37		Reference Number	AN 12	M	Assigned by host
39		Response Code	AN 2	M	'00' – No error
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
55		EMV / CHIP Data	ANS ...999	O	Required for EMV / CHIP transactions
63		<del>Response Display Text</del>	<del>ANS ...40</del>	<del>O</del>	<del>If received, this is the last field</del>
63		Additional Data Length	N 3	O	'0nnn' - BCD length of data to follow
	18	Debit Key Synch Counters	AN ...11	O	Mandatory if Field 63, Table 18 included on the 0400 request <b>and</b> new keys are returned in Field 63, Table 34 of the response (i.e. for Canadian debit).
	22	Response Display Text	ANS ...42	O	If applicable
	31	Network Response Code	AN ...4	O	Native network response code ( <i>Mandatory for Canadian debit processing</i> ).
	34	Canadian Debit Keys	AN ...50	O	For Canadian debit, new keys should be used on all subsequent processing including MAC authentication for the current response.
	35	Canadian Debit Message Authentication Code (MAC) and MAC Check Digit	AN ...22	O	Mandatory for Canadian Debit. The MAC is calculated using the following fields: <ul style="list-style-type: none"> <li>Account Number (Bit 2)</li> <li>Processing Code (Bit 3)</li> <li>Transaction Amount (Bit 4)</li> <li>Trace Number (Bit 11)</li> <li>Terminal RRN (Bit 37)</li> <li>Response Code (Bit 39)</li> <li>Terminal MAC key (if new key received above)</li> <li>Terminal KME key (if new key received above)</li> <li>Terminal KPE key (if new key received above)</li> </ul>
	SP	Security Packet	AN ...V	O	Required if a token/provider ID is being returned or if requesting POS to perform a security key update. See Section 5.35.1 for required tags (fields).  <i>Note: If a token is included in the request, the same token will be echoed back in the response. A new token will not be created if a token already exists.</i>

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## 6.9 RECONCILIATION CONTROL (0500/0510)

### 6.9.1 Settlement Totals Request (0500)

This message is used to reconcile totals between the terminal and the FDMS Nashville host.

If multiple currencies apply, the dollar totals in Field 63 represent the total units of currency without any regard to decimal placement. For example:

1 US Dollar = 000000000100 units of currency

1 Yen = 000000000001 unit of currency

1 Dinar = 000000001000 units of currency

Total units = 000000001101 units of currency

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0500'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'920000' - Settlement Totals '960000' - Batch Upload Totals
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
60		Batch Number	AN ...6	M	Terminal assigned batch number
63		Settlement Totals	AN ...90	M	

### 6.9.2 Settlement Totals Response (0510)

This message is in response to the 0500 settlement totals request. The host compares the terminal totals to the totals stored at the host. If the terminal and host totals are out-of-balance, the 0510 Field 39 response code will be set to 95 which means the terminal should upload the entire batch to the host via 0320 batch upload messages.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0510'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'nnnnnx' - where 'nnnnn' is echoed from request and 'x' is: '0' - Parameter initialization not required '4' - Parameter initialization required (should be ignored if integrated terminal management does not apply)
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	O	Generated by the FDCN host.
13		Transaction Date	N 4	M	Generated by the FDCN host.
24		NII	N 3	M	Echoed from request
37		Reference Number	AN 12	M	Assigned by host
39		Response Code	AN 2	M	'00' - No error/settlement complete '95' - Out-of-balance batch upload required
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
63		Response Text	ANS ...40	M	Response text to display and print: 'OKdddttttbbb' if Field 39='00' where: 'dddd'=date 'tttt'-time 'bbb'=batch #  'BATCH UPLOAD IN PROGRESS' if Field 39='95'  <b>NOTE: This field must be present – no other Field 63 tables can be included on the 510 response.</b>

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## 6.10 NETWORK MANAGEMENT (0800/0810)

### 6.10.1 Canadian Debit Key Update Request (0800)

This message is used to request debit keys for Canadian debit processing.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0800'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'000000' - Canadian Key Update
11		Systems Trace Number	N 6	M	To be echoed in response
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
41		Terminal ID	AN 8	M	FDMS Nashville Terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville Merchant ID
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
63		Additional Data Length	N 3	O	'0nnn' - BCD length of data to follow
	18	Debit Key Synch Counters	AN ...11	O	Mandatory if participating in debit key synchronization processing.

## 6.10.2 Canadian Debit Key Update Response (0810)

This message is in response to the request for debit keys for Canadian debit processing and includes the new keys.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0810'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'000000' - Canadian Key Update
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	O	Generated by the FDCN host.
13		Transaction Date	N 4	M	Generated by the FDCN host.
24		NII	N 3	M	Echoed from request
39		Response Code	AN 2	M	'00' – No error
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
63		Additional Data Length	N 3	M	'0nnn' - BCD length of data to follow
	18	Debit Key Synch Counters	AN ...11	O	Mandatory if Field 63, Table 18 included on the 0800 debit key update request.
	22	Response Display Text	ANS ...42	O	If applicable
	34	Canadian Debit Keys	AN ...50	M	New keys apply to authentication for processing of this message as well as subsequent processing.
	35	Canadian Debit Message Authentication Code (MAC) and MAC Check Digit	AN ....22	M	<p>Authentication should use Message Authentication Key from Field 63, Table 34 if present in the response message. No authentication required if the MAC in Field 63, Table 35 is all spaces. Fields included in the MAC calculation are:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Account # (PAN) – All zeroes</li> <li><input type="checkbox"/> Processing Code - Bit 3 ('000000')</li> <li><input type="checkbox"/> Transaction Amount – All zeroes</li> <li><input type="checkbox"/> Trace Number - Bit 11</li> <li><input type="checkbox"/> Reference # - All zeroes</li> <li><input type="checkbox"/> Response Code (Bit 39)</li> <li><input type="checkbox"/> Terminal MAC Key (as last received in Bit 34)</li> <li><input type="checkbox"/> Terminal KME key (as last received in Bit 34)</li> <li><input type="checkbox"/> Terminal KPE key (as last received in Bit 34)</li> </ul>

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### 6.10.3 Security Key Update Request (0800)

This message is used to request the security Key ID and Public key.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0800'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'010000' - Security Key Update
11		Systems Trace Number	N 6	M	To be echoed in response
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
41		Terminal ID	AN 8	M	FDMS Nashville Terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville Merchant ID
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
63		Additional Data Length	N 3	M	'0nnn' - BCD length of data to follow
	SP	Security Packet	AN ...V	M	Required when submitting a key update request. See Section 5.35.1 for required tags (fields).

### 6.10.4 Security Key Update Response (0810)

This message is in response to the request for the transaction security Key ID and Public Key.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0810'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'010000' - Security Key Update
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	O	Generated by the FDCN host.
13		Transaction Date	N 4	M	Generated by the FDCN host.
24		NII	N 3	M	Echoed from request
39		Response Code	AN 2	M	'00' – No error
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
63		Additional Data Length	N 3	M	'0nnn' - BCD length of data to follow
	22	Response Display Text	ANS ...42	O	If applicable
	SP	Security Key Update Information	AN ...V	R	Required when returning key information. See Section 5.35.1 for required tags (fields).



### 6.10.5 Contactless Firmware Update Request (0800)

This message is used to submit the contactless reader firmware version or firmware download status. When this message is received, the firmware version and download status information are stored in TMS and viewable in FD POS.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		41. Message Type	42. N 4	43. M	44. '0800'
		45. Primary Bit Map	46. B 64	47. M	48. Refer ISO 8583
49. 3		50. Processing Code	51. N 6	52. M	53. '020000' - Contactless Reader Firmware Update
54. 1 4		55. Systems Trace Number	56. N 6	57. M	58. To be echoed in response
59. 2 4		60. NII	61. N 3	62. M	63. FDMS Nashville processing NII
64. 3 4		65. Acquirer Reference Data	66. AN ...1	67. O	68. Mandatory if entire (non-truncated) TID is included in Field 41
69. 4 4		70. Terminal ID	71. AN 8	72. M	73. FDMS Nashville Terminal ID
74. 4 2		75. Merchant ID	76. AN 15	77. O	78. FDMS Nashville Merchant ID
79. 5 3		80. Logon Password	81. N 16	82. O	83. Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
84. 6 3		85. Additional Data Length	86. N 3	87. M	88. '0nnn' - BCD length of data to follow
	89. 4 3	90. Contactless Firmware Update	91. AN ...36 or AN ...83	92. M	93. Firmware version or download information.

### 6.10.6 Contactless Reader Firmware Update Response (0810)

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		94. Message Type	95. N 4	96. M	97. '0810'
		98. Primary Bit Map	99. B 64	100.M	101.Refer ISO 8583
102.3		103.Processing Code	104.N 6	105.M	106.'020000' - Contactless Reader Firmware Update
107.1 4		108.Systems Trace #	109.N 6	110.M	111.Echoed from request
112.1 2		113.Transaction Time	114.N 6	115.O	116.Generated by the FDCN host.
117.1 3		118.Transaction Date	119.N 4	120.M	121.Generated by the FDCN host.
122.2 4		123.NII	124.N 3	125.M	126.Echoed from request
127.3 9		128.Response Code	129.AN 2	130.M	131.'00' - No error
132.4 4		133.Terminal ID	134.AN 8	135.M	136.Echoed from request
137.5 3		138.Logon Password	139.N 16	140.O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
141.6 3		142.Additional Data Length	143.N 3	144.M	145.'0nnn' - BCD length of data to follow
	146.2 2	147.Response Display Text	148.ANS ...42	149.O	150.If applicable

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### 6.10.7 Test Transaction Request (0800)

This message is used to perform a test transaction to the FDMS Nashville host.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0800'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'990000' - Test Transaction
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).

### 6.10.8 Test Transaction Response (0810)

This message is in response to the 0800 test transaction request to the FDMS Nashville host.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0810'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	Echoed from request
12		Transaction Time	N 6	O	Generated by the FDCN host.
13		Transaction Date	N 4	M	Generated by the FDCN host.
24		NII	N 3	M	Echoed from request
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
63		<del>Response Display Text</del>	<del>ANS ...40</del>	<del>O</del>	<del>If received, this is the last field</del>
or 63		Additional Data Length	N 3	O	'0nnn' - BCD length of data to follow
	22	Response Display Text	ANS ...42	O	If applicable

### 6.10.9 Statistics Request (0800)

The Statistics Request may be transmitted after a successful settlement totals response (0510, Response Code '00'). This message is not required as statistics information is not currently used by the FDMS system.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0800'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'910000'
11		Systems Trace Number	N 6	M	To be echoed in response
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
60		Software ID/Revision	AN ...32	M	Vendor specific
63		Terminal Statistics	AN ...105	M	

### 6.10.10 Statistics Response (0810)

This message is returned in response to the 0800 statistics request message.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0810'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'91000x' - where 'x' is: '0' - Parameter initialization not required '4' - Parameter initialization required (should be ignored if integrated terminal management does not apply)
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	O	Generated by the FDCN host.
13		Transaction Date	N 4	M	Generated by the FDCN host.
24		NII	N 3	M	Echoed from request
39		Response Code	AN 2	M	'00' – No error
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	AN 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
63		Response Display Text	ANS ...40	O	If received, this is the last field
63		Additional Data Length	N 3	O	'0nnn' - BCD length of data to follow
	22	Response Display Text	ANS ...42	O	If applicable

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### 6.10.11 Initialization Request (0800)

This message is used to request parameter information from the FDMS Nashville host for terminals that are supporting integrated terminal management.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0800'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'93000x' where x: '0' - First request '1' - Subsequent request
11		Systems Trace Number	N 6	M	To be echoed in response
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
53		Logon Password	N 16	M	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
60		Software ID/Revision	AN ...32	M	<i>Vendor specific</i>
63		Additional Data Length	N 3	M	'0nnn' - BCD length of data to follow
	49	Terminal Status	AN ...22	M	Used to identify terminal type/ROM rev and printer type
	TH	Terminal to Host Packet	AN ...V	O	Required if the terminal is notifying the host of a switch from Apriva to Datawire.

### 6.10.12 Initialization Response (0810)

This message is in response to the 0800 initialization request message and only applies for terminals that support integrated terminal management. The last position of the processing code field is set to 0 when there are no more tables to load.

Field 60 includes a global length byte for all tables that follow. The Field 60 global length byte is followed by some number of complete tables depending on the max buffer size allowed for the response to the terminal. Each table includes a table ID, a table length, and table data. If present, the max buffer size indicated in Field 60 Software/Revision ID from the 0800 request will be used to determine the number of Field 60 tables that can be included in the response. If the max buffer size is not present in Field 60 Software/Revision ID on the 0800 request, Field 60 on the response will be limited to a maximum of 320 bytes. If a table is too large to fit into a single response, Field 39 will be set to '96' and a response text message of 'BUFFER TOO SMALL' will be returned in Field 63, Table 22.

There is no order or sequencing of tables implied except for range tables which must be loaded in sequence order. The terminal must ignore tables that do not apply for the merchant or that are undefined in the terminal application – the presence of these tables should not cause an error at the point of sale. The terminal should allow and ignore new fields added to end of an existing table.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0810'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'93000x' - where x: '0' - Session complete '1' - More tables to load (send another request)
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	O	Generated by the FDCN host.
13		Transaction Date	N 4	M	Generated by the FDCN host.
24		NII	N 3	M	Echoed from request
39		Response Code	AN 2	M	'00' – No error '96' – Error, display Field 63, Table 22
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
60		Initialization Tables	ANSB ...V	M	See ISO Dual Addendum A for table formats.
<i>Field 63 is typically loaded on the first 0810 response only.</i>					
63		Response Display Text	ANS ...40	O	If received, this is the last field
or 63		Additional Data Length	N 3	O	'0nnn' - BCD length of data to follow
	22	<del>Response Display Text</del>	<del>ANS ...42</del>	<del>O</del>	<del>If applicable</del> <del>E.g. 'BUFFER TOO SMALL' if a table exceeds the</del> <del>max buffer size capability</del>
	42	Schedule Download	AN ...72	O	If included, should trigger automated application download at the terminal

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### 6.10.13 File Processing Request (0800)

This message is used to report the status of a file request the first/next block to download. A file download may be performed in conjunction with other terminal processing such as authorization or settlement. The success or failure of the file update should not affect the status of the other processing. For example, if the file update is performed after the terminal completes settlement processing but the file processing fails, the POS device should not consider the settlement failed and should complete normal settlement processing regardless of the status of the file update.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0800'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'940000'
11		Systems Trace Number	N 6	M	To be echoed in response
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	O	FDMS Nashville merchant ID
53		Logon Password	N 16	O	Mandatory if integrated terminal management applies (see ISO Dual Addendum A).
60		Software ID/Revision	AN ...32	M	Includes max size for response buffer.
63					
	F1	File Update Status	ANSB ....37	O	Mandatory before the first block transfer request and after the end of a file transfer session after the last file block transfer response.
	FB	File Block Transfer	AN ....9	O	Mandatory on each block request when requesting first or next block

#### 6.10.14 File Processing Response (0810)

This message is used to report the status of a file at the host or to load the next block for a file download in progress.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0810'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'940000'
11		Systems Trace Number	N 6	M	Echoed from request
12		Transaction Time	N 6	O	Generated by the FDCN host.
13		Transaction Date	N 4	M	Generated by the FDCN host.
24		NII	N 3	M	Echoed from request
39		Response Code	AN 2	M	'00' – No error
41		Terminal ID	AN 8	M	Echoed from request
53		Logon Password	N 16	O	If present, replace old logon password when integrated terminal management applies; otherwise, ignore.
63		Additional Data Length	N 3	O	'0nnn' - BCD length of data to follow
	22	Response Display Text	ANSB ...42	O	If applicable. Example errors are 'Buffer Too Small' and 'File Processing Error'.
	F1	File Update Status	ANSB ....37	O	Mandatory when Table 63-F1 in 0800 request
	FB	File Block Transfer	ANSB ....9999	O	Mandatory when Table 63-FB included in 0800 request.

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### 6.10.15 File Update Processing Flow

A file is loaded as blocks of data rather than as individual fields. The POS device must assemble all block into a single file and validate the CRC-16 checksum on the assembled file. All file transfer requests must start with the first block.

#### *DCC BIN Update Flow*

Terminal		Host
0800 File Update Request (Processing Code 940000 with Table 63-F1, Function Code 'R')	→	
	←	0810 DCC File Update Response with Table 63-F1, Function Code 'U' if file needs updating; Function Code 'N' if file is up to date
0800 File Update Request (Processing Code 940000 with Table 63-FB, Block 1 if Function Code received from host is 'U')	→	
	←	0810 File Update Response (Processing Code 940000 with Table 63-FB, Function Code 'C')
	Last 2 steps are repeated until the last block is loaded.	
	←	0810 File Update Response (Processing Code 940000 with Table 63-FB, Function Code 'L' for last block)
0800 File Update Request (Processing Code 940000 with 63-F1 Function Code 'S')	→	
	←	0810 File Update Response (Processing Code 940000 with Table 63-F1 Function Code 'N')
Terminal disconnects and validates CRC.		



## 6.11 HEALTH CARE TRANSACTIONS (0900/0910)

### 6.11.1 Health Care Eligibility Request (0900)

This message is used to process a health care eligibility request.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0900'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'00n000'
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	M	Time transaction entered
13		Transaction Date	N 4	M	Date transaction entered
22		POS Entry Mode	N 3	M	'012' – Manually keyed '022' – Card was read
24		NII	N 3	M	FDMS Nashville processing NII
31		Acquirer Reference Data	AN ..1	O	Mandatory if entire (non-truncated) TID is included in Field 41
35		Track II Data	Z ..37	O	Mandatory if Track II data is available
41		Terminal ID	AN 8	M	FDMS Nashville terminal ID
42		Merchant ID	AN 15	M	FDMS Nashville merchant ID
45		Track 1 Data	ANS ..76	O	Mandatory if Track I data is available
48		Application Specific Data Length	N 4	M	'0nnn' – BCD length of data to follow
		Dataset Identifier	B 8	M	Hex '48' – Dataset '72' (decimal) for Healthcare
		Dataset Length	B 16	M	Indicates total number of bytes that follow including the bit map and data fields
		Dataset Bit Map	B 16	M	Identifies Dataset 72 fields to follow (position 1 is '0' to indicated that this is the only bit map)
48-2		Health Care Transaction Type	N 2	M	01 – Eligibility – In-Network 02 – Eligibility – Not In-Network
48-3		Payer ID	AN ..20	M	Indicates payer/insurance carrier
48-4		Provider ID	AN ..20	M	Indicates provider/doctor
48-5		Patient DOB	N 8	M	Patient's date of birth (mmddccyy)
48-6		Date of Service	N 8	M	Date service provided (mmddccyy)
48-7		Dependent Code	N 2	M	Relationship of patient to subscriber: 00 – Self 01 – Spouse 02 – Child 03 – Other
48-8		Subscriber ID	AN ..30	O	Subscriber's ID if payer not in-network
48-9		Subscriber First Name	AN 10	O	1 <sup>st</sup> 10 characters of subscriber's first name if payer not in-network; send spaces if bypassed; omit if not prompting for the field
48-10		Subscriber Last Name	AN 16	O	1 <sup>st</sup> 16 characters of subscriber's last name if payer not in-network; send spaces if bypassed; omit if not prompting for the field
48-11		Policy/Group #	AN ..30	O	Subscriber's policy or group # if payer not in-network; length of Hex 00 with no data to follow if bypassed; omit if not prompting for the field
48-12		Track III Data	ANS ..76	O	Track III data (IATA encoding format) if a card is swiped and track III data is present
53		Logon Password	N 16	O	Mandatory if integrated terminal management

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					applies (see ISO Dual Addendum A).
60		Software ID/Revision	ANS ...31	M	<i>Software name, revision, response buffer size</i>
63		Additional Data Length	N 3	M	'0nnn' - BCD length of data to follow
	49	Terminal Status	ANS ...16	M	Terminal type/EPROM rev, printer type, printer new line characters, and max printer columns

### 6.11.2 Health Care Eligibility Response (0910)

This message is in response to the health care eligibility request.

BIT	TBL	ELEMENT	TYPE	REQ	COMMENT
		Message Type	N 4	M	'0910'
		Primary Bit Map	B 64	M	Refer ISO 8583
3		Processing Code	N 6	M	'0n0000'
11		Systems Trace Number	N 6	M	Assigned by terminal, echoed in response
12		Transaction Time	N 6	M	Time transaction entered
13		Transaction Date	N 4	M	Date transaction entered
24		NII	N 3	M	Echoed from request
39		Response Code	AN 2	M	'00' – No error 'nn' – Processing error
41		Terminal ID	AN 8	M	Echoed from request
42		Merchant ID	AN 15	M	Echoed from request
48		Application Specific Data	N 4	M	'0nnn' – BCD length of data to follow
		Dataset Identifier	B 8	M	'0048' – Dataset '72' (decimal) for Healthcare
		Dataset Length	B 16	M	Indicates total number of bytes that follow including the bit map and dataset data fields
		Dataset Bit Map	B 16	M	Identifies Dataset 72 fields to follow (position 1 is '0' to indicated that this is the only bit map)
48-15		Printer Response Text	AN ....1900	M	Health care receipt text (The printer data can include special characters recognized by the supported printer – the terminal application will send the data to the printer without interpretation or reformatting)
53		Logon Password	N 16	O	As assigned by host in Field 53 of any response
63		Additional Data Length	N 3	O	'0nnn' - BCD length of data to follow
	22	Response Display Text	ANS ...42	O	Displayed by terminal if Field 39 not equal to '00'

## 7 APPENDIX A: RESPONSE CODES

CODE	DESCRIPTION
'00'	Approved
'01'	Referred to card issuer
'02'	Referred to card issuer's special conditions
'10'	Partial Authorization Amount Approval
'12'	Invalid Message Type/Process Code
'13'	Invalid Amount
'14'	Invalid or Unauthorized Card Number
'19'	Miscellaneous Data Error
'25'	Invalid Terminal ID
'30'	Miscellaneous Format Error
'51'	Declined
'54'	Expired Card
'55'	Incorrect PIN
'57'	Declined (Canadian Debit)
'58'	Invalid Transaction
'76'	Invalid Product Code
'77'	Reconcile Error (not currently used)
'89'	Invalid Terminal ID or Terminal Record Locked (FDMS internal Code 31)
'91'	Time-Out - Call Voice Center
'93'	Initialization Required (display error and abort – host terminal level Active Flag indicates the terminal has completed a download but has not performed subsequent startup initialization)
'94'	Duplicate Transmission
'95'	Reconcile error, upload batch
'96'	<p>Miscellaneous Processing Error</p> <p>Note: Typically, Response Display Text (Field 63, Table 22) would be returned when this response code applies so that more descriptive error text can be displayed at the POS device to facilitate problem resolution.</p> <p>Examples:</p> <p>'HOST ERROR 50, CALL HELP DESK' – TID record marked as 'Violated' during auth/settle (switch error)</p> <p>'HOST ERROR 51, CALL HELP DESK' – TID record already marked as 'Violated' (switch error)</p> <p>'HOST ERROR 52, CALL HELP DESK' – TID record marked as 'Violated' during param init (TMS error)</p> <p>'BUFFER TOO SMALL ' – Initialization response buffer limit exceeded on 810 response</p>
'97'	No transactions to reload – returned on a 0310 response when terminal requests a batch upload when there isn't an open batch at the host
'AP'	Errors generated by Apriva host – typically accompanied by Field 63 or Field 63, Table 22 error text.

**Note:** For undefined codes, applications should display generic error message containing the received error code (for example, 'Error nn: Call Help Desk')

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## 8 APPENDIX B: CHECK APPROVAL ID CODES

### 8.1 STATE AND CREDIT CARD ID CODES

ID Code	ID Data (Field 63 Table 61 if keyed, Field 35 if Track II swiped or Field 45 if Track I swiped)
25	Alabama
55	Alaska
20	Arizona
27	Arkansas
23	California
26	Colorado
28	Connecticut
33	Delaware
93	District of Columbia
35	Florida
42	Georgia
44	Hawaii
43	Idaho
45	Illinois
46	Indiana
49	Iowa
57	Kansas
59	Kentucky
52	Louisiana
56	Maine
79	Maryland
87	Massachusetts
40	Michigan
64	Minnesota
77	Mississippi
66	Missouri
21	Alberta
11	British Columbia
61	Manitoba
13	New Brunswick
31	Newfoundland
01	Northwest Territories
68	Montana
63	Nebraska
38	Nevada
47	New Hampshire
53	New Jersey
39	New Mexico
69	New York
75	North Carolina
36	North Dakota
60	Ohio
65	Oklahoma
67	Oregon
78	Pennsylvania

ID Code	ID Data (Field 63 Table 61 if keyed, Field 35 if Track II swiped or Field 45 if Track I swiped)
70	Puerto Rico
74	Rhode Island
72	South Carolina
73	South Dakota
86	Tennessee
89	Texas
88	Utah
83	Vermont
82	Virginia
92	Washington (State)
98	West Virginia
94	Wisconsin
99	Wyoming
41	Nova Scotia
51	Ontario
81	Prince Edward Island
71	Quebec
12	Saskatchewan
91	Yukon Territories
22	Visa
24	Carte Blanche
29	Amex
32	Diner's Club
62	MasterCard
95	Discover

## 8.2 OTHER ID CODES

ID CODE	ID DATA	COMMENT
00	MICR Data	Table 58, ID Code 00 implied
07	Product Code	Table 61 or Table 77
08	Check Sequence Number	Table 64, ID Code 08 implied
09	Social Security Number	Table 61 or Table 77
10	Military ID	Table 61 or Table 77
14	Telephone Number	Table 61 or Table 77
85	Company Check	Table 61 or Table 77
97	Military ID	Table 61 or Table 77
100	MICR Data From Check Reader	Table 58, ID Code 100 implied
101	Checking Account # (keyed)	Table 60, ID Code 101 implied
102	Bank Routing (keyed)#	Table 59, ID Code 102 implied
103	Customer Name (keyed)	Table 61 or Table 77
104	Cashback Amount	Table 41, ID Code 104 implied
105	Swiped ID Track Data	Field 35 or 45, ID Code 105 implied
106	Tran Code (keyed)	Table 75, ID Code 106 implied
	Check Type	Table 76, ID Code not applicable

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## 9 APPENDIX C – ACCOUNT NUMBER CHECK DIGIT SCHEME

This self-checking scheme (referred to as the Luhn Mod-10 Method) is an international standard for validating card account numbers (ISO 2894/ANSI 4.13). Such account numbers, which cannot exceed 19 digits including the check digit, are assigned, embossed and encoded to include a single check digit in the rightmost position. The check digit is calculated as follows:

1. Beginning on the right, with the digit that immediately precedes the check digit and moving toward the left, double every other digit. After doubling each selected digit, if the result is ten or greater, add the two digits together to arrive at a single-digit result.
2. Each individual resulting digit, plus those bypassed, above is then added together.
3. This sum is then subtracted from the lowest multiple of ten that is equal to or greater than the sum, and the single-digit result is the check digit.

**Example:** 15-Digit Account Number 7951-0287-9015-54?

4 x 2	= 8
5 x 1	= 5
5 x 2 = 10 : 1 + 0	= 1
1 x 1	= 1
0 x 2	= 0
9 x 1	= 9
7 x 2 = 14 : 1 + 4	= 5
8 x 1	= 8
2 x 2	= 4
0 x 1	= 0
1 x 2	= 2
5 x 1	= 5
9 x 2 = 18 : 1 + 8	= 9
7 x 1	= <u>7</u>
Sum	64
Subtracted From	<u>70</u>
Resulting Check Digit = 6	

**Note:** Many programs written only to verify such numbers begin with the check digit itself (weighted as 1) and simply assure that the result is a multiple of ten. Certification mandates that this validity check, as defined above, be supported by all software products/applications in order to process on the First Data Host.

## 10 APPENDIX D – RENTAL CLASS ID CODES

<u>ID Code</u>	<u>Rental Class</u>
0001	Mini
0002	Subcompact
0003	Economy
0004	Compact
0005	Midsize
0006	Intermediate
0007	Standard
0008	Full size
0009	Luxury
0010	Premium
0011	Minivan
0012	12-passenger van
0013	Moving van
0014	15-passenger van
0015	Cargo van
0016	12-foot truck
0017	20-foot truck
0018	24-foot truck
0019	26-foot truck
0020	Moped
0021	Stretch
0022	Regular
0023	Unique
0024	Exotic
0025	Small/medium truck
0026	Large truck
0027	Small SUV
0028	Medium SUV
0029	Large SUV
0030	Exotic SUV
9999	Miscellaneous

Source: Open Travel Alliance OTA Code Table – Size/Vehicle Class Type

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# 11 APPENDIX E – EMV TAG MATRIX

The EMV Tags listed below are the tags supported by First Data and will be present in the EMV Data Field Identifier as applicable. If the Data Element is not applicable, the TLV will not be present in the EMV Data Field Identifier. *Additional tags from the chip may be present in field 55. These tags will not be captured for settlement but will be passed to Visa/MC in the authorization request.*

Auth (Original online authorization): 0100, 0200

Auth Response: 0110, 0210

Rev (Online reversal of online authorization): 0400

Settle (Offline advice, batch upload, batch download): 0220, 0310, 0320

EMV TAG	Data Element	Origin	Comments	Auth	Auth Resp	Rev	Settle
9F40	Additional Terminal Capabilities	Device	Indicates the data input and output capabilities of the terminal	O		O	O
9F03	Amount, Other	Device	Secondary amount associated with the transaction, representing a cash back amount. <b>Mandatory if cash back applies.</b>	C	-	O	C
9F26	Application Cryptogram	Card	Cryptogram returned by the ICC in response to the GENERATE AC command (ARQC for auth, TC for settle).	M	-	O	M
5F24	Application Expiration Date	Card	Date after which the application expires. (Required for Interac)	O	-	O	O
4F	Application Dedicated File (ADF) Name	Card	Identifies the application as described in ISO/IEC 7816-5	O		O	O
82	Application Interchange Profile	Card	A series of indicators that reflect the specific functions supported by the chip card account. For example, this field indicates whether cardholder verification is supported.	M	-	O	M
9F06	Application Identifier (AID) Terminal	Device	Identifies the application as described in ISO/International Electrotechnical Commission [ISO7816-5].	O	-	O	O
50	Application Label	Card	Mnemonic associated with the AID according to ISO/IEC 7816-5	O	-	O	O
9F12	Application Preferred Name	Card	Preferred mnemonic associated with the AID	O	-	O	O
87	Application Priority Indicator	Card	Indicates the priority of a given application or group of applications in a directory	O	-	O	O
9F36	Application Transaction Counter	Card	Contains the count of the transactions performed by the application. This field is incremented by one each time a transaction is initiated.	M	-	O	M
9F07	Application Usage Control	Card	Indicates issuer's specified restrictions on the geographic usage and services allowed for the application	O		O	O



EMV TAG	Data Element	Origin	Comments	Auth	Auth Resp	Rev	Settle
8A	Authorization Response Code	Device	If the transaction is offline approved by the device it will contain one of the following values: Y1 = Offline approved Y3 = Unable to go online. Offline approved.	-	Ⓔ	-	C
9F5D	Available Offline Spend Amount (Visa Only)	Card	Visa proprietary data element indicating the remaining amount available to be spent offline. The offline spend is a calculated amount that allows the terminal to print or display the amount of offline spend that is available on the card.				
9F08	Card Application Version Number	Card	Version number assigned by the payment system for the application	O		O	O
5F20	Cardholder Name	Card	Indicates cardholder name according to ISO 7813	O		O	O
9F34	Cardholder Verification Method (CVM) Results	Card	Indicates the results of the last CVM performed.	M	-	M	M
9F02	Cryptogram Amount	Device	Contains the actual transaction amount used by the chip when calculating the cryptogram for the EMV transaction. This amount excludes any adjustments (e. g. tips) that were made to the transaction amount after completion of the original EMV transaction. Two decimals implied.	M	-	O	M
9F27	Cryptogram Information Data	Card	Indicates the type of cryptogram and the actions to be performed by the terminal.	M	-	O	M
9F7C	Customer Exclusive Data	Card	This tag will provide data exclusive to the card as determined by the Issuer. <b>Not used for Canadian EMV.</b>	C	-	-	-
84	Dedicated File Name	Card	Identifies the name of the DF as described in ISO/IEC 7816-4.	O	-	O	O
9F6E	Form Factor Indicator	Device	This field contains indicators about the attributes of cardholder's device and the technology used for communication between the cardholder's device and the acquiring POS device. <b>Not used for Canadian EMV.</b>	C	-	O	O
9F0D	Issuer Action Code (IAC) - Default	Card	Specifies conditions that cause a transaction to be declined if it might have been approved online, but the Terminal is un-able to process the transaction online.	O	-	O	O

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EMV TAG	Data Element	Origin	Comments	Auth	Auth Resp	Rev	Settle
9F0E	Issuer Action Code (IAC) - Denial	Card	Specifies conditions that cause the decline of a transaction without at-tempting to go online.	O	-	O	O
9F0F	Issuer Action Code (IAC) - Online	Card	Specifies conditions that cause a transaction to be transmitted online.	O	-	O	O
9F10	Issuer Application Data	Card	Contains proprietary application data for transmission to the issuer in an online transaction. <b>Mandatory for auth and settle if provided by the card.</b>	C	-	O	C
91	Issuer Authentication Data	Issuer	Contains data transmitted from the issuer to the card for issuer authentication.	-	O	-	-
5F28	Issuer Country Code	Card	Indicates the country of the issuer according to ISO 3166	O	-	O	O
71	Issuer Script 1	Issuer	The issuer can send a command script that must be sent to the chip application by the terminal, in its entirety and without interpretation, before the Second Processing Step.	-	C	-	-
72	Issuer Script 2	Issuer	The issuer can send a command script that must be sent to the chip application by the terminal, in its entirety and without interpretation, after the Second Processing Step.	-	C	-	-
9F5B	Issuer Script Results	Issuer	The issuer can send commands ('issuer scripts') to the card in the authorization response during online processing. The card 'executes' the commands and updates the card parameters. The card records the identifier of the commands and the success or failure of the updates in the Issuer Script 1 Results field. <b>Mandatory for settle if issuer script received from the issuer on an auth response.</b>	-	-	-	C
5F30	Service Code	Card	Service code as defined in ISO/IEC 7813 for track 1 and track 2	O		O	O
9F09	Terminal Application Version Number	Device	Version number assigned by the payment system for the application.	O	-	O	O
9F33	Terminal Capability Profile	Device	Indicates the card data input, the Cardholder Verification Method (CVM) and the security supported by the terminal. This field must be display hexadecimal.	O	-	O	O
9F1A	Terminal Country Code	Device	Country code of the terminal. Numeric country code.	M	-	O	M

EMV TAG	Data Element	Origin	Comments	Auth	Auth Resp	Rev	Settle
9F1E	Terminal Serial Number	Device	A unique and permanent identification number of the chip terminal assigned by the manufacturer. It is used to track devices regardless of their location.	O	-	O	O
9A	Terminal Transaction Date	Device	The local date that the transaction was authorized. YYMMDD format.	M	-	O	M
9F35	Terminal Type	Device	Indicates the environment of the terminal, its communications capability, and its operational control.	O	-	O	O
95	Terminal Verification Results	Device	A series of indicators from the terminal perspective. The terminal records the results of offline and online processing by setting a series of indicators in this field. These indicators are available to members in the online message and clearing transaction.	M	-	O	M
9F53	Transaction Category Code	Device	MasterCard/EuroPay code defining the type of transaction or industry sector in which the merchant operates.	O	-	O	O
5F2A	Transaction Currency Code	Device	Currency code of the transaction according to ISO 4217.	O	-	O	O
9F41	Transaction Sequence Counter	Device	Counter maintained by the terminal that is incremented by one for each transaction.	O	-	O	O
9B	Transaction Status Information	Device	Indicates the functions performed in a transaction	O	-	O	O
9C	Transaction Type	Device	Indicates the type of financial transaction, represented by the first two digits of ISO 8583: 1987 Processing Code.	M	-	O	M
9F21	Transaction Time	Device	Local time that the transaction was authorized	O	-	O	O
9F21	Unpredictable Number	Device	The # used in generation of the cryptogram for chip transactions. It provides variability and uniqueness to the cryptogram.	M	-	O	M

O = Optional; O<sub>1</sub> = M = Mandatory for cash back transactions; M = Mandatory; C = Conditional; X = Does not apply

#### Conditional Data Elements

1. Issuer Script Results – conditional for MasterCard; if the Issuer provides the Issuer Script in the authorization response and the transaction is approved, the script results must be provided in the settlement file.
2. Issuer Application Data (IAD) – conditional for MasterCard; must be provided in the settlement file if the IAD is provided by the chip to the terminal.
3. Authorization Response Code – mandatory for Visa and conditional for MasterCard and when the EMV transaction was approved offline by the chip. For Amex, the Authorization Response Code is included in Tag 91, Issuer Authentication Data.
4. Issuer Script 1 – May be present if the issuer provides the Issuer Script 1.

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5. Issuer Script 2 – May be present if the issuer provides the Issuer Script 2.

## 12 APPENDIX F – EMV CA PUBLIC KEY FILE FORMAT

The 'EMVKEY' file contains a single header record followed by multiple Public Key records. All records are ASCII, use commas as field separators and are terminated with a CRLF (Hex '0D0A').

Header Record – Note that fields are comma separated and the record is terminated with a CRLF				
Field Name	Type	Max Length	Value	Usage
File Name	A/N	8	"CA_KEYS"	Identifies the type of file
File Version	Numeric	4		Specifies the file version for tracking purposes (i.e. "0100")

Key Records - Note that fields are comma separated and the record is terminated with a CRLF				
Field Name	Type	Max Length	Value	Usage
Expiry Date	Numeric	8		Specifies when the key expires. Formatted as: MMDDYYYY (i.e. "12312008")
Certification Authority Hash algorithm Indicator	Numeric	2	"01"	Identifies the hash algorithm used to produce the Hash Result in the digital signature scheme. At the present time only a value of "01" (SHA-1) is supported.
Certification Authority Public Key Algorithm Indicator	Numeric	2	"01"	Identifies the digital signature algorithm to be used with the Certification Authority Public Key At the present time only a value of "01" (RSA) is supported.
Registered application provider Identifier (RID)	A/N	10		Identifies the payment system to which the Certification Authority Public Key is associated (e.g. 'A000000003').
Index	Hex	2		Identifies the Certification Authority Public Key in conjunction with the RID
Modulus	Hex	Variable (max 496)		Value of the modulus part of the Certification Authority Public Key
Exponent	Numeric	2 or 6	03 or $2^{16+1}$	Value of the exponent part of the Certification Authority Public Key, equal to 3 or $2^{16+1}$
Certification Authority Public Key Check Sum	Hex	40		A check value calculated on the concatenation of all parts of the certification Authority Public Key (RID, Certification Authority Public Key Index, Certification Authority Public Key Modulus, Certification Authority Public Key Exponent) using SHA-1

## Example CA Public Key File:

```
CA_KEYS,0100
12312008,01,01,A000000003,98,CA026E52A695E72BD30AF928196EEDC9FAF4A619F2492E3FB
31169789C276FFB7D43116647BA9E0D106A3542E3965292CF77823DD34CA8EEC7DE367E080708
95077C7EFAD939924CB187067DBF92CB1E785917BD38BACE0C194CA12DF0CE5B7A50275AC61BE7
C3B436887CA98C9FD39,03,E7AC9AA8EED1B5FF1BD532CF1489A3E5557572C1
12312008,01,01,A000000003,99,AB79FCC9520896967E776E64444E5DCDD6E13611874F39857
22520425295EEA4BD0C2781DE7F31CD3D041F565F747306EED62954B17EDABA3A6C5B85A1DE1BE
B9A34141AF38FCF8279C9DEA0D5A6710D08DB4124F041945587E20359BAB47B7575AD94262D4B2
5F264AF33DEDCE28E09615E937DE32EDC03C54445FE7E382777,03,4ABFFD6B1C51212D05552E4
31C5B17007D2F5E6D
12312008,01,01,A000000003,95,BE9E1FA5E9A803852999C4AB432DB28600DCD9DAB76DFAAA4
7355A0FE37B1508AC6BF38860D3C6C2E5B12A3CAAF2A7005A7241EBAA7771112C74CF9A0634652
FBCA0E5980C54A64761EA101A114E0F0B5572ADD57D010B7C9C887E104CA4EE1272DA66D997B9A
90B5A6D624AB6C57E73C8F919000EB5F684898EF8C3DBEFB330C62660BED88EA78E909AFF05F6D
A627B,03,EE1511CEC71020A9B90443B37B1D5F6E703030F6
12312008,01,01,A000000004,FE,A653EAC1C0F786C8724F737F172997D63D1C3251C44402049
B865BAE877D0F398CBFBE8A6035E24AFA086BEFDE9351E54B95708EE672F0968BCD50DCE40F783
322B2ABA04EF137EF18ABF03C7DBC5813AEAFA3AA7797BA15DF7D5BA1CBAF7FD520B5A482D8D3F
EE105077871113E23A49AF3926554A70FE10ED728CF793B62A1,03,9A295B05FB390EF7923F576
18A9FDA2941FC34E0
12312008,01,01,A000000004,F3,98F0C770F23864C2E766DF02D1E833DFF4FFE92D696E1642F
0A88C5694C6479D16DB1537BFE29E4FDC6E6E8AFD1B0EB7EA0124723C333179BF19E93F10658B2
F776E829E87DAEDA9C94A8B3382199A350C077977C97AFF08FD11310AC950A72C3CA5002EF513F
CCC286E646E3C5387535D509514B3B326E1234F9CB48C36DDD44B416D23654034A66F403BA511C
5EFA3,03,A69AC7603DAF566E972DEDC2CB433E07E8B01A9A
12312008,01,01,A000000004,FA,A90FCD55AA2D5D9963E35ED0F440177699832F49C6BAB15CD
AE5794BE93F934D4462D5D12762E48C38BA83D8445DEAA74195A301A102B2F114EADA0D180EE5E
7A5C73E0C4E11F67A43DDAB5D55683B1474CC0627F44B8D3088A492FFAADAD4F42422D0E701353
6C3C49AD3D0FAE96459B0F6B1B6056538A3D6D44640F94467B108867DEC40FAAECD740C00E2B7A
8852D,03,5BED4068D96EA16D2D77E03D6036FC7A160EA99C
12312008,01,01,A000000004,F1,A0DCF4BDE19C3546B4B6F0414D174DDE294AABBB828C5A834
D73AAE27C99B0B053A90278007239B6459FF0BBCE7B4B9C6C50AC02CE91368DA1BD21AAEADBC65
347337D89B68F5C99A09D05BE02DD1F8C5BA20E2F13FB2A27C41D3F85CAD5CF6668E75851EC66E
DBF98851FD4E42C44C1D59F5984703B27D5B9F21B8FA0D93279FBBF69E090642909C9EA27F8989
59541AA6757F5F624104F6E1D3A9532F2A6E51515AEAD1B43B3D7835088A2FAFA7BE7,03,D8E68
DA167AB5A85D8C3D55ECB9B0517A1A5B4BB
12312008,01,01,A000000004,F8,A1F5E1C9BD8650BD43AB6EE56B891EF7459C0A24FA84F9127
D1A6C79D4930F6DB1852E2510F18B61CD354DB83A356BD190B88AB8DF04284D02A4204A7B6CB7C
5551977A9B36379CA3DE1A08E69F301C95CC1C20506959275F41723DD5D2925290579E5A95B0DF
6323FC8E9273D6F849198C4996209166D9BFC973C361CC826E1,03,F06ECC6D2AAEBF259B7E755
A38D9A9B24E2FF3DD
```

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# 13 APPENDIX G – TRANSARMOR FIELD 63, TABLE 22 ERROR TEXT EXAMPLES

The following text can be included in Field 63, Table 22 of a response from the First Data host when TransArmor processing applies. Typically, Field 39 is set to a value of '96' whenever the Field 63, Table 22 error text is included. *Other text scenarios are supported and others may be added as needed – the examples below are primarily related to TransArmor and offers error processing.*

ISO Dual Field 39 Response Code	ISO Dual Bit 63, Table 22 Response Display Text	Comment
96	PLEASE RETRY	Various problems with security handler at switch
96	CRYPTO FAILURE	Security handler could not decrypt data
96	TOKEN FAILURE	Security handler could not generate or retrieve a new token
96	KEY FAILURE	Security handler could not find the associated private key
96	790-PLEASE RETRY	Switch could not parse response from security handler
96	791-ERR DECRYPT	TID in message does not match TID in security packet sent from POS
96	792-ERR DECRYPT	TID is not returned by the security handler
96	793-NOT ALLOWED	Security is not configured for merchant or terminal record
96	794-INVLD TRAN	Parse failure when security packet sent from POS
96	795-INVLD TOKEN	Parse failure on token request sent from POS (i.e. missing PAN or token type)
96	796-INVLD DETOK	Parse failure when token sent from POS
96	797-INVLD DECRPT	Parse failure when encrypted data sent from the POS
96	798-NO KEY	Security handler could not retrieve the key associated with a Key ID
96	799-PLEASE RETRY	Unknown switch failure
96	"OFFER PROC ERROR"	Offer available but cannot be processed to offer provider