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Petroleum Transaction Message Specification (PCD)

Host Message Version: 6

March 2026

V1.29

Petroleum Transaction Message Specification (PCD) V1.29

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About This Guide

This guide is intended to provide a reference for the messages, which are transmitted from the terminal to the host and from the host to the terminal, communications routines, and receipt requirements.

Refer to the *Worldpay Petroleum Card Specification* for specific information about fleet cards (prompting, restrictions, track layouts, and so on).

This guide defines all data fields in ASCII format and they are in numeric (n), alphabetic (a), or alphanumeric format (a/n). Data elements in terminal request messages that are always required are classified as (REQD) and data elements that are optional are classified as (OPTL). Data elements in host response messages that are always returned are classified as (CNST) and data elements that are returned dependent on the type of terminal request are classified as conditional (CDTL).

Intended Audience

This document is intended for users of the Worldpay Petroleum Message Format.

Revision History

For revision history for this document prior to March 2018, consult your Relationship Manager.

Revisions to this document are as follows:

TABLE 1 Document Revision History

Doc. Version	Release Date	Description	Location(s)
1.29	03.27.2026	Modified Note for G080, Tag PB (see Table 6-11). For both G080 and R080, Changed the maximum length for Tag MS from 153 to 317. Change the maximum length for Tag KT from 96 to 256. Added a second possible format for Tag CD (see Table 6-11, Table 6-12, Table 6-25 and Table 6-26). Modified the Notes for R002, Tag VF (see Table 6-15).	Chapter 6
		Modified the Condition and Notes/Field Values for Terminal Features, Byte 4 (see Table H-1).	Appendix H
1.28	02.19.2026	Corrected Field Name “Response Group” to “Request Group” in Table 3-20). Added sections 3.23 through Table 3-25. about Master Key management.	Chapter 3
		Removed the “Only available for...” Note from G080. Corrected the description for Field 3 of G080. It was “Tag Value Length”, now “Tag Value” (see Table 6-10). Also, added MS Tag and Subtags (see Table 6-12). Added Response Group R080 - PIN Encryption Data (see section 6.3.9). Also, changed the Notes for Tag PB (see Table 6-11).	Chapter 6
1.27	10.08.2025	Added Field 15 to G001 (see Table 6-1) to support a Transaction Initiation Flag.	Chapter 6
1.26	07.24.2025	Added Field 14 to G001 (see Table 6-1) to support the Transaction Link Indicator. Added request group G068 - Lifecycle Transaction Link Identifier to support the inclusion of the ID value in subsequent linked transactions. Added response group R041 - Transaction Link ID to support the return of the link ID value for use in subsequent linked transactions.	Chapter 6

TABLE 1 Document Revision History

Doc. Version	Release Date	Description	Location(s)
1.25	06.06.2025	Modified the description of Tag VF in R002 (see Table 6-15)	Chapter 6
		Add Note for FleetCor/Fuelman to Code DJ (see Table A-1).	Appendix A
1.24	03.04.2025	Added Field #13 to G001 (see Table 6-1) Added Tag PG (Merchant Payment Gateway ID) to G002 (see Table 6-3) Added Field G080 - PIN Encryption Data (see section G080 - PIN Encryption Data)	Chapter 6
		Modified the Condition and Description/Field Values for Terminal Features, Block 4 (see Table H-1	Appendix H
1.23	09.25.2024	Changed the order and numbering of R035 and R036. R035 was listed as R036 and R036 as R035.	Chapter 6
		Added Data Types to Table A-1.	Appendix A
1.22	08.21.2024	Updated the Tag for Issuer Script Result (see Table W-1) from 9F5b to 9F5B.	Appendix W
1.21	06.10.2024	Added definition for Maintenance ID.	Appendix A
1.20	01.30.2024	Revised the Note at the beginning of Appendix L, Product Information Values.	Appendix L
1.19	08.25.2023	Added Field 12 to G001 (see Table 6-1). Added Tag BN to R002 (see Table 6-15) Added Tags EM and PC to R075 (see Table 6-23).	Group Data
		Added info to description of Field Separators (see Table W-2).	Appendix W
1.18	02.27.2023	Added Field 11 to G001 (see Table 6-1). Add missing EBT Transaction Codes 25 and 45 (see Table 1-10).	Chapter 6 Chapter 1
1.17	12.8.2022	Added G062 - Visa Merchant ID (see G062 - Visa Merchant ID). Added Tag VA to R002 - Additional response Data (see R002 - Additional Response Data)	Chapter 6
1.16	08.24.2022	Added values to Table 6-1 (G001), Table 6-3 (G002), and Table 6-10 (R002).	Chapter 6
1.15	06.30.2022	Removed “Non-numeric versions of these data type will be ignored.” from Notes for Visa 2.0, note 2.	Appendix A

TABLE 1 Document Revision History

Doc. Version	Release Date	Description	Location(s)
1.14	05.24.2022	Added information to support Visa 2.0	Chapter 6 and Appendices A, H, and L
1.13	04.27.2022	Reworded Note in section Section 6.3.1. Updated footers across entire guide.	Chapter 6 All
1.12	03.22.2022	Added option 2 to Position 0 of Table H-1, "Terminal Features"	Appendix H
1.11	01.07.2022	Updated the amounts in Table V-1, "Pre-Auth and Cutoff Amounts for Pump Transactions".	Appendix V
1.10	12.03.2021	Removed Section 5.1 (Receipt Requirements).	Chapter 5
1.9	11.05.2021	Added Field 08 (Debit Optimization Request Indicator) to G001 - Optional Processing Indicators. Added tag DO to the list of valid values for R002 - Additional Response Data.	Chapter 6
1.8	08.06.21	Added G061 - FIS Loyalty Data and R075 - Raw Network Response Data.	Chapter 6
1.7	06.16.21	Updated the text in the Product Codes and Price Look Ups section. Updated all of the product codes in Appendix A, "Card Data and Product Information Codes".	Chapter 1, Appendix A
1.6	02.03.2021	Added transaction codes 80 and 81 to Table 1-8. Updated the descriptions for Fields 04, 05, and 06 in Table 6-1. Added G028 - Tokenization Utilization. For R002 - Additional Response Data, added the PL and TK tags. For R003 - System Health Status Information, corrected a subfield description for Current System Health.	Chapter 1, Chapter 6
1.5	01.06.2021	For G001 - Optional Processing Indicators, added fields 04, 05, and 06, which are reserved for future use. For G001 - Optional Processing Indicators, added field 07 (Request Raw Network Data). Removed note from G002 - Additional Request Data. Added R075 - Raw Network Response Data.	Chapter 6

TABLE 1 Document Revision History

Doc. Version	Release Date	Description	Location(s)
1.4	10.07.2020	Added System Health Check Request and System Health Check Response. Updated Sample Administrative Request/Response Packets with a System Health Check example. Updated the introductory paragraph for Request Groups. Added G004 - Customer Discretionary Data. Updated the introductory paragraph for Response Groups. Added R003 - System Health Status Information. Added R035 - WEX Additional Host-Based Prompts Requested and R035 - WEX Additional Host-Based Prompts Requested. Added the WX tag for G002 - Additional Request Data. In Table A-1, noted that WEXP no longer supports code 05 (Driver's License). Updated Table B-5 with following new code: 0400 (More WEX Prompts Required). Updated the values for Byte 2 (Wright Express Version Flag) in Table H-1.	Chapter 3, Chapter 6, Appendix A, Appendix B, Appendix H
1.3	05.06.2020	Added a required field separator for the following transaction request messages: Transaction Request Message (TREQ) and Addendum Data Message. Added a required field separator for the following administrative transactions: Host Batch Close Response, Update Terminal Configuration Response, and Update Card Ranges Response.	Chapter 2, Chapter 3
1.2	04.01.2020	Added subfield 03 to G001 - Optional Processing Indicators. Add the AR tag to R002 - Additional Response Data.	Chapter 6
1.1	01.08.2020	Added G026 - POS Encrypted Data (not generally available at this time).	Chapter 6
1.0	10.02.2019	This is a new guide.	NA

Document Structure

This manual contains the following sections:

Chapter 1, "Overview"

This chapter provides a general overview of the Petroleum Specification message formats.

Chapter 2, "Transaction Request Message"

This chapter describes the Transaction Request messages that request authorization from the card-issuing network for a payment, return, or void against a specific account and the Transaction Response messages that contains the network's approval or denial of the requested transaction.

Chapter 3, "Administrative Transactions"

This chapter describes that administrative transactions you use to request information from or send information to the host. This information is not specific to one transaction or card type.

Chapter 4, "Worldpay Communications"

This chapter describes the required protocol dependent message headers and trailers and the protocol behavior for single threaded communications. It illustrates various communication scenarios (with and without errors) that may occur during the message exchange between the terminal and host.

Chapter 5, "Terminal Application Requirements"

This chapter describes the terminal application receipt and report requirements.

Chapter 6, "Group Data"

This chapter describes the following: group data rules, request groups, and response groups.

Appendix A, "Card Data and Product Information Codes"

This appendix provides data types, service codes, measurement codes, product codes, sample customer data fields, and sample product information.

Appendix B, "Card Data and Product Information Codes"

This appendix provides the action codes and response literals for uploaded transaction, credit, debit, Fleet, gift and prepaid cards, sprint phone card activation and the VSP response codes for P2PE.

Appendix C, "AVS Result Codes"

This appendix provides AVS result codes for the following: Visa, Mastercard, Discover, and American Express.

Appendix D, "Card Verification Value Result Codes"

This appendix provides the Visa and Discover CVV2/CID Result Codes, the Mastercard CVC 2 Result Codes, and the American Express CID Result Codes.

Appendix E, "Transaction Code Values"

This appendix provides the transaction code values for the different card type transactions.

Appendix F, "Account Types"

This appendix provides the descriptions and field values for the different account types.

Appendix G, "Entry Type Values"

This appendix provides the descriptions and field values for entry methods.

Appendix H, "Terminal Features"

This appendix provides the descriptions and field values for terminal feature field value information.

Appendix I, "Configuration Information"

This appendix provides the field value information for configuration information.

Appendix J, "Host Gift Totals"

This appendix provides the field value information for host totals, which are current batch/shift for gift card activations, deactivations, and balance inquiries.

Appendix K, "Terminal Batch Totals"

This appendix provides the field value information for terminal batch totals.

Appendix L, "Product Information Values"

This appendix provides the descriptions and field values for product information.

Appendix M, "Transaction Type and Card Specific Data"

This appendix This appendix includes the descriptions and field values for the following: Transaction Type Specific Data 1, Card Type Specific Data, and Transaction Type Specific Data 2 (EBT and Loyalty).

Appendix N, "Receipt Header Information"

This appendix provides the descriptions and field values of the Receipt Header Information.

Appendix O, "Configuration Change Flag"

This appendix provides the descriptions and field values of the Configuration change flag.

Appendix P, "Configuration Update Information"

This appendix provides the field value information for Configuration Update Information.

Appendix Q, "Surcharge Fees"

This appendix provides the merchant processing fees for various services with descriptions and field values of the surcharge fee values.

Appendix R, "Miscellaneous Features"

This appendix provides the descriptions and field values of the miscellaneous features values.

Appendix S, "End of Day Posting Options"

This appendix provides the descriptions and field values of the End of Day Posting Options values.

Appendix T, "Card Range Update Data"

This appendix provides the descriptions and field values of the Card Range Update Data values.

Appendix U, "Response Literal"

This appendix describes the field value information for Response Literal information on Administrative transactions only.

Appendix V, "Table Information"

This appendix presents visual representations of several Worldpay codes, defaults, and processing options to help POS developer understand the Worldpay Message Formats and the processing of traffic to the Worldpay Host.

Appendix W, "EMV Data Elements"

This appendix describes the EMV request and response fields.

Appendix X, "Terminal Input Capabilities"

This appendix describes the various methods by which a terminal can capture PAN/track data and remains constant for each transaction from the terminal.

Glossary

This glossary provides definitions used in the Petroleum/C-Store industry. The intent is to provide an understanding of the meaning of features required by Worldpay and what that feature, function or term means to Worldpay. If there is any term or function that is not clear to the developer, it should be forwarded to the Product Management Associate working with the developer for a clarification.

Related Documentation

See the following related document:

- *Petroleum Card Specification*

Typographical Conventions

Table 2 describes the conventions used in this guide.

TABLE 2 Typographical Conventions

Convention	Meaning
. . .	Vertical ellipsis points in an example mean that information not directly related to the example has been omitted.
. . .	Horizontal ellipsis points in statements or commands mean that parts of the statement or command not directly related to the example have been omitted.
< >	Angle brackets are used in the following situations: • user-supplied values (variables) • XML elements
[ ]	Brackets enclose optional clauses from which you can choose one or more option.
bold text	Bold text indicates emphasis.
Italicized text	Italic type in text indicates a term defined in the text, the glossary, or in both locations.
blue text	Blue text indicates a hypertext link.
|	This character represents a separator in examples and if for illustrative purposes only. `|I2.|123456|0100|21|004000|` You should not include it in any messages.
<fs>	In examples, this represents a field separator.
<gs>	In examples, this represents a group separator.
<rs>	In examples, this represents a record separator.

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Overview

This chapter provides a general overview of the Petroleum Specification message formats.

The topics discussed in this chapter are:

1.1 General Field Information

All data fields defined in this specification are in ASCII format and are in numeric (n), alphabetic (a), or alphanumeric format (a/n). Data elements in terminal request messages that are always required are classified as (REQD) and data elements that are optional are classified as (OPTL). Data elements in host response messages that are always returned are classified as (CNST) and data elements that are returned dependent on the type of terminal request are classified as conditional (CDTL).

Field names with an asterisk (*) are also documented by byte value and should not be interpreted as multiple separate fields. For optional fields that are also documented by byte value, the individual bytes are requirements of this field and will be classified as required (REQD).

Fixed-length alphanumeric fields are always left-justified and padded to the specified length with space characters (hex values = 0x20) and fixed length numeric fields are always right-justified and padded to the specified length with 0's (hex values = 0x30). Variable length fields are always delimited by a field separator and you should not pad them.

Amount fields are in the lowest currency value unless otherwise specified. For transactions in dollars, the amounts are in pennies. Amount fields always contain positive or absolute values.

1.2 Field Descriptions

1.2.1 Payment Types

Worldpay defines payment types as Credit, Debit, EBT, Fleet, and Prepaid. The transaction codes specific to each payment type determine the transaction types.

1.2.2 Terminal Identification Field

The terminal identification field comprises a 15 byte numeric merchant number, an eight byte numeric terminal number, and a one byte numeric check digit for a 24 byte total. Worldpay assigns the merchant number, terminal number, and check digit.

Table 1-1 shows an example of MID 542929001000041001177048.

TABLE 1-1 MID Example

Name	Value
Merchant Number	542929001000041
Terminal Number	00117704
Check Digit	8

NOTE: Versions prior to Version 5 must still support the 22 character terminal identification field with a 15 byte merchant number, a six byte terminal number, and a one byte check digit.

1.2.3 Device Identifier Field

The Device Identifier field is a 1-byte alphanumeric device identification number that follows the Terminal Identification field. It is a unique alphanumeric character based on the terminal's logical address in respect to the controller.

1.2.4 Transaction Date and Time Field

Format the local transaction date using a CCYYMMDD format, where CC is the two digit century, YY is the two digit year, MM is the two digit month, and DD is the two digit day.

Format the local transaction time using an HHMMSS format, where HH is the two digit hour, MM is the two digit minutes, and SS is the two digit seconds. The timestamp on an original transaction should occur within three minutes (local time) of the official US time. See time.gov for the official time.

Worldpay loads these two values into the TREQ fields, Local Transaction Date and Local Transaction Time. A Completion transaction must match the time and date stamp given on the preauthorization transaction. A Void transaction must match the time and date stamp of the voided transaction.

1.2.5 Batch Numbers Field

The terminal application generates batch numbers when a transaction opens a new batch/shift or when the merchant operator initiates a Shift Close or Day Close on an empty batch.

Format the Batch Numbers field using a YYYYMMDDNNN format, where YYYY is the four digit year, MM is the two digit month, DD is the two digit day, and NNN is the three digit count.

Batch numbers are based on the date they are opened and a three digit batch/shift count. Even when spanning multiple calendar days, the batch number does not change until a transaction opens a new batch or shift.

As a fraud prevention feature, the batch count must increment to 999 independent of the date. The batch count then increments to 001.

1.2.6 Transaction Sequence Numbers Field

The terminal application generates transaction sequence numbers. They are a fixed-length numeric field that have a starting value of 0001 and should increment by 1 for each approved or denied transaction.

The Transaction Sequence Number is the sequence number that appears on receipts and reports. Completion requests and voids should use the same sequence number sent in the preauthorization or sale request. This number rolls over to the starting value after 9999.

1.2.7 Message Sequence Numbers Field

The terminal application generates the Message Sequence Numbers field. It is a fixed-length numeric field. The terminal application should generate a unique Message Sequence Number field for each transaction request sent to the host computer regardless of the outcome of the transaction. This number rolls over to the starting value after 9999.

1.2.8 Entry Method Field

The Entry Method field describes the origin of the track data, which is one of the following methods: swiped (from terminal or pump), radio frequency read, or manual-entry.

1.2.9 Processing Mode Field

The Processing Mode field indicates whether the terminal is in Host Capture or Hybrid mode. The preferred mode is Hybrid in which the terminal will upload transactions for an out of balance batch.

1.2.10 Request Type Field

The Request Type field indicates whether the Detail Transaction sent to the Worldpay Host should be sent for authorization and posting to the merchant account. If the field's value is 0, the transaction is an original transaction and available for authorization and processing. If the field's value is 1, the transaction is a resubmittal and it is not available for authorization but only for posting.

1.2.11 Hot Pump Function

The Hot Pump function allows the pump mechanism to begin dispensing fuel before the host returns the authorization response. If the host's response is a decline, the pump should immediately terminate fuel dispensing and send the cardholder inside for payment. Turning on and off Hot Pump at the site can be accomplished by the merchant operator or set by a PDL parameter. In the Worldpay Host PDL, Hot Pump is a parameter that is optional depending on the card type. You transmit it to the terminal in a terminal configuration update message. See Update Terminal Configuration Request on page 93 and Update Terminal Configuration Response on page 94 for more information.

1.2.12 BIN Range Update - Manual Entry of BINs

This function lets the POS update a BIN Range that requires a BIN prefix of 12 digits. On the Update Card Ranges Response, the Card Range Update Data field for ranges allows eight characters for the first and final BIN Number in a range. The Card Ranges Response applies only to Credit, Prepaid, and Fleet ranges. The POS should provide a Configuration Menu function that let you update a range from eight characters to twelve characters.

This is not a requirement as of the publication of this document. See Update Card Ranges Request and Update Card Ranges Response for more information.

1.2.13 Offline Stand In Function

The Offline Stand In function lets you perform offline authorizations when the POS cannot communicate with the Worldpay host. Once the POS establishes communication with the Worldpay host again, the POS sends all stored transactions to the Worldpay host. It is the customer's decision to use Offline Stand In and accepts it as a risk of doing business.

The POS can store a maximum number of 200 stand in transactions. After that, the POS must not process additional transactions as Stand In. When the POS is in Stand In mode for an extended period, the POS prompts the merchant operator to contact the Worldpay Help Desk.

Once a terminal reestablishes communications with the host, newly initiated transactions should take priority over the transmission of transactions approved locally. While observing this prioritization, locally approved transactions should be submitted to the host in the order that they were originally created (first in, first out).

> **NOTE:** A terminal can have only two batches open at any one point in time. If a terminal exceeds this limit, transactions submitted that are not in the two oldest batches receive a decline with an invalid batch response. Number must be numeric values.

When the POS returns to Live Mode, it should not send the next Stand In transaction to the host until it receives a valid host response to the current Stand In transaction.

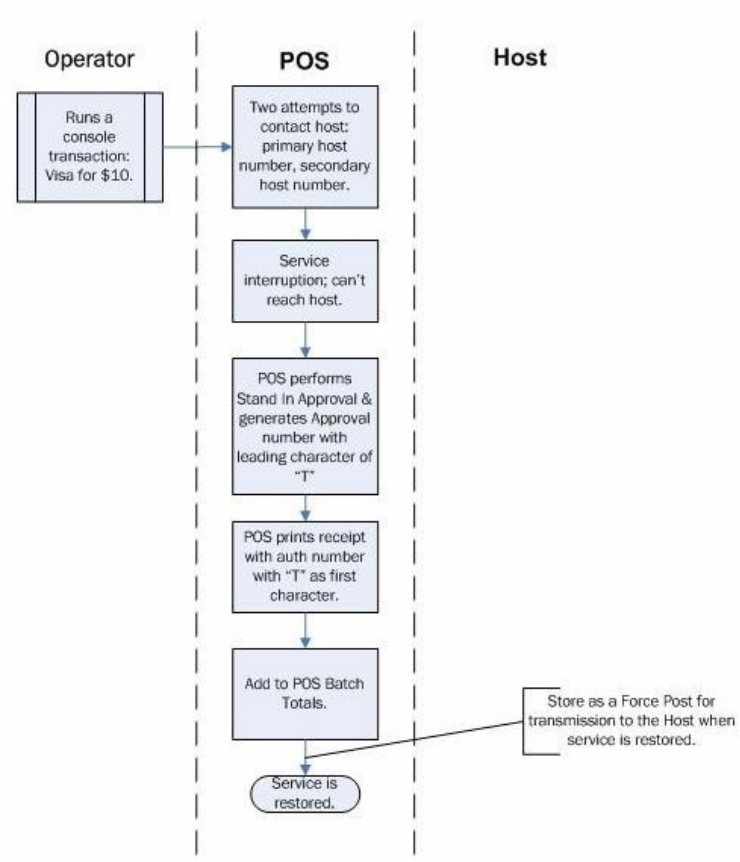
Normally, Offline Stand In is set to OFF for all card types in the Worldpay parameter download file. In the Worldpay Host PDL, Offline Stand In and Offline Stand In Amounts are parameters that are optional by card type and are transmitted to the terminal in the Terminal Configuration Update Message. See Update Terminal Configuration Request and Update Terminal Configuration Response for more information.

Stand In is never valid for Debit, EBT or Prepaid cards. You can enable Stand In processing during the configuration of the Point of Sale.

Figure 1-1 assumes the following:

- The POS is a dial system.
- The POS has the Offline Stand In flag for Visa set to **Y** (Yes).
- The POS has the Offline Stand In Limit for Visa set to $20.00.

FIGURE 1-1 Offline Stand In Processing User Case



1.2.14 Hybrid Batch Processing

Hybrid batch processing, the method of settling a day's processing, functions as a combination of Host and Terminal Capture. The POS must maintain a shadow file of transactions that have been processed to the Worldpay Host. These shadow detail records must contain all the information that was originally sent to the Host and received in the response, including the Authorization Number and Retrieval Data, except the complete Track Data which the POS cannot store.

In Hybrid Batch mode, all records sent to the host will have a Processing Mode field set to 1 indicating Hybrid Batch.

You can process batches to the Worldpay Host at any time with one exception. The POS receives the Response Literal of `PLEASE TRY LATER` for this one exception. This occurs between 03:45 AM and 04:02 AM Eastern Time. If the POS receives this Response Literal, it should wait twenty minutes before

retrying the Batch Settlement. This seventeen minute window is the only time that the Worldpay host does not accept batches.

The POS can close its batch for several different reasons including Batch Limit auto close, merchant operator initiated shift close, merchant operator initiated end of day close, and automated End of Day (EOD) Close. When the POS is set for hybrid mode, any function that results in a batch close will require the POS to do a hybrid settlement. The POS will close any open Batch and send totals to the Worldpay Host. If the totals from the POS Batch Totals match the Host Totals for the batch, the Worldpay Host posts the transactions recorded at the host. If the totals matched and the POS has completed its batch close process, the POS will delete the detail records within the POS.

If the totals do NOT match, the POS then functions in a Terminal Capture mode, and sends all of its detail records from the shadow file to the Worldpay Host. The Request Type fields for all the detail records in the uploading batch are set to 1 indicating that this is a Re-submittal for Hybrid Upload. Provided the POS generated Header and Trailer records have totals that match the count and amount of the detail records sent up to the Host, the Host will post what the POS sent and send the POS a `BATCH CLOSED` Response Literal in the Hybrid Batch Upload Response (Trailer). After successfully completing the upload and receiving the Host `BATCH CLOSED` message, the POS will delete the detail records it has.

The Worldpay host will tally all of the transaction detail records sent by the POS. If the POS Header and Trailer record totals don't match the total of the detail records sent up, the Worldpay Host will respond with an `OUT OF BALANCE` Response Literal in the Hybrid Batch Upload Response (Trailer). If the batch is still out-of-balance after three attempted uploads, the Worldpay Host will post the original Host transactions that it has. The POS will then use the POS Totals to print a report used by the merchant operator to perform an off-line reconciliation. The report prints the `OUT OF BALANCE` message and prints the POS Totals and the Host Totals. With the printed report, the merchant operator may perform an offline reconciliation.

The POS tries to upload the batch three times. If they are unsuccessful, when the POS sends up a fourth attempt it will receive `BTCH PREV CLOSED` Response Literal on the Hybrid Batch Upload Response (Header Packet). The Worldpay Host closes the Batch after three unsuccessful attempts. The Batch is marked closed by the Worldpay host, and the Worldpay host will post totals accumulated by the Worldpay host. The Worldpay Host will compare the Batch/Shift Number in the Hybrid Batch Upload Request (Header Packet) and see that the matching Batch Number is marked Closed. This is what triggered `BTCH PREV CLOSED` response to the POS. This will also allow the POS to know that its batch has been processed at the host and the POS Batch must be manually reconciled and deleted. The POS batch may now be deleted after the printing of the batch reports. The POS increments its Batch Number.

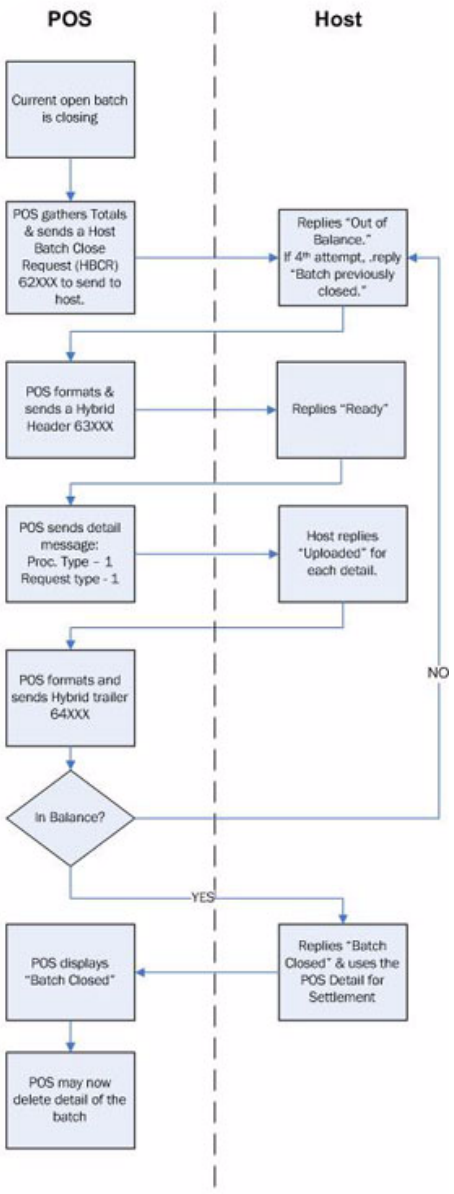
For additional information, see the following:

- Hybrid Batch Upload Request (Header Packet)
- Hybrid Batch Upload Response (Header Packet)
- Hybrid Batch Upload Request (Trailer Packet)
- Hybrid Batch Upload Response (Trailer Packet)

Figure 1-2 assumes the following:

- The Host and the POS totals do not match.
- There are 99 transactions.

FIGURE 1-2 Hybrid Upload User Case



1.2.15 Information Update Message

The Information Update message (Transaction Code 38 for Fleet or Transaction Code 19 for Credit on the TREQ) is used to send up additional information in the product data and customer data fields when the normal transaction flow does not provide for some information to be sent to the host.

There are two Fleet Card scenarios that use the Information Update message. These include the Fuelman Customer Number Prompt and Fleet Inside Partial Approval Processing.

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1.2.15.1 Fuelman Customer Number Prompt

The Fuelman cards which can request an additional customer prompt on an inside sale or return, would send this message to the host with all of the product data and customer prompts/information. A pump pre-auth/completion pair of transactions would have the additional prompt in the customer data field of the completion message. For Fleet Information Update messages sent to the Worldpay Host, the POS should use the Transaction Code 38. See Sample Administrative Request/Response Packets.

When the POS received the TRSP from the Worldpay Host, it interrogates the Transaction Type Specific data field, examining the Credit/Fleet Results Codes.

If Byte 3, Additional Cardholder Prompts is set to 1 for Customer Number, the POS must prompt for Customer Number and build a Customer Data field with the entered Customer Number on the Information Update Message. For this Customer Data field, use Code 8 for Purchase Order Number. See Appendix A, "Card Data and Product Information Codes" for more information.

If Byte 6, Purchase Card Indicator is set to B, R, or S, Integrated POS moves the already calculated Sales Tax Amount to the Product Information field, using Product Code 950 and the entered Sales Tax Amount on the Information Update Message, even if it is zero.

If Byte 6, Purchase Card Indicator is set to B, R, or S, Stand Alone POS must prompt for the Sales Tax Amount, if the Tax information is not already stored, and build a Product Information field, using Product Code 950 and the entered Sales Tax Amount on the Information Update Message, even if it is zero.

After sending the Information Update Message to the Worldpay Host, the POS must store the data sent to the host until a successful batch close. If the POS must perform a Hybrid Batch Upload, the Customer Data Field with the Customer Number, and/or the Product Information field with the Sales Tax information must be sent up on the Worldpay Host on the detail transactions sent up as a part of the Hybrid Upload. Simply put the additional information gathered is added to the original transaction and send to the Host on the upload.

The Track Data field is not required on these messages, but the header information-the Total Amount field should be the same as for the original transaction. Thereafter, only the Product Information and Customer Data fields are required. These should only be original requests. If the batch is uploaded, the information should be in the re-submitted transaction.

The response will return a 0000 action code and a response literal of RECEIVED, if no errors were encountered when parsing this message.

1.2.15.2 Fleet Inside Partial Approval Processing

Fleet Cards may return a partial approval, i.e. a cardholder wished to purchase a $100.00 item but the Fleet Card Issuer approves $75.00. At that time, the POS must send an Information Update Message to the host. The POS must send the updated Customer/Product information to the Host to reflect the split tender, using the Transaction Code 38.

When the POS receives the TRSP from the Worldpay host, it interrogated the Partially Approved Transactions Flag field. If this field is equal to 1, the amount is a partial approval. The transaction has been approved for the amount returned in the Total Amount field. The POS then subtracts the Partial Amount authorized from the original Total Amount requested. This remainder is the dollar amount the POS must acquire to complete the purchase.

The POS builds the Information Update Message using the Partial Amount authorized as the total amount of the transaction. The POS uses the same Time Stamp, Transactions Sequence Number, Authorization Number, Retrieval Data and the same PAN and Expiration Date. The POS does not retain the full Track Data for this transaction. Only the PAN and Expiration Date is sent in the PAN=EXPIR DATE format. The

POS builds the product data using the same detail as the original transaction and adds a new Product Code - 913, indicating that this is a split tender transaction. The POS loads the remainder amount to the value of Product Code 913. The Information Update transaction is then immediately sent to the Host.

The remainder is also the dollar amount the POS must acquire to complete the purchase. The POS must then give the operator the ability to do a split tender. If the cardholder agrees to the split tender to complete the sale, the operator will ask for a second form of payment. The operator may accept cash or any form of payment to satisfy the full amount of the original transaction.

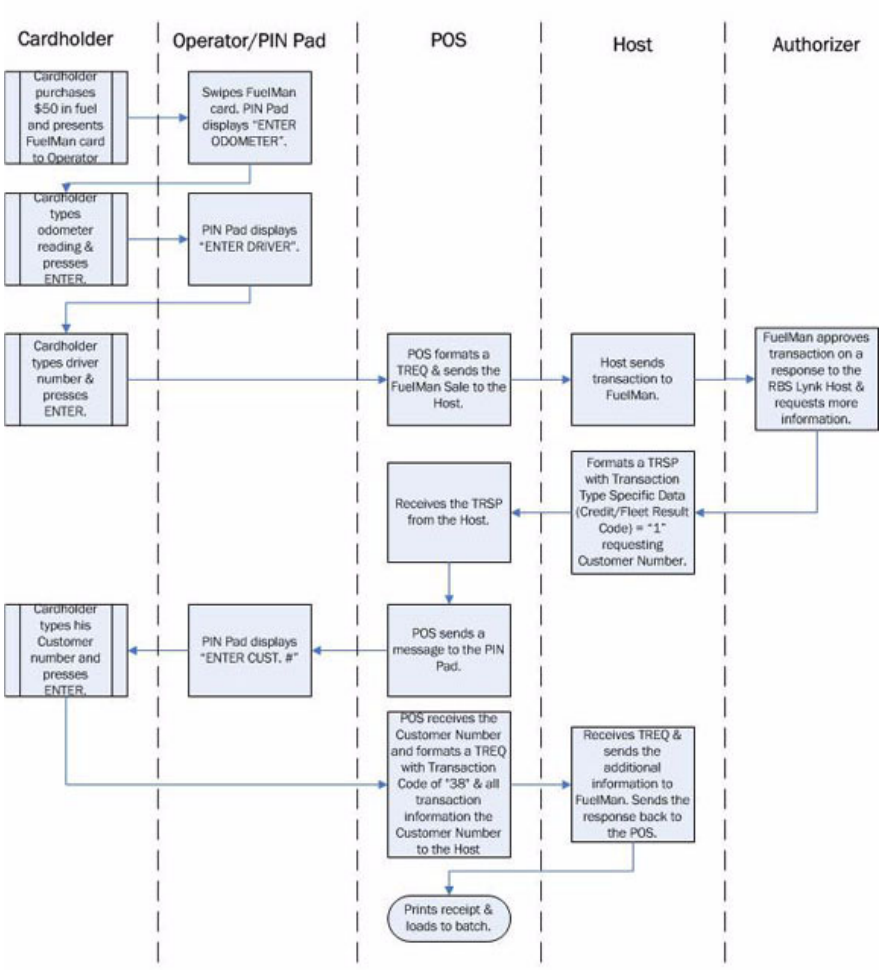
If the cardholder does not want to provide a second form of payment to satisfy the original amount, then the POS must run a void transaction of the updated transaction that has been sent to the host. The void should be done automatically after the cardholder declines to provide a second form of payment. The POS must follow the rules for void processing following the matching criteria. (See *Void* in the Glossary.) For more information, see Transaction Request Message (TREQ).

1.2.15.3 Information Update Message User Case

Figure 1-3 assumes the following:

- The POS is a dial system.
- The POS is the Inside Controller.
- The Customer accepts the FuelMan Card.
- The transaction is run inside.

FIGURE 1-3 Information Update Message User Case



1.2.16 Address Verification

Address Verification (AVS) is a fraud deterrent. It can be configured-the Worldpay PDL or as a site setting. AVS is used to deter the use of fraudulent Credit Cards from being used. Most often, when card numbers are stolen and fraudulent cards are manufactured, the users of the fraudulent cards do not have access to the billing ZIP Code of the cardholder.

The AVS data used is the billing ZIP Code of the cardholder. This data can be included for any credit card transaction. This processing is not currently available for fleet, debit, or EBT cards.

The ZIP Code (either 5 or 9 numeric characters) uses code E and is placed in the Customer Data field on the TREQ sent to the host.

Activating AVS processing and prompting must be configured by card type and entry method (keyed, swiped, outside, inside, all, none).

1.2.16.1 AVS Prompting

The options are for AVS prompting are:

- **1** - Inside Manual/ Outside Off
- **2** - Inside Swipe/ Outside Off
- **3** - Inside Both/ Outside Off
- **4** - Inside Manual/ Outside Swiped
- **5** - Inside Swipe/ Outside Swiped
- **6** - Inside Both/ Outside Swiped
- **7** - Inside Off/ Outside Swiped
- **8** - Inside Off/ Outside Off

See Update Terminal Configuration Request and Update Terminal Configuration Response for more information.

The response for the AVS check is the first character of the Transaction-Type Specific Data, redefined as the Credit/Fleet Result Code field in the transaction response (AVS Result Code field).

If the transaction is declined by the issuer, the AVS Result Code field does not need to be validated. The POS should continue with the normal denial transaction processing.

When a POS transaction requires AVS, the prompts at the POS require the Cardholder to enter the ZIP Code. On approved transactions with AVS, the AVS Result Code field on the TRSP must be checked. If the AVS Result Code field indicates a match on the sent ZIP Code, or that AVS is unavailable for that card, the transaction should be considered approved and continue with normal processing.

1.2.16.2 AVS Enabled Outside

If AVS is enabled for Outside, the sequence will be as follows:

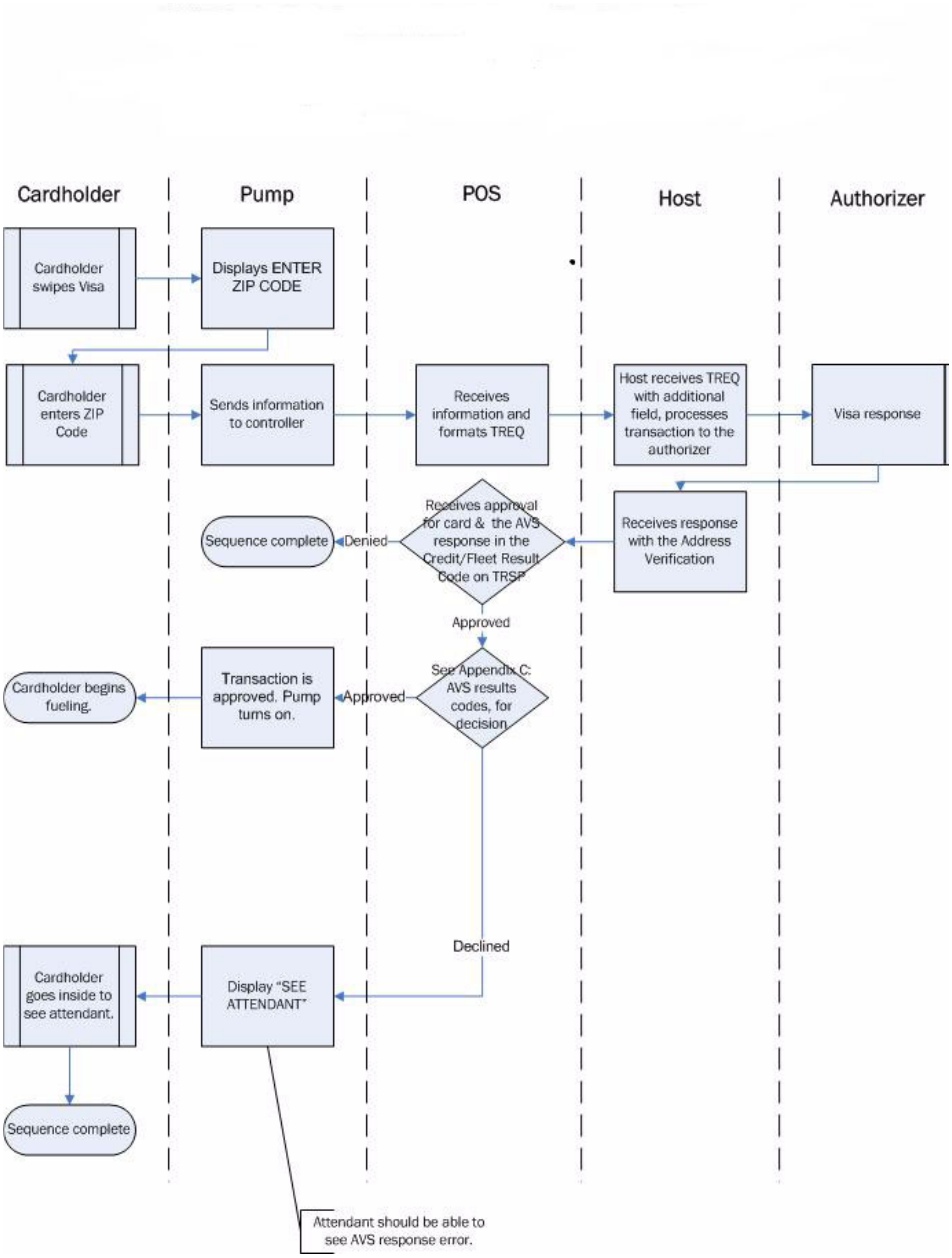
1. The Cardholder swipes the Card, the display reads `ENTER ZIP CODE.`
2. The Cardholder enters the Billing ZIP Code on the Keypad and hits Enter.
3. The Dispenser sends the information to the Controller. The Controller formats a TREQ for the Pre Auth and loads the AVS information and sends to the Worldpay Host for processing.
4. If there is an AVS mismatch of ZIP Code on an outside pre-authorization transaction, the display message at the pump sends the cardholder inside with `SEE ATTENDANT` and then `AVS/CVV FAILED`. The pump does no other processing.

1.2.16.3 AVS Outside Transaction Pay at the Pump User Case

Figure 1-4 assumes the following:

- The POS is a dial system.
- The POS is an Integrate POS with pumps communicating with the Inside Controller.
- AVS Prompting for Visa is set to 4 (Inside/Outside, Zip Only).

FIGURE 1-4 AVS Outside Transaction Pay at the Pump User Case



1.2.16.4 AVS Enabled Inside

If AVS is enabled for Inside, the sequence will be as follows:

1. The merchant operator swipes the Card, the PIN Pad display reads `ENTER ZIP CODE`.
2. The cardholder enters the Billing ZIP Code on the PIN Pad and presses Enter.
3. The controller formats a TREQ for the transaction and loads the AVS information and sends to the Worldpay Host for processing.

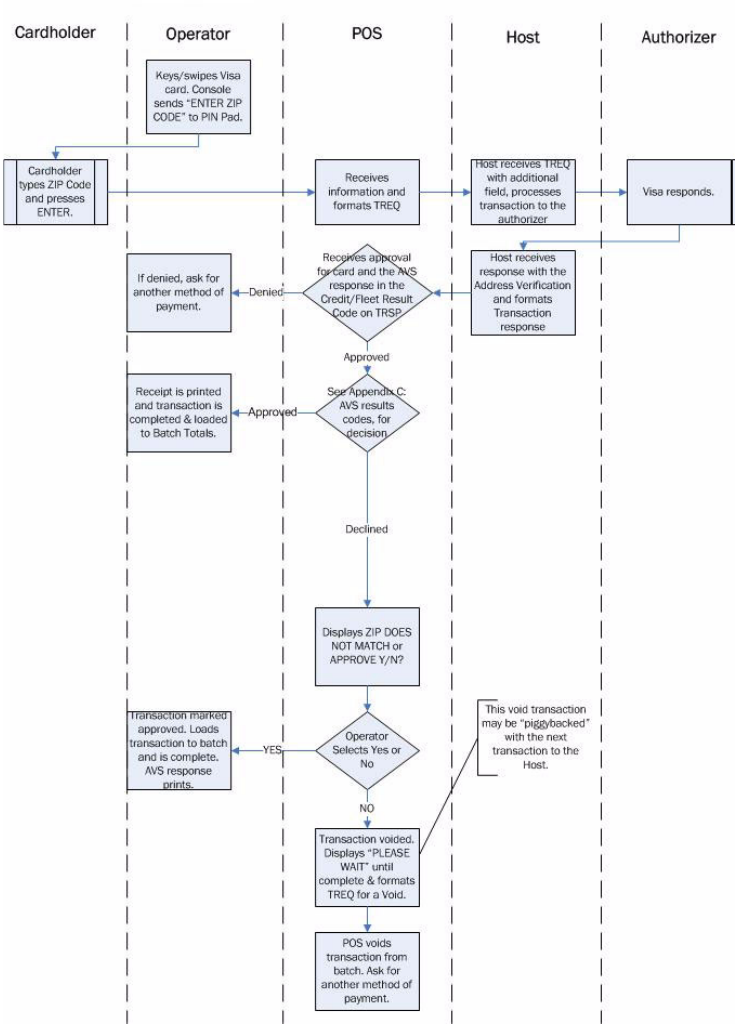
4. If the AVS ZIP Code did not match, the display reads `AVS FAILED` and a prompt to accept or deny the transaction `ACCEPT Y/N?`. If the clerk chooses to deny the Inside transaction based on the AVS error, a void for that approved transaction is automatically sent to the host. If the clerk chooses to approve the transaction, the receipt should print. It will be up to the store's policy to approve or deny the transaction based on the AVS response.
5. The `AVS FAILED- ACCEPT Y/N?` prompt may also be disabled via site setting or PDL so that an AVS mismatch may be declined by the issuer, but will not impact the transaction flow.

1.2.16.5 AVS Inside Console Transaction User Case

Figure 1-5 assumes the following:

- The POS is a dial system.
- The POS is an Integrated POS with pumps communicating with the Inside Controller.
- AVS Prompting for Visa is set to 4 (Inside/Outside, ZIP only).

FIGURE 1-5 AVS Inside Console Transaction User Case



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1.2.16.6 Mismatch Prompting

The Mismatch Prompting AVS field is sent in the Update Merchant Configuration Response 73100 and should be configured as a site setting. See Update Merchant Configuration Response for more information. On Inside transactions only, this parameter field will determine whether the POS should ignore AVS mismatch responses or send the display message to the clerk.

- If the parameter is set to 1 (Yes), the POS will perform the additional AVS display steps and the AVS Result is always printed on the receipt.
- If the parameter is set to 2 (No), the POS will not perform the additional AVS display steps. No AVS messages will display on the controller/work station and the controller will not interrogate the AVS Result Code.

1.2.17 Cardholder Verification

Cardholder Validation Value 2 (CVV2) data can be input by the merchant operator on manually-entered credit transactions. The data is found printed on the back or front of the card, following the account number. The value is 3-4 numeric digits and is placed in the Customer Data field using code V. This data is not valid for fleet, debit, prepaid or EBT cards. The response for the CVV2 check is the second character of the Transaction-Type Specific Data, redefined as Credit/Fleet Results Code (CVV2 Result Code field). Prompting should be configured by card type.

If the transaction is declined by the network, the CVV2 Result Code field does not need to be checked; continue with the normal denial transaction processing.

When a transaction sent with CVV2 Data is approved, the CVV2 Result Code field should be checked by the POS. If the CVV2 Result Code field indicates a match of the sent data (code =M) or that CVV2 is unavailable for that card (code P, U or blank), the transaction should be considered approved by the POS and continue with normal processing.

On an approved transaction if the response contains a CVV2 Results Code field = N indicating a CVV2 mismatch and the Mismatch Prompting CVV2 parameter is set to Yes, the error should display to the clerk CVV FAILED with a prompt to accept or deny the transaction ACCEPT Y/N? If the clerk chooses to deny the transaction based on the CVV2 error, a void for that approved transaction must be sent to the host. If the clerk chooses to approve the transaction, the receipt must print. It will be up to the store's policy to approve or deny the transaction based on the CVV2 response.

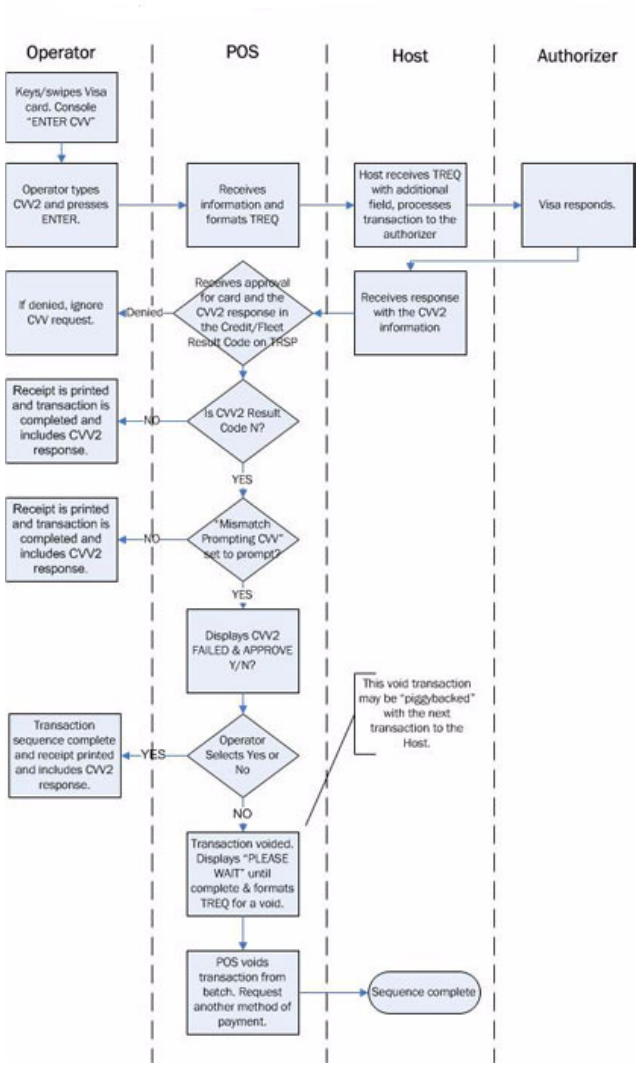
A site parameter/PDL setting indicates whether to automatically bypass the CVV Failed- Accept Y/N prompt so that the card issuer may decline a transaction based on CVV2 mismatch, but the POS will handle as an approval.

1.2.17.1 CVV2 Inside Console Transaction Use Case

Figure 1-6 assumes the following:

- The POS is a dial system.
- The POS is an Integrated POS with pumps communicating with the Inside Controller.
- CVV Prompting for Visa is set to 1 or 3 for Outside and Inside/Outside.

FIGURE 1-6 CVV2 Inside Console Transaction Use Case



1.2.17.2 Mismatch Prompting

The Mismatch Prompting CVV2 parameter field is sent in the Update Merchant Terminal Response 73100 message or as a site setting. See Update Terminal Configuration Response for more information. This field will determine the processing.

- If the parameter is set to 1 (Yes), the POS will perform and display the additional CVV2 mismatch messages as described in the case above.
- If the parameter is set to 2 (No), the POS will not display the additional CVV2 mismatch messages. No CVV2 messages will display on the controller/work station and the controller will not interrogate the CVV2 result code. The POS will approve any approved transactions with a CVV2 mismatch.

1.2.18 Batch Limit Auto Close/batch Limit Setting

The POS must have the ability to maintain a reasonable number of transactions in its memory. The Batch Size is a Host Controlled PDL Parameter. Point of Sale applications that accept the Worldpay Parameter Download must be able to accept a parameter value giving the maximum batch size.

When the maximum batch size is reached, the Point of Sale must perform an automatic batch limit close. This is done in the background and is transparent to the merchant operator. There is no merchant operator intervention. While closing the batch, the POS will be able to start a second batch and load transactions to it. There should be no interruption to the POS or pumps ability to operate normally and dispense fuel/process transactions during this period. For Stand Alone POS, the batch may be as large as POS memory allows.

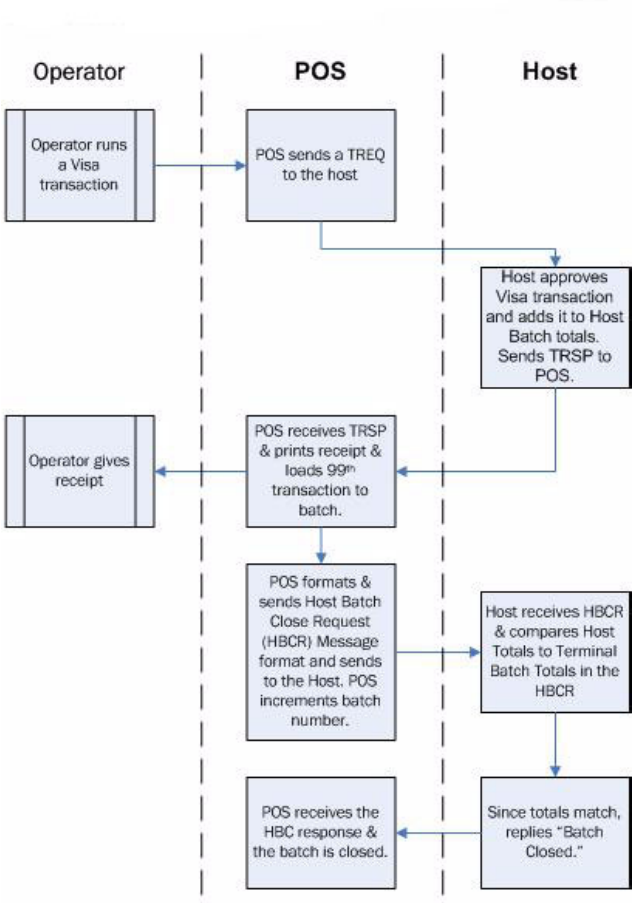
For more information, see Update Merchant Configuration Response.

1.2.19 Automatic Batch Close User Case

Figure 1-7 assumes the following:

- The PDL Batch Size Auto Close value is 99.
- The totals at the POS and the RBS Lynk Host match.

FIGURE 1-7 Automatic Batch Close User Case



1.2.20 End of Day Close Processing

Three parameters, the EOD Posting Options, control if and how a customer's POS processes with a behind the scenes EOD function. The POS devices that process on the Worldpay Network send up batches of transactions during a day. A site may close one batch or many batches during a day-either-merchant operator Initiated manual shift closes or-automatic 99 transaction batches. These may be held by the Worldpay host pending EOD close. When the merchant operator closes a day using an EOD close, the POS will close the current batch that it has open and forward the transactions in that batch to the Worldpay Host. If there are no transactions in the current batch, the POS must still send a Host Batch Close Request transaction requesting a batch close for a zero amount with the Administrative Code of 62400 for Host Day Close (Post), closing the batch. The POS will then balance this last batch against the Worldpay Host totals.

A day is defined as the period between EOD closes. If the POS does not perform an EOD for several calendar days, and the customer is set up for EOD processing, Worldpay will hold funds until an EOD is performed. EOD reports should reflect all transaction data that has occurred since the last EOD- not just the most recent batch.

The EOD Posting Options can be set as a parameter in the parameter download file, or a site setting. It will determine how the POS processes the EOD. See Update Merchant Configuration for more information about the options.

The first parameter in the EOD Posting Option controls whether Batches will be posted when received.

1.2.21 EOD Host Post

This is a parameter in the EOD Posting Option section that communicates to the Worldpay host whether Worldpay should post individual shifts and batches to the customer after they have been uploaded or wait for an EOD. The POS will operate the same way regardless of which EOD post setting or administrative code is used.

- **1** - Worldpay posts all batches associated with the shift close.
- **2** - Worldpay holds all batches and shifts and posts at day close.
- **3** - Worldpay posts all batches as independent of shift and day.

The Worldpay default value for the EOD Host Post parameter is **2**.

1.2.22 Clerk Control Warning

The second parameter in the EOD Posting Option controls how and if the POS will use the EOD Close. This parameter is the Clerk Control Warning (CCW). It is an informational setting. Its values are:

- **1** - Display EOD request prompt at HHMM
- **3** - EOD close prompting and performance disabled

The Worldpay default value for the Clerk Control Warning parameter is **3**.

1.2.23 Batch Size Auto-Close

The third parameter in the EOD Posting Option is the Batch Size Auto-Close.

It controls the size of the batch that the POS will allow. This is a Host controlled parameter. For this parameter, the Worldpay default is 99 transactions. If the site has a value of 99 in this Parameter, and it has run 99 transactions, the POS will generate an Auto Close of the batch.

The EOD Close Parameter in the parameter download file or site setting will determine how the POS processes the EOD and whether it will process an End of Day (EOD) Close of the Day's Processing. The options are listed in the PDL Update Merchant Configuration section of this specification in the EOD Posting Options entry.

The Clerk Control Warning EOD Close Parameter only notifies the merchant operator.

For example, the CCW EOD Close Parameter may be 12300, with the 1 indicating this is the informational option to remind the merchant operator to perform the End of Day and 2300 indicating that the EOD should be run at 11 PM.

This option is informational and is used to influence the merchant operator to close the day's processing. The time stamp sent in this Parameter will be the time that the site should close its day's processing. When the POS is within two hours of this End of Day time, it will have an alternating display from the Idle Prompt to Close Batch Soon. When the POS has reached the End of Day Time, it will have an alternating display from the idle prompt to Must Close Batch. The POS will beep every five minutes during the CCW. After the CCW time has passed, in our example 2300 the POS returns to the idle prompt and no further notification is displayed to the merchant operator.

CCW batch close warning should not interfere with POS processing. POS should give the merchant operator the ability to temporarily stop notification message (15 minutes) before the message re-appears. IE: Option to close later makes prompt stop for 15 minutes.

The EOD Close Parameter may be marked as Disable Automatic EOD. If the EOD Close Parameter is disabled, there is no notification to close the day's processing given to the merchant operator.

All Shift and EOD closes are done by merchant operator. If the Customer processes shifts, then the POS must allow for a Shift function in addition to an End of Day function.

The Shift function will close an open batch. This allows the transactions in that batch to be associated with the shift being closed. The shift report may include a single batch or multiple batches. Based on the EOD Host Post flag, the batches within the shift may be posted or held until an End of Day is processed.

1.2.24 Merchant Operator-initiated Shift And Day Close with an Empty Batch

If there are no transactions present when the merchant operator performs a Shift or Day Close, the POS Application still sends a Batch Close message for every merchant operator Initiated Shift or Day Close.

The POS application normally increments the batch number when it runs its first transaction. For an Empty Batch, the batch number must be incremented prior to sending up the Host Batch Close Request message.

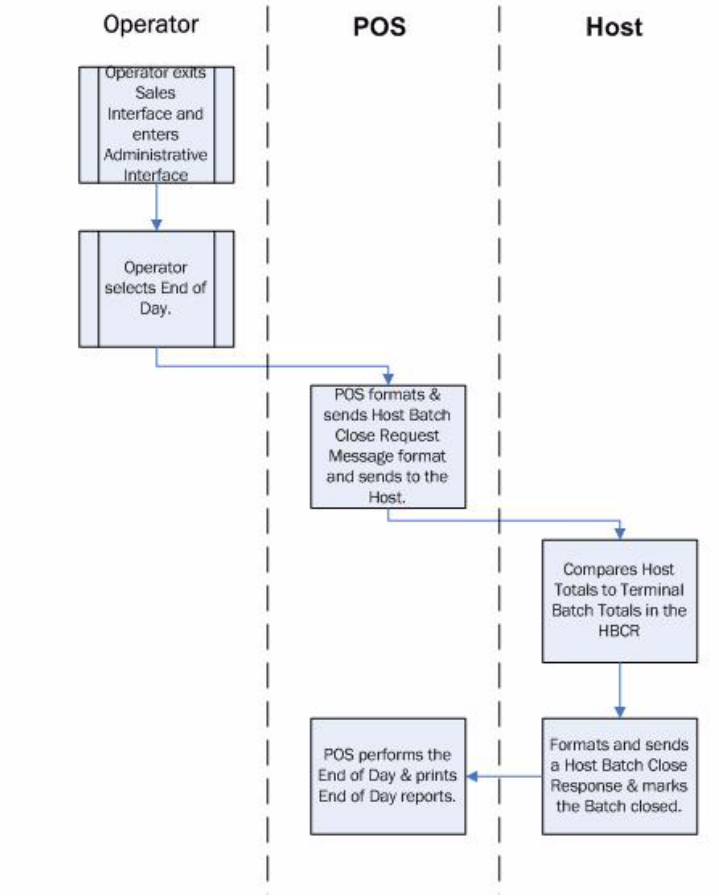
This covers the Host Batch Close Requests with Administrative Code 62100 for Shift Close (merchant operator Initiated, Post) and 62200 for Shift Close (merchant operator Initiated, do not Post) and Host Batch Close Requests with Administrative Code 62400 for Host Day Close (Post).

1.2.25 Operator Close User Case

Figure 1-8 assumes the following:

- The PDL Batch Size Auto Close value is 99.
- The totals at the POS and the RBS Lynk Host match.

FIGURE 1-8 Operator Close User Case



1.2.26 Product Codes and Price Look Ups

The POS device provides the ability to associate product codes with merchandise purchased and provides the ability to associate a Price Look Up (PLU) with each product code.

Worldpay uses the latest Conexxus Product Codes. The POS must provide the site with the ability to use all 999 of the Conexxus Product Codes. These three digit codes are divided into logical product groups. See Appendix A, "Card Data and Product Information Codes".

The three digit product codes are used for tracking what is being sold at the site. Additionally, they are used by Fleet Card issuers to track what products are purchased with Fleet Cards.

The POS may use a subset of the PCATS Product Codes, indicating what fuels and products the site sells. The POS must allow for a site controlled function to enter Product Codes as products are added or deleted.

The POS device provides the ability to associate a PLU with each Product Code. The POS must allow for a site controlled function to enter units (for example, each, case, gallon) and price per unit for each PLU.

Both functions (Product Code Update and PLU Update) must be password protected.

1.2.27 Password Protection

The POS must have the ability to provide password protection for certain functions and processes. The POS provides levels of password protection. The POS must provide at least three levels of protection.

From highest to lowest the three levels are Administrator, Manager and merchant operator. The Administrator may perform all Administrator, Manager and merchant operator functions. The Manager may perform all Manager and merchant operator functions. The merchant operator may perform merchant operator level functions.

The Administrator level password allows access to updating the POS application, by either a Hardware or Software install or a download, and resetting passwords for Managers and merchant operators. The Manager level password allows the manager to perform the normal day to day operations associated with the C-Store or Service Station. The merchant operator level allows normal sign on and sign off and running of financial transactions, including sales and pre-authorizations.

The POS password protection template will vary from Customer to Customer. In general, certain functions will fall to the Manager level. Those will generally include running any Return or Void transactions.

1.2.28 Parameter Download for the Point of Sale and Site Controlled Settings

The POS device has various parameters or settings that control how the POS device operates. These settings can be simple as whether to allow Void transactions or not allow Void transactions or how AVS is handled across all card types.

For POS devices using Worldpay Stratus for PDL updates, Worldpay accomplishes the process using three different types of requests, which are sent to the Worldpay Host requesting updated information.

The request/response types are:

- Update Terminal Configuration Request on page 93 and Update Terminal Configuration Response on page 94
- Update Merchant Configuration Request on page 95 and Update Merchant Configuration Response on page 96
- Update Card Ranges Request on page 98 and Update Card Ranges Response on page 99

For POS devices using a separate Download System, such as the VeriFone Vericenter system, Worldpay accomplishes the process by requesting either a Partial Download (PDL) or a complete Application Download that includes a Partial Download (PDL).

The POS must allow default values to be loaded with the software. When the POS has a new application installed, or Application Version A is upgraded to Application Version B, the application will have various Parameter Values set as defaults. The Vendor must have the default values approved by Worldpay. The POS Vendor must allow these default values to loaded independent of the Worldpay parameter download when the Application is installed or upgraded. The Vendor must allow for multiple PDL shells to accommodate multiple Customers using the Application. The defaults for all card acceptance should be No - Not Accepted, when building shells.

The POS must have the functionality that allows the merchant operator to request a complete PDL from Stratus or a Partial Download (PDL) from a separate Download system. This would be located in the Configuration Menu. The POS Application must have a configuration menu as a part of its Administrative Menu or Manager Menu. The Configuration Menu has the Request a PDL or Request a Partial Download function. It will be password protected. When entering the function, the POS will prompt for Password, and then guide the user-the request. This will include requesting the Terminal Configuration Update, Merchant Configuration Update and Card Range Update from Worldpay Stratus or a Partial Download from the separate Download System.

The POS must have the functionality to process a PDL or Partial Download when it is informed of the need for PDL updates or Partial Download updates on the Host Batch Close Response packet returned from the Worldpay Host. In the Configuration Change Flag field, the POS receives a one character value telling it what portion(s) of the PDL from Stratus must be requested or if a Partial Download or Full Application Download from the separate Download System must be requested. If the Configuration Flag field has a value of zero, then no PDL changes are required and no PDL requests are made by the POS. If the Configuration Change Flag field has one of the following values, then the POS must request those portions of the Stratus PDL or separate Download System Partial or Full Download.

Table 1-2 lists the values you can send to Configuration Change Flag Field.

TABLE 1-2 Change Configuration Flag Field Values

Flag	Description
0	No configuration changes
1	Request Terminal Configuration update
2	Request Merchant Configuration update
3	Request Terminal and Merchant Configuration updates
4	Request Card Range update
5	Request Terminal Configuration and Card Range updates
6	Request Merchant Configuration and Card Range updates
7	Request Terminal, Merchant, and Card Range updates
P	Request Partial Download (PDL) from a separate Download System
C	Request Complete or Full Application Download from a separate Download System

All PDL or Partial Download processing must be done after the POS has closed out processing on a given batch. The PDL or Partial Download must be applied prior to running the first transaction in the next batch. For a single device Integrated POS, for example one controller and no work stations, it is allowable for the POS to be down while processing an merchant operator initiated PDL. The merchant operator must exit the normal Sales Screen and enter an Administrative Function to initiate the PDL. All PDLs or Partial Downloads, initiated by the Worldpay Host requesting the POS to perform the PDL or Partial Download, must be done in the background. The entire process of contacting the Worldpay Host, receiving the Terminal, Merchant and Card Range messages or parameter information from a separate Download System and then updating the POS Parameters with the Parameter information is automatic. If the POS is an Integrated POS, the updating is completely transparent to the merchant operator and should not interfere with the ability of site to dispense gas or run sales.

POS processing a full application download from a separate Download System receive a C in the Configuration Change Flag field on the Host Batch Close Response (HBCR). Additionally, they receive the version of the application to be downloaded and a time stamp indicating when the download should be done on the Host Batch Close Response. The Download Application Version field on the HBCR supplies the Download System identifier of the application to be downloaded. The POS should compare this value to the Application Version it currently has loaded. If they are the same, then the POS should ignore the request. If they are different, then the POS should perform the download. The Download Timestamp on the HBCR supplies the exact time that the POS should dial the Download System for the application download. If the Download Timestamp on the HBCR is equal to 8888 the POS should display the message Download Now to the merchant operator. The merchant operator can clear this message. It is the merchant operator's responsibility to process the download request.

The POS should attempt to connect to the Download System three times. If the Download System cannot be reached, the POS should display Dwnld Attempt Failed as the display message. If the Download System is reached, the POS then performs the application download and then the Partial Download for parameters. The POS then notifies the Worldpay Host that the download has been completed by sending notification to the Worldpay Host. See Update Notification Request on page 100.

The following defines the items returned to the POS on the PDL response packets. For specifics on where these fields are located on the transaction responses sent to the POS, see the following sections:

- Update Terminal Configuration Request on page 93 and Update Terminal Configuration Response on page 94
- Update Merchant Configuration Request on page 95 and Update Merchant Configuration Response on page 96
- Update Card Ranges Request on page 98 and Update Card Ranges Response on page 99

Review the three Response descriptions and note that several fields have an asterisk (*) indicating that the POS has nothing to change.

> **NOTE:** Fields with a value of zero require no changes. POS should use an existing POS value for these fields. If the field contains a 0, the POS should not change the value for that field. It should keep the value that is already present. If the field does not contain a 0, then the POS should update the parameter field with the value given on the PDL.

1.2.28.1 Update Terminal Configuration

These fields are applicable on a card type by card type basis.

Payment Type, Account Type and Accept Flag

Three one character fields describing the type of payment and whether it is accepted for Pump or Inside or Both.

Hot Pump Allowed

The POS Pay at the Pump option that allows the dispensing of fuel while the authorization is being processed. The Worldpay default is `2 = NO`.

Pre-Authorization Amount

The POS Pay at the Pump amount that is sent up on the authorization. For PrePay at the Pump transactions the DCR Cutoff Amount and Pre Auth Amount are usually the same. However, there are

exceptions. The one exception is the issuer mandated Visa/Mastercard $1.00 transaction on the Pre Auth Amount. With the Visa/Mastercard $1.00 transaction, the DCR Cutoff would be used to turn off the pump.

Offline Stand In

Worldpay can support Offline Stand In transaction capability. POS Vendor base functionality should be adapted to Worldpay's message formats. Enabling Offline Stand In should be controlled by the Worldpay host or with a Password Protected function.

Offline Stand In Amount

If the Customer chooses to accept the possibility of receiving a chargeback or a decline for approving a transaction when the Worldpay Host is not available, this field will contain the maximum dollar amount the Customer's POS will approve.

AVS Prompting

See Address Verification on page 11 for more information.

The possible combinations by card type are:

- **1** - Inside Manual/ Outside Off
- **2** - Inside Swipe/ Outside Off
- **3** - Inside Both/ Outside Off
- **4** - Inside Manual/ Outside Swiped
- **5** - Inside Swipe/ Outside Swiped
- **6** - Inside Both/ Outside Swiped
- **7** - Inside Off/ Outside Swiped
- **8** - Inside Off/ Outside Off

Card Validation Data (CVD)

See Cardholder Verification on page 15. The possible combinations by card type for CVV2 acceptance are:

- **1** - Accepted Inside Only
- **2** - Disable Prompting

Manual Transactions Enabled

Whether the Customer chooses to accept manually entered transactions inside at the controller or work station is controlled by this Parameter.

DCR Cut-off Amount

The Dispenser Card Reader (DCR) Cutoff Amount is the maximum amount that the pump will use to cut-off the amount of fuel being pumped. This value can be up to $9, 999.00 whole dollars as a part of the PDL and site setting. This amount can differ from the Pre Auth Amount sent on the Authorization. An example of this may be seen on the Visa and Mastercard transactions. While both the Visa and Mastercard Pre Auth Amounts will be set to $1, the DCR Cutoff Amount for Visa and Mastercard it will be $75.

When the $1.00 Pre-Auth Amount is approved and returned to the POS, the DCR Cutoff Amount is used to turn off the pump.

Floor Limit Enabled

The Customer may choose to accept the possibility of a Decline or a Charge Back for approving transactions for specific card types, without sending the transactions to the Worldpay Network for processing. With this feature, the POS approves the transaction without attempting to reach the Worldpay Host. The floor limit enabled transactions are loaded to the POS Batch. These are Ticket Only or Force Sales. They are sent to the Worldpay Host with the next connection to the host. They are sent on TREQs with the Transaction Code of 03 for Force Sale. Floor Limit transactions are allowed on Credit only, and not available for Debit, Fleet, EBT and Prepaid cards. The transactions have the first two positions of the Authorization Code equal to FL.

Floor Limit Amount

If the Customer chooses to accept the possibility of a chargeback or a decline for approving a transaction, without sending the transaction for approval to the Worldpay Host, this field will contain the dollar amount limit the Customer's POS will approve. The Worldpay default amount is zero.

Small Ticket Enabled

The Customer may choose to participate in Issuer small ticket programs. For this process functionality, a signature is not required on the Credit Card ticket produced on the Inside POS. The limits are established by the Customer. Small Ticket transactions are processed normally to the Worldpay Host.

Small Ticket Amount

This parameter gives the dollar amount that the Customer will allow for a no-signature receipt.

Debit First Prompt Enabled

This parameter allows the POS to prompt for PIN first on Pay at the Pump transactions for Debit, Visa and Mastercard. See Debit Prompting on page 36 for more information.

Card Issuer Referral Numbers

This parameter gives the telephone number that the merchant operator should call for soft declines. It must be displayed when soft decline messages, such as Call Center or Call for Authorization, are received by the POS. The number allows the merchant operator to call the Voice Authorization Center.

1.2.28.2 Update Merchant Configuration

Receipt Header Information

This parameter consists of up to four lines of receipt information. Each of the four lines may be up to 40 characters in length. See the sample receipts supplied. Receipt header information cannot be altered at the POS.

The content of the Receipt Header Information fields are:

- Merchant store name
- Merchant street address
- Merchant city

- Merchant state
- Merchant ZIP code
- Merchant store phone number

Primary Host Number and Secondary Host Number

These two parameter values are the phone numbers used to communicate with the Worldpay Host for Financial and Administrative transactions.

Processing Mode

This parameter determines the type of processing the POS will perform. Worldpay Hybrid is the method described in this specification and the method used for Petroleum processing with Worldpay.

Primary VSAT/IP address and Secondary VSAT/IP Address

These two parameter values are the addressing information for POS using satellite communication or IP communication with the Worldpay Host.

URL and Port Address

This parameter value is the addressing information when using an URL for communicating with the Worldpay Host via IP.

Miscellaneous Features

Table 1-3 lists parameters and how they control processing.

TABLE 1-3 Processing Parameters

Parameter	Processing Features
Enable Debit Prompting	Yes or No This determines whether the message `DEBIT Y/N?` displays when a cardholder swipes a card at the dispenser without first selecting a Method of Payment (MOP). If enabled, cards with an undefined bin range will receive the prompt `DEBIT Y/N?`.
Enable Return	Yes or N This determines whether Return transactions are allowed
Enable Voids	Yes or No This determines whether Void transactions are allowed
Enable Merchant and Journal Masking	Yes or No Enabling this parameter will ensure the Merchant copy and POS Journal Tape follows the account masking as the Cardholder receipts

TABLE 1-3 Processing Parameters

Parameter	Processing Features
Enable Check ID Prompting	Valid values are: • **1** - Yes • **2** - No When you enable this parameter, it only effects Inside Sales. The POS displays `Check ID` on Velocity soft declines.
Mismatch Prompting AVS/CVV2	Valid values are: • **1** - Yes • **2** - No When you enable this parameter, the POS processes the AVS or CVV2 results sent to it.
Process Partial Authorizations	Valid values are: • **1** - Yes • **2** - No When you enable this parameter, the POS can process partial authorizations on inside Credit transactions.
Reserved for Future Use	Zero fill this parameter.

EOD Posting Options

These parameters determine how the POS processes the EOD. In Table 3-14, "Update Merchant Configuration Response", see the description for End of Day (EOD) Posting Options field. For more information about end of day close processing, see End of Day Close Processing on page 18.

The first parameter in the EOD Posting Option controls whether batches will be posted when received.

EOD Host Post

This is a parameter in the EOD Posting Option section that communicates to the Worldpay host whether Worldpay should post individual shifts and batches to the customer after they have been uploaded or wait for an EOD. For more information about end of day close processing, see End of Day Close Processing on page 18.

- If the value is 1, then Worldpay will post all batches associated with the shift close
- If the value is 2, then Worldpay will hold all batches and shifts and post at day close
- If the value is 3, then Worldpay will close and post all batches independent of the shift and day

The Worldpay default value for the EOD Host Post parameter is 2.

TABLE 1-4 EOD Host Post

EOD Host Post Value	Auto close	Shift Close (merchant operator initiated)	Day Close (merchant operator initiated)
Batch Close			

TABLE 1-4 EOD Host Post

EOD Host Post Value	Auto close	Shift Close (merchant operator initiated)	Day Close (merchant operator initiated)
1Shift	62 300	62 100	62 400
2EOD	62 300	62 200	62 400
3Post All	62 500	62 100	62 400
Hybrid Upload Header			
1Shift	63 300	63 100	63 400
2EOD	63 300	63 200	63 400
3Post All	63 500	63 100	63 400
Hybrid Upload Trailer			
1Shift	64 300	64 100	64 400
2EOD	64 300	64 200	64 400
3Post Al	64 500	64 100	64 400

The second parameter in the EOD Posting Option controls how and if the POS will use the EOD Close.

- **1** - Display EOD request prompt at HHMM
- **3** - Automated EOD close prompting and performance disabled

The Worldpay default value for the Clerk Control Warning parameter is **3**.

The third parameter in the EOD Posting Option is the Batch Size Auto-Close. It controls the size of the batch that the POS will allow before the POS needs to do an auto-close. The value of this parameter will be determined by terminal type.

Download Phone Number

This parameter contains the phone number that the POS uses to request PDLs.

Site Advertising Lines

This parameter allows the Site POS to receive up to four 40-character advertising lines that will be printed at the bottom of each inside receipt. These may be seasonal or permanent or not used at all.

Master Cut-Off Amount

This parameter gives the absolute highest dollar amount that the POS can accept on a financial transaction. This value can be up to $9,999.99 as a part of the PDL or site setting. The master cut-off is a single amount that applies to all transactions both inside and outside and network or cash.

Update Card Ranges

This PDL transaction updates the ranges for the Cards that are available to the POS.

This Parameter shows the Account Category, the Account Type and the BIN Ranges for the individual cards. The beginning BIN Range and the ending BIN Range are eight characters in length.

See Appendix V, "Table Information".

Parameter Download User Case

Figure 1-9 assumes the following:

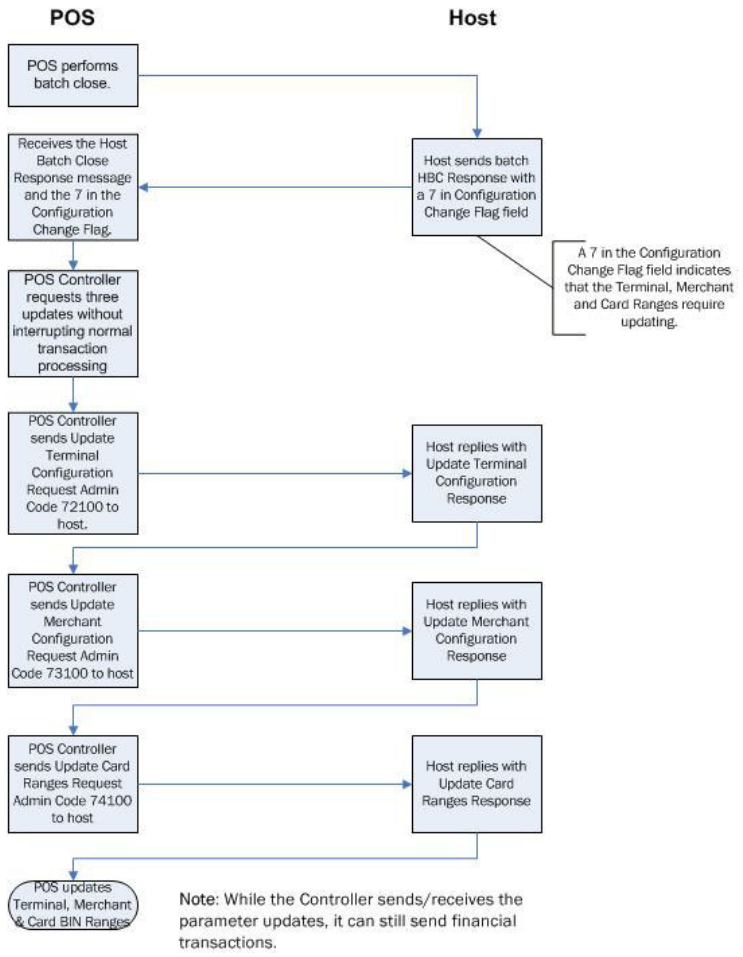
The POS is a Controller/Workstation.

POS Batch Closed in Balance.

POS needs a complete Parameter Download (PDL). The PDL will be Automatic and performed in the background by the POS.

The POS starts with the default values from the initial setup on the last PDL.

FIGURE 1-9 Parameter Download User Case



1.2.29 Site Specific Parameter Processing

Parameter settings can be changed at the site by a service technician or merchant operator-the administrative menu.

> **NOTE:** Unless otherwise stated, all parameter download settings will have a site setting.

Depending on the value sent down in the parameter download, an individual site may or may not have the ability to change certain POS settings. In most cases, if the PDL parameter sent from the Worldpay Host contains a zero value, then that parameter is controlled by the site. Unless otherwise stated, all Parameter Download Settings will have a comparable Site Parameter setting that will allow the setting to be changed at the site without requiring a parameter download if this permission has been enabled at the Worldpay host. See Host Only Controlled Parameters. Additionally, all site parameter settings and parameter download settings, excluding host only controlled parameters, should have Worldpay specified default values loaded as part of the POS setup. Except for the Host Only Controlled Parameters, the POS must allow these default values to loaded independent of the Worldpay parameter download when the Application is installed or upgraded. Initial setup values should be loaded as part of the application or file and should not require merchant operator to enter values for these fields. The POS system should have flexibility to create different setup files for different Worldpay customers. If there are no default parameter values loaded, the POS Application cannot function. Any additional settings controlled by the POS and not-the PDL should not be overwritten if a PDL is done.

See Appendix V, "Table Information".

1.2.30 No Change Indicators for Parameter Fields

One important simplification that was made by Worldpay is that we indicate which Terminal and Merchant parameter fields are to be updated. These fields are marked with an asterisk on the Terminal Update Response and Merchant Update Response messages.

See Update Terminal Configuration Request and Update Merchant Configuration Request.

. If the POS receives a zero for any of the marked fields, it should not make any change to the value of the specific parameter. If the POS receives a specified value, other than zero, it should take the specified value and change the specific parameter. If the POS receive a value not equal to zero and not specified, it should not make any change to the value of the specific parameter. This last scenario should be a rare occurrence, but should be developed on the POS application.

1.2.31 Parameter Update Notification

When the POS receives a complete Parameter Download from the Worldpay Host, or an Update Terminal Configuration, Update Merchant Configuration or Update Card Ranges, it must notify the Worldpay Host that it has applied the new Parameter information. This notification will be done for all PDLs. When the POS receives a Partial Download or a Full Application Download from a separate Download System, such as VeriFone's Vericenter, it must notify the Worldpay Host that it has applied the new Partial Download or the Full Download.

The POS will send the notification to the Worldpay Host after it has applied the update(s). If more than one update is being done, for example Terminal Configuration and Merchant Configuration, the POS may wait until all PDL updates have been applied and then notify the Host.

TABLE 1-5 Parameter Update Notification

When the POS processes an…	It sends an…
Update Terminal Configuration	Update Notification to the Worldpay Host with an Administrative Code of 72110.
Update Merchant Configuration	Update Notification to the Worldpay Host with an Administrative Code of 73110.
Update Card Ranges	Update Notification to the Worldpay Host with an Administrative Code of 74110.
Partial Download from a separate Download System	Update Notification to the Worldpay Host with an Administrative Code of 77110.
Full Application Download from a separate Download System	Update Notification to the Worldpay Host with an Administrative Code of 78110.

See Update Notification Request

1.2.32 Host Only Controlled Parameters

There are several parameter groups that should be controlled by the Worldpay Host. These parameters must not be changed by the merchant operator of the POS. Only a very few PDL from the Worldpay parameters are not site controlled, for example the site can change the value of the parameter. However, these parameters listed below are controlled by the host:

- The Receipt Header Information Parameter sent on the Update Merchant Configuration Response.
- The EOD Processing Option - Batch Size Auto-close.

  See Update Terminal Configuration Request and Update Terminal Configuration Response for more information.
- The Card Ranges and therefore the card types accepted by the POS.

  See Update Card Ranges Request and Update Card Ranges Response for more information.

1.2.33 Prepaid Cards Support

Worldpay supports prepaid cards. Today, Stored Value Systems (SVS) cards and Worldpay Gift cards are supported. The POS must be able to support prepaid processing and have the ability to add additional cards as they become available on the Worldpay Network.

Unique card types will be used to define different prepaid programs. This identification information is sent to the Worldpay Host in the Transaction Request (TREQ) message, using the Account Type field, for example SVS = B and Gift Cards = 8.

The POS must have the ability to support more than one prepaid program. The POS must use the Worldpay Parameter Download functionality to receive information as to which cards to accept. In the Update Terminal Configuration Request and the Update Card Ranges Response, the POS will receive the Account Types and Card Range Update Data to accept.

Worldpay Gift Card activation, deactivation, and balance inquiry transactions should not be uploaded as a part of the batch upload.

1.2.33.1 Available Transaction Set for Prepaid Cards

TABLE 1-6 Transaction Set for Prepaid Cards

Transaction	Description
Balance Inquiry (SVS and Worldpay Gift Cards)	This obtains the available balance of card. It uses TRAN CODE= CREDIT CARD 09.
Preauthorization (SVS and Worldpay Gift Cards)	This reserves funds until a redemption is fulfilled. It uses TRAN CODE = CREDIT CARD 02.
Preauthorization Completion (SVS and Worldpay Gift Cards)	This completes a preauthorization transaction (releases a hold and debits the card for the transaction amount. It uses TRAN CODE = CREDIT CARD 03.
Redemption (SVS and Worldpay Gift Cards)	This debits the card balance (for example, a post pay sale). It uses TRAN CODE = CREDIT CARD 01.
POS Cancellation (SVS and Worldpay Gift Cards)	This voids a previous sale transaction. It uses TRAN CODE = CREDIT CARD 05.
Merchandise Return (SVS and Worldpay Gift Cards)	This adds value to a new or existing card upon return of merchandise. It uses TRAN CODE = CREDIT CARD 04.
Card Activation (SVS)	This activates an Open Value Card. This is specific to cards where the value is assigned at the time of purchase. It uses TRAN CODE = CREDIT CARD 07, ACCOUNT TYPE = B.
Card Activation (Worldpay Gift Cards)	This activates, loads or reloads pre-value and user defined gift cards. It uses TRAN CODE = CREDIT CARD 07, ACCOUNT TYPE = 8.
Card Deactivation (Worldpay Gift Cards)	This deactivates an activated card. It uses TRAN CODE = CREDIT CARD 08, ACCOUNT TYPE = 8.
Card Deactivation (SVS)	This deactivates an activated card. It uses TRAN CODE = CREDIT CARD 08, ACCOUNT TYPE - B.
Reload/Recharge (SVS)	This adds value to a card. It uses TRAN CODE = CREDIT CARD 10.
Issue Card (SVS)	This places value on a new card. This is for fixed value cards with the value of the card printed on the card itself. It uses TRAN CODE = CREDIT CARD 18.
Cash Out (SVS)	This removes all of the remaining balance off the card. Essentially it is a Sale transaction that uses a $0.00 for the Total Amount field. The amount field returned from the host will be the amount that is given to the Cardholder. The card then has no value on it. This uses TRAN CODE = CREDIT CARD 01.

The activation and load transactions should be sent to the host after the payment for the activation or loading of funds has been completed.

1.2.33.2 Prepaid Partial Approvals

For Pay at the Pump transactions, the POS must check for partial approvals on the TRSP received for the preauthorization and turn off the pump accordingly.

For deactivations, use the following rules:

- Worldpay Gift Cards operate with a simple deactivation that does not reference any data from the originating activation.
- SVS Cards process deactivations with a matching criteria, similar to the matching done on void transactions. The SVS deactivation should include the original activation's date, time, transaction sequence number, authorization number, and retrieval data.

For Pay at the Pump transactions, the POS must send the Completion up to host immediately after it is complete. In this respect, prepaid card processing is similar to debit processing.

For Inside transactions, the POS must check for partial approvals on the TRSP received from the Worldpay Host and process a Partial approval.

See Credit Partial Approvals Inside.

SVS Card and Worldpay Gift Card transactions must print the remaining balance on every financial receipt. As additional cards are added to Worldpay processing, their requirements will be reviewed and the Specification will be updated.

See Transaction Request Message (TREQ) and Transaction Response (TRSP).

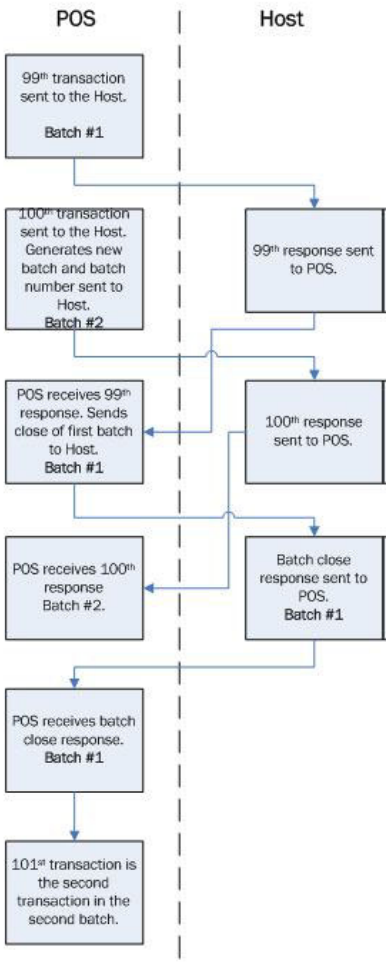
1.2.34 Multiple Batch Processing

The POS must have the ability to complete any outstanding transactions for a batch and then store that Batch of transactions and start processing a second Batch at the same time. There may have been a problem closing a Batch with the Worldpay Host and new transactions are being processed. The POS must be able keep processing transactions on the second Batch.

Figure 1-10 assumes the following:

- Current Batch is #01 and contains 98 transactions.
- The Batch Limit is 99 transactions and the POS is dial.
- At exactly same time, a console transaction and Pay at the Pump transaction are conducted.

FIGURE 1-10 Multiple Batch Processing User Case



1.2.35 Cash Receipts

Cash Receipts are provided as a value add to the cardholder.

The POS must have the ability to print a Cash Receipt. These transactions are not submitted to the Worldpay Host for processing. The POS must provide the merchant the ability to print a cash receipt upon demand for the cardholder.

The merchant would press a button, or function key, to request the cash receipt. The cash receipt would look like a normal receipt; for example, the header information, product name, and quantity information will be displayed.

The card type would print as CASH.

1.2.36 Track 1/Track 2 Processing

The POS must have the ability to accept both Track 1 and Track 2 from the Magnetic Stripe or an RFID read. This is for Pay at the Pump and Console traffic. The POS should use Track 2 when formatting and

submitting transactions to the Worldpay Host for processing, if possible. Debit, EBT must use Track 2 when formatting and submitting transactions to the Worldpay Host for processing.

For Credit, Fleet and Prepaid Cards, if the POS cannot receive the Track 2 on a given card, but can receive the Track 1, then it is acceptable to use Track 1 when formatting and submitting a transaction to the Worldpay Host for processing. Please note, not all cards have both Track 1 and Track 2 on the Magnetic Stripe. Specifically, three of the Fleet Card issuers do not have Track 1, for example Wright Express, Fleet One and Fuelman.

1.2.37 Check ID Prompting

Worldpay has the ability to send specific codes or flags to the Point of Sale that indicates the merchant operator must do an ID Check. The Enable Check ID field is sent in the Update Merchant Configuration Response 73100 message or set at the site via configuration. This field will determine the processing.

1.2.37.1 Check ID Prompting for Inside Transaction Processing

The Check ID prompting is used only on Inside sales.

The POS must interrogate the TRSP for the Action Code field for a value of 0011. If the Action Code field has the value of 0011, the transaction has been approved but there has been a Velocity Hit, for example the transaction has exceeded a Customer Velocity Level at the Worldpay Host. Based on the value of the Enable Check ID Support parameter, the POS can either process the Approved - Check ID response or bypass it. The merchant operator has the ability to override/bypass a Check ID prompt displayed on the POS.

- If the POS has the Enable Check ID Support parameter value of 1 (Yes), the POS processes the `Approved - Check ID` responses.
- When the POS receives a normal decline Action Code, it does not perform any Check ID processing.
- When the POS receives a normal approval Action Code of 0000, the POS processes normally.
- When the POS receives an Action Code of 0011, indicating that the merchant needs to check the cardholder's ID, the POS displays `CHECK ID` and `APPROVE =Y DECLINE = N`.
- For integrated POS, if the merchant operator enters Y, the host approves the transaction and it processes normally.
- If the merchant operator enters N, the POS will retain the information already keyed for the items the cardholder wants to purchase and it will prompt for another MOP.
  - If the Cardholder provides another MOP, the POS will use the retained information on a new transaction.
  - Whether the Cardholder provides another MOP or not, the POS will display `TRAN VOIDED` and must automatically generate an online void transaction for the original sale transaction.
- For standalone POS, if the merchant operator enters Y, the host approves the transaction and processes it normally. If the merchant operator enters N, the POS must display `TRAN VOIDED` and must automatically generate an online void transaction for the active sale transaction.

> **NOTE:** POS terminals that do not support Check ID processing may receive a Response Code of 0011 on Credit sales, indicating a normal approved transaction.

1.2.37.2 Check ID Prompting for Outside Transaction Processing

The Check ID prompting is not available for Outside Transactions.

For Outside Pay at the Pump transactions, the POS will display a generic message `SEE ATTENDANT` when it receives an Action Code of 0068.

See Transaction Request Message (TREQ) and Transaction Response (TRSP).

1.2.38 Dial Rollover

Dial Point of Sale must be able to roll over to a Secondary Number anytime a valid response from the Worldpay Host is not received by the POS. The basic flow will be:

POS dials the Primary Number. If there is a ring/no answer, busy signal, answers/raises carrier but no ENQ from the Host, the POS will dial or roll to the Secondary Number after the time-out period has expired. The POS displays `REDIALING SECONDARY`.

Then the POS dials the Secondary Number. If there is a ring/no answer, busy signal or answers/raises carrier but no ENQ from the Host or any situation where there is no valid response from the Worldpay Host, the Inside POS will display `CALL FOR AUTHORIZATION` and the Outside Pay at the Pump Dispenser will display `SEE ATTENDANT`. The POS has now made two attempts to complete the dial transaction. The transaction is considered complete, unless the POS goes to Stand In Processing.

1.2.39 Debit Prompting

The Worldpay host sends a Debit First Prompt Enabled parameter to the POS on the Update Terminal Configuration Response. If this parameter is set to 1, the POS must prompt for a PIN first on pay at the pump transactions for Debit, Visa and Mastercard.

Based on the technical capabilities of the POS, it handles Debit Prompting at the pump in one of the following ways:

- The POS maintains BIN ranges for Credit, Fleet and Proprietary cards.

  If the Cardholder does not select a payment method, starts the pump transaction with a card swipe, and the POS cannot recognize the card's BIN range to establish the card type, the POS prompts `DEBIT Y/N?`

  If the Cardholder selects Y (debit), the POS prompts the cardholder to enter a PIN. If the Cardholder selects N on a BIN Range that the POS does not recognize, the POS displays `SEE ATTENDANT`.
- This approach also uses the POS-maintained BIN Ranges. Additionally, the Debit First Prompt Enabled parameter identifies types of credit cards that may be check cards. Typically, these card types are Visa and Mastercard.

  If the Cardholder does not selected a payment method and starts the pump transaction with a card swipe, the POS checks the following items:

  - If the POS cannot recognize the card's BIN Range to establish the card type or if the POS recognizes the card's BIN range and that card type has the Debit First Prompt Enabled parameter set to yes, it prompts `DEBIT Y/N?`.
  - If the Cardholder enters a PIN for a Visa, Mastercard or Debit, the host processes the transaction as debit.

- If the Cardholder selects N for a Visa or Mastercard, the host processes the transaction as credit.
- If the Cardholder selects N on a BIN Range that the POS does not recognize, the POS displays `SEE ATTENDANT`.

See Update Merchant Configuration Response for more information.

1.2.40 Host Time Synchronization

Messages from the Worldpay host that return the host date and time will be adjusted by the Worldpay Host to the terminal's local date and time. The only messages from the host that return the host date and time are the Host Batch Totals Inquiry Response, Host Batch Close Response, Hybrid Batch Upload Response (Header) and the Hybrid batch Upload Response (Trailer). The POS application must have a site level configurable option to synchronize with the Worldpay Host. However, all receipts and transaction reporting details must use and print the Date and Time from the Worldpay Host.

The only exception to this rule is for the G-Site Direct POS. There is a Parameter Download (PDL) Response - Time message which updates the terminals time with the host date and time.

1.2.41 Alon USA RFID Processing

The Point of Sale must be able to process RFID traffic for Pay at the Pump traffic. The Worldpay Host supports the following entry methods for RFID traffic and requires that the POS support them both:

- On the TREQ, an Entry Method of 03 indicates a transponder or RFID. That is valid for any RFID traffic not using the AVI product.
- Worldpay requires this entry method for the Alon USA Fleet fueling system. The following describes the interactions of the Fleet Fueling system with the POS:
  - The Alon USA Fleet Fueling system uses Automated Vehicle ID (AVI) from Roseman Engineering to communicate credit information to the POS.
  - The POS identifies AVI transactions on the Transaction Request (TREQ) with an Entry Method of 4 for AVI. See Transaction Request Message (TREQ).
  - The transaction sent to the Worldpay host is like any other POS pay at the pump transaction with the exception of the different entry method.

1.2.42 Worldpay Piggyback Process

The POS must be able to do the following:

- Send up completions for Pay at the Pump transactions.
- Send up any Ticket Only (Force Sale) transaction or Stand In Transaction that it has in its batch.

If the POS is dial, then piggybacking transactions is an accepted method of sending up these types of transactions. If a pre-authorization on a credit card is run at 10:00 AM, and the next pre-authorization or other type of transaction is run at 10:15, the completion of the pre-authorization from 10:00 AM may be piggybacked with the transaction run at 10:15. This approach may be applied to the other transactions that the POS needs to send to the Worldpay host.

There are exceptions. For debit captures, and prepaid captures, the POS should dial the Host and send the captures up as soon as they are ready to be sent to the Host. Additionally, if there are any outstanding

transactions of any kind when a batch close is ready to begin, they should be sent to the Host before the batch is processed.

If the POS has dedicated service, for example DSL or VSAT, it should send up any completions or Stand In Transactions as soon as they are ready to be sent to the Host. This real time approach allows the POS to take full advantage of the dedicated service in place.

1.2.43 EBT Manual Processing

The POS must process Electronic Benefit Transfer (EBT) transactions. Manual Entry is allowed. Valid Manual EBT transactions require that Card Number and PIN Number be entered. There is no Expiration Date entered, and the POS must plug in the non-expiring date of 4912 when reconstructing the Track Data.

For EBT Offline the manual transactions require Card Number, the same 4912 Expiration Date, Voucher Number and Authorization Number. There is no PIN entered on EBT Offline Manual transactions.

TABLE 1-7 EBT Manual Processing

EBT Card Type	Card Swipe Required?	Manual Entry Allowed?	PIN Required?	Notes
Sale Food	No	Yes	Yes	
Sale Cash	No	Yes	Yes	
Sale Food (Offline)	No	Yes	No	Requires voucher # and approval code
Void Food	No	Yes	Yes	
Void Cash	No	Yes	Yes	
Void Food (Offline)	No	Yes	No	
Refund Food	No	Yes	Yes	
Refund Cash	N/A	N/A	N/A	Not Allowed
Refund Food (Offline)	No	Yes	No	Requires voucher # and approval code

1.2.44 Pump Certification and Pump Graphics Support

The POS interacts with various Pump types. For each pump type supported, such as Gilbarco, Wayne, and Tokheim, the POS should be tested with that pump. The Worldpay Network Certification requires all pump types be tested. Additionally, any Pump type that supports graphics sent from the Controller to the Pumps is tested in the Worldpay Network Certification.

1.2.45 Software Versioning

The POS must maintain information giving hardware, software and firmware. This information is assigned by the POS Vendor with approval from Worldpay. The information must be part of the application when the application is loaded to the POS. The information values for the hardware, software and firmware cannot be changed by site personnel.

The three elements of the versioning are sent up to the Worldpay Host on all Administrative transactions.

The three elements of the versioning are found in the Configuration Information section on all the Administrative Message formats. The three specific fields are:

- Hardware Type, 4 character value assigned by Worldpay
- Software Version, 8 character value giving the release or revision number
- Firmware Version, 8 character value giving the Firmware/OS release or revision

See Chapter 3, "Administrative Transactions".

1.2.46 Transaction Set

The POS must support the following transaction types: credit card, debit card, EBT card, and Fleet card. Prepaid cards use credit card codes and follow credit card transaction codes.

See Appendix M, "Transaction Type and Card Specific Data" for related information.

TABLE 1-8 Credit Card Transaction Codes

Transaction Code	Description
01	Sale
02	Preauthorization
03	Completion or Force Sale
04	Return
05	Void Sale
06	Void Return
07	Card Activation
08	Card Deactivation
09	Card Balance Inquiry
10	Reload/Recharge
18	Issue Card
19	Information Update
80	Convert Card to Token (non-financial)
81	Convert Token to Card (non-financial)

TABLE 1-9 Debit Card Transaction Codes

Transaction code	Description
11	Sale
12	Sale with Cash Back
13	Preauthorization
14	Completion
15	Void Sale
16	Void Sale with Cash Back
17	Return

TABLE 1-10 EBT Card Transaction Codes

Transaction Code	Description
21	Sale
22	Sale with Cash Back
24	Completion
25	Post Auth Sale with Cashback
26	Return
27	Balance Inquiry
41	Reversal Sale
42	Reversal Sale with Cash Back
44	Reversal Completion
45	Reversal Post Auth Sale with Cashback
46	Reversal Return

TABLE 1-11 Fleet Card Transaction Codes

Transaction Code	Description
31	Sale
32	Preauthorization
33	Completion or Force Sale
34	Return
35	Void Sale
36	Void Return
38	Information Update

1.2.47 Partial Credit Authorizations

1.2.47.1 Partial Credit Authorizations Outside

The POS must be able to recognize and process partial authorizations returned from the issuers at the pump. The POS is required to process partial authorizations for Credit, in addition to Debit, EBT, and Prepaid Cards.

See Transaction Request Message (TREQ) and Transaction Response (TRSP). For information on Credit/Fleet Results Codes, General POS Default Settings, and Partial Authorizations, Appendix V, "Table Information".

When processing Pre Authorizations, the POS must send the Partial Authorization Flag and interrogate the Partially Approved Transaction Flag field on the Transaction Response (TRSP) message. If this field is equal to 1, the Total Amount field on the TRSP is a partial approval and the Pump must shut off at the amount.

1.2.47.2 Credit Partial Approvals Inside

The POS must be able to recognize and process partial approvals returned from the issuers. The POS is required to process partial approvals at the Console for all Credit Cards, in addition to Fleet, Debit, EBT, and Prepaid Cards.

> **NOTE:** Credit, Debit, EBT, Fleet, and Gift Cards must be able to accept partial approvals, both inside at the console POS and outside at the pump.

The Transaction Request message notifies the Worldpay Host that the POS can process partial approvals. The Terminal Feature Data field has a one character Partial Authorization Enabled Field that must be equal to 1. If the POS has this Partial Authorization Enabled Field set to 0, the Worldpay Host will not send back approved credit card partial approvals. The Partially Approved Transaction Flag on the Transaction Response (TRSP) message informs the POS that the Total Amount field on the TRSP is a partial approval. If this field is equal to 1, the amount is a partial approval for the Console.

See Transaction Request Message (TREQ) and Transaction Response (TRSP).

With a Credit Card presented as the method of payment, if the TRSP has the Partially Approved Transaction Flag equals 1, it is a partial approval. For example, a Cardholder presents a Credit Card for a $25.00 purchase. The TRSP has the Partially Approved Transaction Flag equals 1 and the Total Amount Field showing $20.00. The POS must offer a Split Tender as a method of securing or completing the sale. The merchant operator requests a second Method of Payment for the remaining amount; in the example $5.00 would be paid in cash, or another form of payment. If the second MOP is non-cash and also receives a Partial Approval, the merchant operator requests a third Method of Payment. If the third non-cash MOP receives a Partial Approval or decline, the merchant operator may continue until all avenues to complete the transaction are exhausted. After all MOPs have been run and the total amount of the sale is still not satisfied, the merchant operator may delete items from the sale to bring the amount under what has been approved. If the Cardholder decides that he doesn't want to provide an additional MOP or wants to cancel the entire transaction, then the POS must run a Void transaction for the amount approved on the original transaction.

If the balance remaining on the card is returned on the Card-Type Specific Data - Card Balance field on the TRSP, the receipt should indicate the net remaining balance on the card after the transaction has

been completed. This includes showing a zero balance ($0.00). Please see further definition of this in Receipt requirements on page 104, numbers 26 and 27.

1.2.47.3 Partial Approvals Parameters for Credit Cards

The POS must be able to recognize and process partial approvals returned from the issuers. The POS is required to process partial approvals at the Console for all Credit Cards, in addition to Fleet, Debit, EBT, and Prepaid cards.

The Transaction Request message notifies the Worldpay Host that the POS can process partial approvals. The Terminal Feature Data field has a Partial Authorization Enabled Field that must be equal to 1. If the POS has this Partial Authorization Enabled Field set to 0, the Worldpay Host will not send back approved credit card partial approvals. The Partially Approved Transaction Flag on the Transaction Response (TRSP) message informs the POS that the Total Amount field on the TRSP is a partial approval. If this field is equal to 1 the amount is a partial approval for the Console.

See Update Merchant Configuration Response for more information.

Partial Approvals Table for Credit Cards

Table 1-12 provides a visual representation of partial approval processing and the flags used.

Specifically, it shows that all POS developing to this specification will have the Partial Authorization Enabled flag set to1 and shows when the POS must send the flag to the Worldpay host.

The key points for processing Partial Approvals are:

- The POS must support Partial Approvals for both Inside and Outside transactions.
- The Partial Authorization Enabled Flag must be sent on all Inside transactions, whether the value is 0 or 1.
- Outside transactions (for example, Pay at the Pump) must support Partial Authorizations.
- The Partial Authorization Enabled Flag must be sent on all Outside transactions. The Worldpay Host does not interrogate this field on Outside transactions
- Partial Authorizations may be turned off for Inside transaction processing. This is a merchant business decision.

NOTE: *Fuelman and FleetOne may send back a higher amount than originally requested.

TABLE 1-12 Partial Approvals Table for Credit Cards

Type	Partial Auth Capable	Send Flag Inside	Receive Flag Inside	Send Flag Outside	Receive Flag Outside
Visa	Yes	Yes	Yes	Yes	Yes
MC	Yes	Yes	Yes	Yes	Yes
Discover	Yes	Yes	Yes	Yes	Yes
American Express.	Yes	Yes	Yes	Yes	Yes

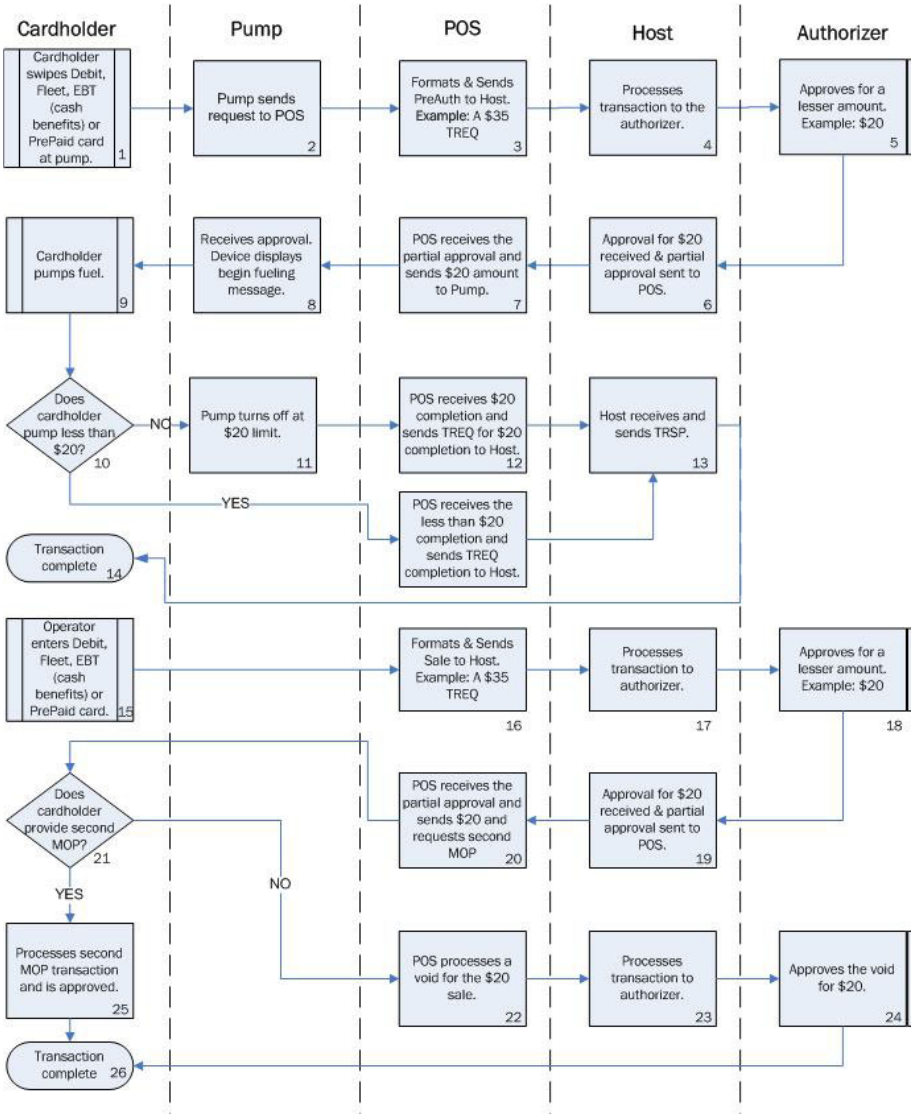
TABLE 1-12 Partial Approvals Table for Credit Cards

Type	Partial Auth Capable	Send Flag Inside	Receive Flag Inside	Send Flag Outside	Receive Flag Outside
Other Credit	Yes	Yes	Yes	Yes	Yes
SVS	Yes	Yes	No	Yes	No
Gift	Yes	Yes	No	Yes	No
Debit	Yes	Yes	No	Yes	No
EBT	Yes	Yes	No	Yes	No
Fuelman	Yes	Yes	No*	Yes	No*
FleetOne	Yes	Yes	No*	Yes	No*
Wright Express	Yes	Yes	Yes	Yes	Yes
Voyager	Yes	Yes	Yes	Yes	Yes
Worldpay Fuel	Yes	Yes	Yes	Yes	Yes

1.2.47.4 Partial Authorizations User Case

Figure 1-11 assumes the Sale or Pre-Authorization amount is $35.

FIGURE 1-11 Partial Authorizations User Case



1.2.48 Pump Processing Dispenser Cut-off Amounts

Following are the basic groups of Pay at the Pump transactions that use the Dispenser Card Reader (DCR) Cutoff Amount and the TRSP Total Amount field to control when to cut-off the pump delivering fuel:

- TREQ Total Amounts
- DCR Cutoff Amounts
- Card Issuer Amounts

1.2.48.1 TREQ Total Amounts

When approval is required on any of the below card types for a dispenser transaction, the response amount should be interrogated and compared to the DCR cut-off amount. Whichever amount is the lowest should be the amount used to shut off. A partial approval transaction flag has no effect on these transactions as any response lower than expected is the approved amount.

1.2.48.2 DCR Cutoff Amounts

The default behavior is to stop fueling at the DCR cut-off amount regardless of the amount received in response to the dispenser. Partial approval flags function as an override to this behavior and may override the DCR cut-off when set to 1. If the partial authorization flag is set to 1 in the response, revert to the TREQ total amounts behavior comparing the response amount and DCR cut-off setting. Whichever is the lowest is the cut-off amount.

1.2.48.3 Card Issuer Amounts

Table 1-13 shows the card types that ignore the DCR cut-off amounts and partial authorization flags. The only determining factor for shutting off the pump is the amount received in the approved response.

TABLE 1-13 Card Types Ignoring DCR Cut-Off Amounts and Partial Authorization Flags

Card Type	Criteria Used	Secondary Criteria to Consider
TREQ Total Amounts		
American Express	TRSP Total Amount of the PreAuth is used	If the Partially Approved Transaction Flag on the TRSP=1, the amount will be lower than what was requested on the TREQ
Gift Card	TRSP Total Amount of the PreAuth is used	-
Voyager	TRSP Total Amount of the PreAuth is used	-
Debit	TRSP Total Amount of the PreAuth is used	-
PrePaid/SVS	TRSP Total Amount of the PreAuth is used	-
DCR Cutoff Amounts		
Visa	DCR Cutoff Amount is used	If the Partially Approved Transaction Flag is = 1, the TRSP Total Amount on the PreAuth is used

TABLE 1-13 Card Types Ignoring DCR Cut-Off Amounts and Partial Authorization Flags

Card Type	Criteria Used	Secondary Criteria to Consider
Mastercard	DCR Cutoff Amount is used	If the Partially Approved Transaction Flag is = 1, the TRSP Total Amount on the PreAuth is used
Discover	DCR Cutoff Amount is used	If the Partially Approved Transaction Flag is = 1, the TRSP Total Amount on the PreAuth is used
Diners Club	DCR Cutoff Amount is used	If the Partially Approved Transaction Flag is = 1, the TRSP Total Amount on the PreAuth is used
Wright Express	DCR Cutoff Amount is used	If the Partially Approved Transaction Flag is = 1, the TRSP Total Amount on the PreAuth is used
Master Card Fleet	DCR Cutoff Amount is used	If the Partially Approved Transaction Flag is = 1, the TRSP Total Amount on the PreAuth is used
Visa Fleet	DCR Cutoff Amount is used	If the Partially Approved Transaction Flag is = 1, the TRSP Total Amount on the PreAuth is used
FuelLynk	DCR Cutoff Amount is used	If the Partially Approved Transaction Flag is = 1, the TRSP Total Amount on the PreAuth is used
Card Issuer Amounts		
Fleet One	TRSP Total Amount of the	
PreAuth is used.	Amount approved on the TRSP Total Amount may be greater or lesser than the amount requested on the TREQ	
Fuel Man	TRSP Total Amount of the PreAuth is used	Amount approved on the TRSP Total Amount may be greater or lesser than the amount requested.

1.2.49 Pump Processing

1.2.49.1 Pump Track Data Processing

Integrated Point of Sale solutions that process Pump traffic must process Track Data as described here.

Sending up the pre-auth transaction, the POS sends up complete Track Data. Typically, this is Track 2 but may be Track 1. The POS must not store the Track Data after the pre-auth. The POS must store the information required for the Completion and the batching functions performed.

Sending up the Completion transaction, the POS sends up the Primary Account Number and Expiration Date, rather than the Track Data. The two fields are formatted as Primary Account Number, an Equal Sign, and the Expiration Date. This information is loaded into the Track Data Field on the TREQ; format is PAN=YYMM.

See Transaction Request Message (TREQ).

1.2.49.2 Pump Completion Processing

Integrated Point of Sale solutions that process Pump traffic follow these steps for Completion transactions.

After receiving an approval on the pre-auth transaction, the POS turns on the Pump and the Cardholder fuels the vehicle. After the Cardholder completes fueling, the POS formats and sends a Completion transaction.

If the POS receives an Action Code on the TRSP indicating that the Authorizing Network is not available, the Completion transaction should be tried up to three more times. The retransmitting of the Completion transaction should be at intervals of ten minutes. Additionally, the transaction should be included in the batch totals and be a part of the upload process. If the Completion has received three Network Unavailable messages, it is understood that this will result in an Out of Balance condition between the POS and the Worldpay Host upon batch close. The result will be the POS performing a Hybrid Batch Upload.

The actions codes indicating network unavailable are:

- Debit - 0032
- EBT - 0032
- Prepaid - 0015

If the POS receives an Action Code on the TRSP indicating a decline other than the Authorizing Network is not available, the POS should indicate that there was a problem with the transaction on a POS detail report. Additionally, the transaction should not be included in the batch totals and should not be a part of the upload process. This applies to Completion Transactions for the current batch being uploaded and any new batch that the Completion would be loaded into.

For more information, see:

- See Transaction Response (TRSP).
- See Appendix B, "Card Data and Product Information Codes".

1.2.50 Zero Dollar Completions

For Pay at the Pump traffic, the POS must also allow for a Zero Dollar Completion. If there is no corresponding Completion transaction to the Pre-Auth transaction, the POS should send a Zero Dollar Completion to the Host. This would be for cases where the Cardholder presses the cancel or clear button after swiping their card, the pump times out waiting for the initiation of pumping after the Pre-Auth response, an AVS Failure, or any other case where the logical completion for a dollar amount greater than zero doesn't occur. This will release the funds being held by the Authorizer for Credit, Debit, Fleet, and Prepaid Cards.

Zero dollar completions never update the batch totals or count.

If a zero dollar completion encounters a communication error, the terminal should proceed with standard retransmit or redial logic based on the Worldpay Multi-Threaded Message Protocol Specification. If the retransmit and redial options are followed according to specification and exhausted, meaning communications errors are still received, the terminal should drop the zero dollar completion and not attempt to transmit it again.

If a zero dollar completion receives a decline response from the host, the terminal should drop the zero dollar completion and not attempt to transmit it again.

See Transaction Request Message (TREQ).

1.2.50.1 Inside Preauthorization Processing

For Inside Console traffic, the POS must also allow the Cardholder to request a preauthorization to turn on the pump. This would be the scenario where the Cardholder comes inside and presents a credit card and requests a certain amount of fuel to be authorized on a given pump. It the Cardholder pumps the entire amount authorized, this is a simple sale. If the Cardholder pumps just a portion of the amount authorized, the POS must return the remainder amount to the Cardholder's card.

The POS will use the Credit Transaction Codes 01 for Sale and 04 for Return. When the Cardholder presents the Credit Card, the merchant operator runs a Credit Sale for the amount requested and with an approval, turns on the pump. The Cardholder may then pump fuel. The pump will turn off when it reaches the entered sale amount. In this case the Cardholder is given a receipt at the pump. If the Cardholder doesn't pump the full amount authorized, then the POS must run a Return transaction for the remainder. The POS will then print a pump receipt showing the full amount authorized, the amount pumped and the amount returned to the card.

For example, if the Authorized Amount of the Sale is $20.00 and the Cardholder pumps $18.00, the POS will run a Return for $2.00 and the pump will print a receipt showing all three dollar amounts with $18.00 as the total amount.

1.2.50.2 Cross Batch Void Processing

The POS must insure that there are no problems with Cross Batch Voids. This is the scenario where the POS runs a Sale in a given batch and the POS tries to void the Sale in the next batch. There is no match so the void is rejected.

The situation where this happens most frequently is with the last transaction in a batch. This might be a partially approved transaction and the Cardholder does not want to complete the sale. If there is a batch close right after the partially approved sale, then the POS must use a Return transaction in the next batch to return money to the Cardholder's account.

1.2.51 Communications Test Processing

The POS must have the ability to send Communication Test transactions to the Worldpay Host. The POS solution should provide the merchant operator the ability to send a Communication Test transaction to confirm host availability. This test transaction may be initiated by a simple assigned function, button or touch screen option. The results of the Communication Test transaction should be displayed to the merchant operator.

See Communications Test Request for more information.

1.2.52 Car Wash Kiosk Processing

Integrated Point of Sale (POS) solutions that support car wash kiosk transactions must follow the processing described in this section.

A Car Wash Kiosk that sends transactions to the POS must be identified as originating at a Kiosk. Provided the POS reports the transaction as a kiosk transaction, the Worldpay Network will ensure that the transaction receives the best interchange rate.

A kiosk transaction is defined as a transaction that starts at the unattended car wash. The card holder does not come into the CStore or Station to purchase a car wash. The Card Holder does not purchase the car wash while purchasing fuel at the pump. The card holder enters a credit, debit, EBT, Cash, or Fleet card at the car wash. The transaction request is then sent to the Integrated POS, which formats a transaction with a Device Identifier for Car Wash Kiosk that is sent to the Worldpay Network. Any car wash purchased with the Card Holder coming into the CStore or Station or at the Pump is handled as a regular Petroleum transaction.

The following is a list of the Device Id values allowed for Car Wash Kiosk traffic. Use of these special characters will indicate which Kiosk is used. If a site has a single Car Wash Kiosk, all the traffic will have ! (exclamation point) as the Device ID. If a site has two Car Wash Kiosks, one will be identified as ! and the second will be identified as @ (ampersand). Worldpay allows for up to 10 Kiosks to be identified.

1.2.52.1 Device IDs

The following list is the Car Wash Kiosk Device IDs:

- !
- @
- #
- $
- %
- ^
- &
- *
- (
-)

1.2.53 Miscellaneous Retain/Return Data

The Miscellaneous Retain/Return data is returned from the authorizing network or the host computer. Retain/Return data must be returned by the terminal in an unaltered format for all completion requests, reversal or void requests, and all resubmittal transactions in order to solicit a host match to a previously authorized or captured transaction. If the retain/return data is not maintained and sent on all resubmittal transactions, they will most likely be rejected by the authorizer and chargebacks will result for the customer.

Bytes 15-18 of the miscellaneous retain/return data field represent the last 4 digits of the detokenized card PAN, which requires additional processing. If the last 4 digits of the original PAN is present in the retain/return data field, it indicates that the information submitted to the host is a tokenized transaction, requiring additional information from the host to complete the receipt requirements. When printing the receipt, substitute the last 4 digits that the POS has on record for the transaction TREQ with bytes 15-18 of the retain/return data provided in the host response.

When bytes 15-18 are blank or absent, default to using the standard last four printing procedure that the POS received at point of entry.

1.2.54 Scheme Tokenization

Card schemes introduced a new standard for digital payments to enhance the security of shopping on a mobile phone, tablet, personal computer or other smart device. The new standard allows for the traditional 16-digit primary account number (PAN) to be replaced with a digital token for online purchases and transactions initiated with mobile devices. Removing sensitive account information in effect segments risk at each end point that store card data, so that a lost phone can result in a discarded token instead of a reissued card. Details for POS interaction with NFC readers can be found on EMVco's website under the EMVCo Payment Tokenisation Specification Technical Framework.

- Tokenization - This is a process where the PAN is replaced with a surrogate value known as a token. Tokenization enhances the security and protection of the PAN at rest or in transit. Tokens are passed to the host at authorization in the Track I / II (swiped), PAN=YYMM (manual/resubmittal) field (Table 2-1) exactly like any other PAN.
- Token assurance level-a score or confidence level that determines the expected level of assurance associated with the approved token requestor and the ID&V (identification and verification) method performed at the time of token request. If an assurance level is presented at the reader, place it in the Customer Data field (page 69), identified as GDA, per Appendix A: Card data and product information codes on page 108.
- Token requestor ID-a unique ID assigned to a Token requestor by token service provider. If a requestor ID is presented at the reader, place it in the Customer Data field (see Table 2-1), identified as GDR. See Appendix A, "Card Data and Product Information Codes".
- Last 4 of PAN-the data provided at the reader is a token, which is not the same as the related PAN. The host returns the last 4 of the Miscellaneous Retain/Return data (page NN). Reference that section for details.

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2

Transaction Request Message

You use the Transaction Request messages to request authorization from the card-issuing network for a payment, return, or void against a specific account. The Transaction Response message contains the network's approval or denial of the requested transaction.

The topics discussed in this chapter are:

2.1 Transaction Request Message (TREQ)

TABLE 2-1 Transaction Request Messages

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Worldpay Petroleum
Processing Mode	1	N	REQD	• **0** - Host Capture Mode • **1** - Hybrid Mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version Version 5 and above will support EMV.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	• 1-9 - Indoor Terminal/Register • A-Z - Outdoor Terminal/Pump • a-z - Additional Outdoor Terminal/Pump • !, @, #, $, %, ^, &, *, (,), - Car Wash Kiosk
Message Sequence Number	4	N	REQD	Message Sequence Number
Transaction Code	2	N	REQD	See Appendix E, "Transaction Code Values".
Account Type	1	A/N	REQD	Appendix F, "Account Types".
Entry Method	1	AN	REQD	See Appendix G, "Entry Type Values".
Request Type	1	N	REQD	• **0** - Original request-Host authorizes transaction if required and posts the transaction to merchant account • **1** - Resubmittal/Hybrid request-Host does not authorize, but only posts the transaction. This action flag signifies a settlement record being sent from the terminal
Batch/Shift Number	11	N	REQD	Current batch/shift number

TABLE 2-1 Transaction Request Messages

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Transaction Sequence Number	4	N	REQD	Transaction Sequence Number
Local Transaction Date	8	N	REQD	Local Transaction Date
Local Transaction Time	6	N	REQD	Local Transaction Time
Total Amount	8	N	REQD	See the definition in the Glossary on page 265.
*Track Data Card Processing Track I / II (swiped), PAN=YYMM (manual / resubmittal)	1-98 18-98	A/N A/N	REQD CDTL	See the definition in the Glossary on page 265. If using UID for subsequent transactions, it should be used in place of PAN.
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
*Product Information	35-643	A/N	CDTL	See Appendix L, "Product Information Values".
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Retrieval Data	30-50	A/N	CDTL	See the definition in the Glossary on page 265.
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Authorization Code	6	A/N	CDTL	See the definition in the Glossary on page 265.
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
*Encrypted PIN Block or * Offline EBT Approval Data	36 or 22	A/N	CDTL	See the definition in the Glossary on page 265.

TABLE 2-1 Transaction Request Messages

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Encrypted PIN Block	Bytes 0-19 - 20	A/N	REQD	Key Serial Number See the definition in the Glossary on page 265.
	Bytes 20-35 - 16	A/N	REQD	Encrypted PIN Block
Offline EBT Approval Data	Byte 0 - 1	A	REQD	0x20 - Space Filler
	Bytes 1-15 - 15	A/N	REQD	EBT Voucher Number; Space-filled for EBT Issuers who do not use voucher numbers
	Bytes 16-21 - 6	A/N	REQD	EBT Authorization Code
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Cash Back Amount	8	N	CDTL	Amount of cash back requested; Only for Debit and EBT cash benefit transactions
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Customer Data	2-639	A/N	CDTL	See the definition in the Glossary on page 265.
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Miscellaneous Retain/Return Data	0-100	A/N	VAR	See Miscellaneous Retain/Return Data.
	Bytes 0-1 - 2	A/N	CDTL	Account Level Processing (ALP) Result
	Bytes 2-3 - 2	A/N	CDTL	Assurance level for a token transaction
	Bytes 4-14 - 11	A/N	CDTL	Requester ID for a token transaction
	Bytes 15-18 - 4	A/N	CDTL	Last 4 digits of the original PAN that was tokenized
	Bytes 19-21 - 3	A/N	CDTL	Wallet ID for a digitized PAN transaction
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Terminal Features Data	1 - 8	A/N	VAR	See Appendix H, "Terminal Features".
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
EMV		Tag Value	Required for Chip Cards	See Appendix W, "EMV Data Elements".

TABLE 2-1 Transaction Request Messages

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow.
eParms (additional P2PE data)	0-300	AN	OPTL	Data should not exceed 300 in length
Field Separator	1	A	REQD	0x1c
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		REQD	See Protocol-Dependent Fields.

2.2 Transaction Response (TRSP)

TABLE 2-2 Transaction Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Transaction Code	2	N	CNST	Echoed from request
Account Type	1	A/N	CNST	Echoed from request except for debit transactions. If it is a debit transaction, this is the account against which the transaction is posted.
Entry Method	1	AN	CNST	Echoed from request
Request Type	1	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Transaction Sequence Number	4	N	CNST	Echoed from request
Local Transaction Date	8	N	CNST	Echoed from request
Local Transaction Time	6	N	CNST	Echoed from request
Total Amount	8	N	CNST	See the definition in the Glossary **on page 265**.
Action Code	4	N	CNST	See Appendix B, "Card Data and Product Information Codes".
Response Literal	16	A/N	CNST	See Appendix B, "Card Data and Product Information Codes".
Retrieval Data	30-50	A/N	CNST	See the definition in the Glossary on page 265.
Field Separator	1	A	CNST	0x1c

TABLE 2-2 Transaction Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Authorization Code	6	A/N	CNST	Returned from the authorizing network or echoed from the request
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Additional Receipt Data	164	A/N	CDTL	Additional receipt data returned from the host will vary depending on the transaction type
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Transaction Type Specific Data 1	8	A/N	CDTL	See Appendix M, "Transaction Type and Card Specific Data". In addition, see Transaction Set.
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Fee Amount	4	N	CDTL	Filler. Not used at this time
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Card Type Specific Data	8	N	CDTL	See Appendix M, "Transaction Type and Card Specific Data". In addition, see Transaction Set.
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow.
Transaction Type Specific Data 2	8	N	CDTL	See Appendix M, "Transaction Type and Card Specific Data". In addition, see Transaction Set.
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow.
Food Nutrition Services Number	8	N	CDTL	FNS or FCS number for EBT Food Stamp merchants Returned on EBT food benefit transactions
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow.

TABLE 2-2 Transaction Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Preferred/Allowed Product Code(s)	Variable		CDTL	Preferred or allowed product codes from the card issuer. Each code will be 3-bytes long and listed one after the other. There will be as many product codes as the issuer sends.
	Bytes 0-2: 3	N	CNST	See Appendix A, "Card Data and Product Information Codes" for a listing of product codes and examples of product description fields. Returned on Fleet One pre-auth transactions as the preferred fuel grade.
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow.

TABLE 2-2 Transaction Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Miscellaneous Retain/ Return Data	0-100	A/N	CDTL	See Miscellaneous Retain/Return Data.
	Bytes 0-1: 2	A/N	CDTL	Account Level Processing (ALP) Result
	Bytes 2-3: 2	A/N	CDTL	Assurance level for a token transaction
	Bytes 4-14:11	A/N	CDTL	Requester ID for a token transaction
	Bytes 15-18: 4	A/N	CDTL	Last 4 digits of the original PAN that was tokenized
	Bytes 19-21:3	A/N	CDTL	Wallet ID for a digitized PAN transaction Valid values are: • **101** - Required for Wallet Remote/Masterpass • **102** - Wallet Remote NFC • **103** - Apple Pay • **216** - Android Pay • **217** - Samsung Pay • **VCO** - Visa Checkout
	Bytes 22-56: 35	A/N	CDTL	Payment Account Reference (PAR). Returned starting from message format version 6.
	Byte 57: 1	A/N	CDTL	UID response • **0** - no error • **3** - UID look up failed, security code mismatch • **4** - UID look up failed, merchant number mismatch • **9** - UID creation failed; original PAN returned
	Bytes 58-76: 19	A/N	CDTL	Unique Identifier (UID). If UID response is non zero, this field is filled with spaces.
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow.
EMV		Tag Value	Required for Chip Cards	See EMV Response Fields.

TABLE 2-2 Transaction Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Field Separator	1	A	CDTL	0x1c - Required if additional data fields follow
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

2.3 Addendum Data Message

The Addendum Data Message is used to replace the Product Information field in the normal transaction request (TREQ) message for low-memory terminals. Special coding is needed at the Host in order to use this message. Do not attempt to utilize the Addendum Data Message without prior approval/direction from Worldpay.

If instructed to do so, the Addendum Data message is required after a Fleet card transaction and contains the additional data required for Fleet card authorizations and settlement. The first 51 bytes should be the same as the matching Fleet transaction except for the Message Sequence Number and the Transaction Code. Up to seven Addendum Data messages may be sent to the Host for one Fleet card transaction to allow up to 20 product codes per transaction. The More Flag should be set to M if more than one Addendum Data message will be sent for one Fleet transaction. The last Addendum Data message should have the More Flag set to E.

The normal request-response message flow is altered when using the addendum message. See the sample data presented in Sample Fleet Transaction Request/Response Packets with Addendum Data Message.

TABLE 2-3 Addendum Data Message

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var	-	REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	Same as Fleet TREQ
Processing Mode	1	N	REQD	Same as Fleet TREQ
Message Format Version	1	N	REQD	Same as Fleet TREQ
Terminal Identification	24	N	REQD	Same as Fleet TREQ
Device Identifier	1	A/N	REQD	Same as Fleet TREQ
Message Sequence Number	4	N	REQD	Same as Fleet TREQ
Transaction Code	2	N	REQD	37 - Fleet Card Addendum Data
Account Type	1	N	REQD	Same as Fleet TREQ
Entry Method	1	AN	REQD	Same as Fleet TREQ
Request Type	1	N	REQD	Same as Fleet TREQ
Batch/Shift Number	11	N	REQD	Same as Fleet TREQ
Transaction Sequence Number	4	N	REQD	Same as Fleet TREQ
More Flag	1	A/N	REQD	• **E** - Ending Fleet Addendum Data message • **M** - Additional Fleet Addendum Data messages to follow
Product Information	35-99	A/N	REQD	See Appendix L, "Product Information Values".

TABLE 2-3 Addendum Data Message

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Field Separator	1	A	REQD	0x1c
Customer Data	2-99	A/N	REQD	See the definition in the Glossary on page 265.
Field Separator	1	A	REQD	0x1c
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		REQD	See Protocol-Dependent Fields.

2.4 Transaction Response (Fleet TREQs and Intermediate Addendum Data Messages)

This is the response for a Fleet transaction request and any Addendum Data Messages which have the More Flag set to M. The final Addendum Data Message (More Flag = E) response will be formatted as a TRSP for the original Fleet transaction request.

TABLE 2-4 Transaction Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Transaction Code	2	N	CNST	Echoed from request
Account Type	1	N	CNST	Echoed from request
Entry Method	1	AN	CNST	Echoed from request
Request Type	1	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Transaction Sequence Number	4	N	CNST	Echoed from request
Action Code	4	N	CNST	**0000** - Ready; any non-zero response indicates an error
Response Literal	16	A	CNST	• **READY** - Host is ready to accept Addendum Data Messages • **NO MATCHING REQ** - No matching original request was found • **INVALID DATA** - Some information in the request was invalid
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

2.5 Sample Credit Transaction Request/response Packets

The following examples are based on terminal 5429290010000041001177048 in hybrid mode, starting with their 67th transaction on June 12, 2007 at 3:42 pm, which was a swiped Visa at the pump (Device ID A). Subsequent transactions are inside (Device ID 1) transactions.

2.5.1 Credit Card Preauthorization

Example: Request

```
LP13542929001000041001177048A0724021202007052401300672007061215422800000100
4446661234567892=05121010000
```

Example: Host Response

```
LP13542929001000041001177048A0724021202007052401300672007061215422800000100
0000APPROVED       216319999999082163012345678ABCD1A 000100<FS>006112<FS
><FS> Y0N
```

2.5.2 Credit Card Completion

Example: Request

```
LP13542929001000041001177048A0725031202007052401300672007061215432300000489
4446661234567892=05121010000<FS><FS>216319999999082163012345678ABCD1A 000
100<FS>006112
```

Example: Host Response

```
LP13542929001000041001177048A0725031202007052401300672007061215432300000489
0000APPROVED 216319999999082163012345678ABCD1A 000100<FS>006112<F S><FS> Y0N
```

2.5.3 Credit Card Sale

Example: Request

```
LP13542929001000041001177048107260111020070524013006820070612154005000003347
4446661234567892=05121010000
```

Example: Host Response

```
LP13542929001000041001177048107260111020070524013006820070612154005000003470000APPROVED       216319999999082163012345678ABCD1A 000347<FS>006110<FS><FS> Y0N
```

2.5.4 Credit Card Void Sale

Example: Request

```
LP13542929001000041001177048107270511020070524013006820070612154046000003474446661234567892=05121010000<FS><FS>216319999999082163012345678ABCD1A 000347<FS>006110
```

Example: Host Response

```
LP13542929001000041001177048107270511020070524013006820070612154046000003470000APPROVED00000000000000000347<FS>006110<FS><FS> Y0N
```

2.5.5 Credit Card Return

Example: Request

```
LP13542929001000041001177048107300411020070524013007120070612154533000003524446661234567892=05121010000
```

Example: Host Response

```
LP13542929001000041001177048107300411020070524013007120070612154533000003520000APPROVED0000000000000009 000352<FS>154607<FS><FS> Y0N
```

2.5.6 Credit Card Sale

The following example is based on terminal 5429290010000041001176958 in hybrid mode, showing a Partial Approval of test account 4446669876543212. The sale is for $1.00 and approved for $0.90.

Example: Request

```
LP13542929001000041001176958100930111020080409005003520080414171854000001004446669876543212=0812101011
0000499<FS><FS><FS><FS><FS><FS><FS><FS>1
```

Example: **Host Response**

```
LP13542929001000041001176958100930111020080409005003
52008041417185400000090000OAPPROVED
00000000000000000090<FS>PA1854<FS><FS>
Y0N1 <FS><FS>00000000<FS>00000000<FS>00000000
```

2.6 Sample Debit Transaction Request/Response Packets

The examples in this section are based on terminal 5429290010000041001177048 with Device ID A processing their 50th transaction on May 30, 2007 at 7:24 am.

2.6.1 Debit Card Preauthorization

Example: Request

```
LP13542929001000041001177048A5124130202007053023400502007053007242400005000
54989381728341232=010100000<FS><FS><FS><FS>0000000000000000DFD35842EB10DA
1C3525
```

Example: Host Response

```
LP13542929001000041001177048A5124131202007053023400502007053007242400005000
0000APPROVED89X234T000050000530072415<FS>987654<FS><FS>00000
000<FS>0000
```

2.6.2 Debit Card Completion

Example: Request

```
LP13542929001000041001177048A5125140202007053023400502007053007242400001740
54989381728341232=010100000<FS><FS>89X234T000050000530072415<FS>9876
54
```

Example: Host Response

```
LP13542929001000041001177048A5125141202007053023400502007053007242400001740
0000APPROVED89X234T000050000530072415<FS>987654<FS><FS>00000
000<FS>0000
```

2.6.3 Debit Card Void Sale

Example: Request

```
LP13542929001000041001177048A5134150102007053023400502007053007242400001740
54989381728341232=010100000<FS><FS>89X234T000050000530072415<FS>9876
54<FS>0000000000000000DFD35842EB10DA1C3525
```

Example: Host Response

```
LP13542929001000041001177048A513415110200705302340050200705300724240000174 0
0000APPROVED89X234T000050000530072415<FS>987654<FS><FS>00000
000<FS>0000
```

Sample EBT transaction request/response packets

The examples below are based on terminal 542929001000041001177048, Device ID 4 processing their 37thth transaction on May 30, 2007 at 11:24 pm. The EBT account type was a cash benefit account and the final sale amount was 8.99.

2.7 Sample EBT Transaction Request/Response Packets

The examples below are based on terminal 5429290010000041001177048, Device ID 4 processing their 37thth transaction on May 30, 2007 at 11:24 pm. The EBT account type was a cash benefit account and the final sale amount was 8.99.

2.7.1 EBT Cash Benefit Sale

Example: Request

```
LP13542929001000041001177048465412121020070530123003720070530112424000008995498938172834123
2=010100000<FS><FS><FS><FS>0000000000000000DFD35842EB10DA1C3525
```

Example: Host Response

```
LP13542929001000041001177048465412121020070530123003720070530112424000008990000APPROVED89X234T000050000530072415<FS>654321<FS><FS>00000000<FS>0000<FS>00000000<FS>00000000
```

2.7.2 EBT Return

Example: Request

```
LP13542929001000041001177048465452621070020530123003720070530112424000008995498938172834123
2=010100000<FS><FS><FS><FS>0000000000000000DFD35842EB10DA1C3525
```

Example: Host Response

```
LP13542929001000041001177048465452621020070530123003720070530112424000008990000APPROVED89X234T000050000530072415<FS>123456<FS><FS>00000000<FS>0000<FS>00000000<FS>00000000
```

2.8 Sample Fleet Transaction Request/response Packets

The examples below are based on terminal 5429290010000041001177048, Device ID X processing their 133rd transaction on May 30, 2007 at 1:55 pm. The fleet card was used to purchase 58.443 gallons of super unleaded at self -service pump. Price per gallon was 1.199 and the final sale amount was 70.07.

2.8.1 Fleet Card Preauthorization

Example: Request

```
LP13542929001000041001177048X142232120200705309990133200705301355000000500
06400168172834123 2=010100000<FS><FS><FS><FS><FS><FS>077429138:A122:890125
```

Example: Host Response

```
LP13542929001000041001177048X142232120200705309990133200705301355000000500
00000APPROVED89X234T000050000530072415<FS>123456<FS><FS> Y0N
```

2.8.2 Fleet Card Completion

Example: Request

```
LP13542929001000041001177048X142933120200705309990133200705301355000000700
76400168172834123 2=010100000<FS>01?004:S:G:058443:0001199:00007007\<FS>89X
234T000050000530072415<FS>123456<FS><FS><FS>077429138:A122:890125
```

Example: Host Response

```
LP13542929001000041001177048X142933120200705309990133200705301355000000700
70000APPROVED89X234T000050000530072415<FS>123456<FS><FS> Y0N
```

2.8.3 Fleet Card Void Sale

Example: Request

```
LP13542929001000041001177048X143035110200705309990133200705301355000000700
76400168172834123 2=010100000<FS>01?004:S:G:058443:0001199:00007007\<FS>89X
234T000050000530072415<FS>123456<FS><FS><FS>077429138:A122:890125
```

Example: Host Response

```
LP13542929001000041001177048X143035110200705309990133200705301355000000700
70000APPROVED89X234T000050000530072415<FS>123456<FS><FS> Y0N
```

2.9 Sample Fleet Transaction Request/Response Packets with Addendum Data Message

The examples below are based on a low-memory terminal using the Addendum Data Message with terminal identification number 54292900100000410011770 48, Device ID X processing their 133rd transaction on May 30, 2007 at 1:55 pm. The fleet card was used to purchase 58.443 gallons of super unleaded at self -service pump. Price per gallon was 1.199 and the final sale amount was 70.07.

You should only use this message flow when specifically approved/directed to do so by Worldpay.

2.9.1 Fleet Card Preauthorization

Example: Request

```
LP13542929001000041001177048X142232110200705309990133200705301355000000500064001681728341232=010100000<FS><FS><FS><FS><FS><FS>077429138:A122:890125
```

Example: Host Addendum Response

```
LP13542929001000041001177048X14223211020070530999013300000READY
```

2.9.2 Fleet Card Preauthorization Addendum

Example: Request

```
LP13542929001000041001177048X14233711020070530999013E<FS>077429138:A122:890125
```

Example: Host Response

```
LP13542929001000041001177048X142332110200705309990133200705301355000000500000000APPROVED 89X234T000050000530072415<FS>123456<FS><FS> Y0N
```

2.9.3 Fleet Card Completion

Example: Request

```
LP13429290010000410011770 48X142933110200705309990133200705301355000000700764001681728341232=010100000<FS><FS>89X234T000050000530072415<FS>123456
```

Example: Host Addendum Response

```
LP13542929001000041001177048X14293111020070530999013300000READY
```

2.9.4 Fleet Card Completion Addendum

Example: Request

```
LP13542929001000041001177048X14303711020070530999013 3E01?004:S:G:058443:000
1199:00007007\<FS>077429138:A122:890125
```

Example: Host Response

```
LP13542929001000041001177048X14303311020070530999013320070530135500000070070
0000APPROVED 89X234T000050000530072415<FS>123456<FS><FS> Y0N
```

2.10 Sample Information Update Message Flow Packets

The example below is based on terminal 5429290010000410011770481142231C, Device ID 1, processing their 133rd transaction on May 30, 2007 at 1:55 pm. A Fuelman card was used to purchase 58.443 gallons of super unleaded at lane 1 inside the store. Price per gallon was 1.199 and the sale amount was 70.07. The sale request returned a request for the Customer Number, so an Information Update message was sent to the host with the additional information. If the batch uploads, only one transaction is sent to the host with all of the information.

2.10.1 Fleet Card Sale

Example: Request

```
LP13542929001000041001177048114223 1C10200705309990133200705301355000000700 7
70764981728341232=010100000<FS>01?004:S:G:058443:0001199:00007007\<FS><FS
><FS><FS><FS>077429138:A122:890125
```

Example: Host Response

```
LP13542929001000041001177048114223 1C10200705309990133200705301355000000700 7
0000APPROVED 89X234T000050000530072415<FS>123456<FS><FS> Y1N
```

2.10.2 Information Update

Example: Request

```
LP13542929001000041001177048114293 8C10200705309990133200705301355000000700 7
70764981728341232=010100000<FS>01?004:S:G:058443:0001199:00007007\<FS>89X
234T000050000530072415<FS><FS><FS><FS>077429138:A122:890125:I010203
```

Example: Host Response

```
LP13542929001000041001177048114293 8C10200705309990133200705301355000000700 7
0000RECEIVED
```

2.11 Split Tender Sample Information Update Message Flow Packets

The example below is based on terminal 54292900100004100117704811422 31C10200705309990133200705301355000000700770764981728341232, Device ID 1, processing their 133rd transaction on May 30, 2007 at 1:55 pm. A Fuelman card was used to purchase 58.443 gallons of super unleaded at lane 1 inside the store. Price per gallon was 1.199 and the sale amount was70.07. The sale request returned a partial approval of 65.00. The Cardholder paid the remaining difference with cash. An Information Update message was sent to the host with the product code 0913 showing the 5.07. If the batch is sent to the host as a part of a Hybrid Upload, only one transaction is sent to the host with all of the information.

Example: Fleet Card Sale Request

```
LP13542929001000041001177048114223 1C10200705309990133200705301355000000700770764981728341232=010100000<FS>01-004:S:G:058443:0001199:00007007\<FS><FS><FS><FS><FS>077429138:A122:890125
```

Example: Host Response

```
LP13542929001000041001177048114223 1C10200705309990133200705301355000000650000000APPROVED 89X234T000050000530072415<FS>123456<FS><FS> Y1N1
```

Example: Information Update Request

```
LP13542929001000041001177048114293 8C10200705309990133200705301355000000650070764981728341232=010100000<FS>01-004:S:G:058443:0001199:00007007\913:O:x:001000:0005070:00000507\<FS>89X234T000050000530072415<FS><FS><FS><FS>077429138:A122:890125:I010203
```

Example: Host Response

```
LP13542929001000041001177048114293 8C10200705309990133200705301355000000650000000RECEIVED .
```

Fleet Card Sale Upload

Example: Request (if the batch uploads)

```
LP13542929001000041001177048114303 1C10200705309990133200705301355000000700770764981728341232=010100000<FS>01?004:S:G:058443:0001199:00007007\<FS>89X234T000050000530072415<FS>123456<FS><FS><FS>077429138:A122:890125:I010203
```

Example: Host Response

```
LP13542929001000041001177048114303 1C10200705309990133200705301355000000700770
```

```
0000UPLOADED89X234T00005000053007241 5<FS>123456<FS><FS> Y0N
```

worldpay

3

Administrative Transactions

Use administrative transactions to request information from or send information to the host. This information is not specific to one transaction or card type.

The topics discussed in this chapter are:

3.1 Host Batch Totals Inquiry Request

This request and response provides a means of checking the terminal totals with the current host totals without closing a batch. This message can be sent at any time.

If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-1 Host Batch Totals Inquiry Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Worldpay Petroleum
Processing Mode	1	N	REQD	• **0** - Host Capture Mode • **1** - Hybrid Mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version Version 5 and above will support EMV.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Identification
Message Sequence Number	4	N	REQD	Message Sequence Number
Administrative Code	5	N	REQD	**61000** - Host Batch Totals Inquiry
Batch/Shift Number	11	N	REQD	Current batch/shift number
Configuration Information	20	A/N	REQD	See Appendix I, "Configuration Information" for field value information.
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Variable		REQD	See Protocol-Dependent Fields.

3.2 Host Batch Totals Inquiry Response

Table 3-2 lists the fields for the Host Batch Total Inquiry response.

> **NOTE:** The Number of Transaction fields contain the number of sale, return, void, and completion (but not pre-auth) transactions. The Amount of Sales fields contain the total amounts of the sale, completion and void return transactions. The Amount of Returns fields contain the total amounts of the return and void sale transactions. The Net Amount is the absolute value of the difference between the sales and returns totals.

TABLE 3-2 Host Batch Totals Inquiry Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Current Batch Totals	108	A/N		See Appendix K, "Terminal Batch Totals" for field value information.
Previous Batch Number	11	N		
Previous Batch Totals	108	A/N		See Appendix K, "Terminal Batch Totals" for field value information.
Host Date	8	N	CNST	Host Date adjusted for local date
Host Time	6	N	CNST	Host Time adjusted for local time
* Host Gift Totals	28	N	CNST	See Appendix I, "Configuration Information" for field value information.
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

3.3 Host Batch Close Request

This request and response closes the current batch and allows transactions for the next batch to start. Based on the Administrative Code, the close request message will either request the host to post or not post the current and outstanding batches' transactions, or start a new batch for subsequent transactions (TREQs). The close response will return the result of the comparison of the terminal totals with the host totals. It also contains a flag denoting any configuration information that may have changed which requires the terminal to request updated information.

In host-capture mode, if the batch is out-of-balance, the batch is closed on the host and the differences must be reconciled manually. In hybrid mode, if the batch is out-of-balance, the terminal is expected to upload all of its transactions for the batch. If the upload is successful, the host will post the uploaded transactions in place of the captured transactions.

If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-3 Host Batch Close Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Worldpay Petroleum
Processing Mode	1	N	REQD	• **0** - Host Capture Mode • **1** - Hybrid Mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version Version 5 and above will support EMV.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Identification
Message Sequence Number	4	N	REQD	Message Sequence Number
Administrative Code	5	N	REQD	• **62100** - Shift Close (merchant operator Initiated, Post) • **62200** - Shift Close (merchant operator Initiated, do not Post) • **62300** - Host Batch Close (Auto-close, do not Post) • **62400** - Host Day Close (Post) • **62500** - Host Batch Close (Auto-close, Post)

TABLE 3-3 Host Batch Close Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Batch/Shift Number	11	N	REQD	Current batch/shift number
* Terminal Batch Totals	108	N	REQD	See Appendix K, "Terminal Batch Totals".
Note: The Number of Transaction fields contain the number of sale, return, void, and completion (but not pre-authorization) transactions. The Amount of Sales fields contain the total amounts of the sale, completion and void return transactions. The Amount of Returns fields contain the total amounts of the return and void sale transactions. The Net Amount is the absolute value of the difference between the sales and returns totals.				
*Configuration Information	20	A/N	REQD	See Appendix I, "Configuration Information".
Request Groups	Variable	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Variable		REQD	See Protocol-Dependent Fields.

3.4 Host Batch Close Response

NOTE: The Number of Transaction fields contain the number of sale, return, void, and completion (but not pre-auth) transactions. The Amount of Sales fields contain the total amounts of the sale, completion and void return transactions. The Amount of Returns fields contain the total amounts of the return and void sale transactions. The Net Amount is the absolute value of the difference between the sales and returns totals.

TABLE 3-4 Host Batch Close Response

Field Name	Size	Type	Condition	Description/Field Values
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request

TABLE 3-4 Host Batch Close Response

Field Name	Size	Type	Condition	Description/Field Values
Response Literal	16	A	CNST	• BATCH CLOSED - Terminal & host totals agree. Batch has been closed. • OUT OF BALANCE - Terminal & host totals do not match. Batch has been closed on host-capture terminals. Host-capture terminals must be manually reconciled in order to balance to the host totals. Hybrid-based applications should initiate a batch upload session as defined in Hybrid Batch Upload Request (Header Packet) and Hybrid Batch Upload Response (Header Packet) in order to balance. • BTCH PREV CLOSED - The batch was previously closed via a close request, an upload, or by exceeding the maximum number of upload retries.
Field Separator	1	A	CNST	0x1c
* Host Batch Totals	108	N	CNST	See Appendix K, "Terminal Batch Totals" for field value information.
Host Date	8	N	CNST	Host Date adjusted for local date
Host Time	6	N	CNST	Host Time adjusted for local time
Host Batch Control Number	10	N	CNST	See the definition in the Glossary on page 265.
Configuration Change Flag	1	A/N	CNST	See Appendix O, "Configuration Change Flag" for field value information.
Mail Flags (N/A)	9	A/N	CNST	
Download Time	4	A/N	CNST	Military Time Stamp Value (HHMM) for per-forming a download. Allows for 8888 as a value

TABLE 3-4 Host Batch Close Response

Field Name	Size	Type	Condition	Description/Field Values
Download Appl. Version	0-8	A/N	CNST	POS Download System recognized Application Name
Field Separator	1	A	REQD	0x1c
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Variable		REQD	See Protocol-Dependent Fields.

3.5 Hybrid Batch Upload Request (Header Packet)

This request and response is used only if the terminal is in hybrid mode and the result of the Batch Close request is OUT OF BALANCE. The Header Packet message announces to the host that the terminal wants to override the host totals. All transactions (TREQs) to be posted must follow with their Request Type value set to 1. The transaction responses will have a response literal of UPLOADED. After the last transaction is resubmitted, a Trailer Packet message will need to be sent. When uploading all transactions (TREQs) to be posted, the POS must include all Retrieval Data sent to it from the last Host responses.

Only the previous batch may be uploaded to the host. If the current batch is closed, the previous batch will no longer be available for uploading to the host. If the upload is unsuccessful three times or the subsequent batch is closed without the first batch receiving a BATCH CLOSED response, the host will post the original captured transactions and the first batch will need to be reconciled manually.

If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

NOTE: The Number of Transaction fields contain the number of sale, return, void, and completion (but not pre-authorization) transactions. The Amount of Sales fields contain the total amounts of the sale, completion and void return transactions. The Amount of Returns fields contain the total amounts of the return and void sale transactions. The Net Amount is the absolute value of the difference between the sales and returns totals.

TABLE 3-5 Hybrid Batch Upload Request (Header Packet)

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Lynk Petroleum
Processing Mode	1	N	REQD	**1** - Hybrid Mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version Version 5 and above will support EMV.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Identification
Message Sequence Number	4	N	REQD	Message Sequence Number

TABLE 3-5 Hybrid Batch Upload Request (Header Packet)

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Administrative Code	5	N	REQD	Valid values are: • **63100** - Hybrid Shift Upload (merchant operator Initiated, Post) • **63200** - Hybrid Shift Upload (merchant operator Initiated, do not Post) • **63300** - Hybrid Batch Upload (Auto close do not Post) • **63400** - Hybrid Day Upload (Post) • **63500** - Hybrid Batch Upload (Auto close, Post)
Batch/Shift Number	11	N	REQD	Current batch/shift number
* Terminal Batch Totals	108	N	REQD	See Appendix K, "Terminal Batch Totals" for field value information.
* Configuration Information	20	A/N	Required	See Appendix I, "Configuration Information" for field value information.
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Variable		Required	See Protocol-Dependent Fields.

3.6 Hybrid Batch Upload Response (Header Packet)

TABLE 3-6 Hybrid Batch Upload Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Response Literal	16	A	CNST	• **READY** - Host is ready to begin accepting batch upload. Terminal should begin transmitting all records as resubmittals. After all records have been successfully transmitted, the terminal must transmit the batch trailer packet to signify the end of the batch upload. • **PLEASE TRY LATER** - Host is currently unable to accept batch upload. Wait 20 m, and then try again. • **BTCH PREV CLOSED** - The batch was previously closed via an upload or by exceeding the maxi- mum number of upload retries.
Host Date	8	N	CNST	Host Date adjusted for local date
Host Time	6	N	CNST	Host Time adjusted for local time
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Variable		CNST	See Protocol-Dependent Fields.

3.7 Hybrid Batch Upload Request (Trailer Packet)

Use this request and response only if the terminal is in hybrid mode and uploading an out-of-balance batch. The Trailer Packet message announces to the host that all transactions to be posted have been resubmitted. The host will compare the totals from the Header Packet with the totals from the resubmitted TREQs and the totals from the Trailer Packet. If any of the totals do not match, the batch is still considered to be out-of-balance. The upload procedure may be retried up to three times before the host decides that it must be reconciled manually. At that time, the host will post the originally captured TREQs.

If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

> **NOTE:** The Number of Transaction fields contain the number of sale, return, void, and completion (but not pre-auth) transactions. The Amount of Sales fields contain the total amounts of the sale, completion and void return transactions. The Amount of Returns fields contain the total amounts of the return and void sale transactions. The Net Amount is the absolute value of the difference between the sales and returns totals.

TABLE 3-7 Hybrid Batch Upload Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Lynk Petroleum
Processing Mode	1	N	REQD	**1** - Hybrid Mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version Version 5 and above will support EMV.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Identification
Message Sequence Number	4	N	REQD	Message Sequence Number

TABLE 3-7 Hybrid Batch Upload Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Administrative Code	5	N	REQD	Valid values are: • **64100** - Hybrid Shift Upload (merchant operator Initiated, Post) • **64200** - Hybrid Shift Upload (merchant operator Initiated, do not Post) • **64300** - Hybrid Batch Upload (Auto close do not Post) • **64400** - Hybrid Day Upload (Post) • **64500** - Hybrid Batch Upload (Auto close, Post)
Batch/Shift Number	11	N	REQD	Current batch/shift number
* Terminal Batch Totals	108	N	REQD	See Appendix K, "Terminal Batch Totals" for field value information.
* Configuration Information	20	A/N	REQD	See Appendix I, "Configuration Information" for field value information.
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		REQD	See Protocol-Dependent Fields.

3.8 Hybrid Batch Upload Response (Trailer Packet)

TABLE 3-8 Hybrid Batch Upload Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Response Literal	16	A	CNST	• **BATCH CLOSED** - Host received count and amount that was specified in the batch header packet • **OUT OF BALANCE** - Host received count and amount other than what was specified in the batch header packet
Host Date	8	N	CNST	Host Date adjusted for local date
Host Time	6	N	CNST	Host Time adjusted for local time
Host Batch Control Number	10	N	CNST	See the definition in the Glossary on page 265.
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Variable		CNST	See Protocol-Dependent Fields.

3.9 Communications Test Request

This request and response allows the communications between the terminal and the host to be tested without executing any transactions. Typically, the Communications Test message is used during the initial installation of the terminal to verify connectivity to the host. It can also be used to track a communications problem. This message can be sent at any time.

If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-9 Communications Test Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Lynk Petroleum
Processing Mode	1	N	REQD	• **0** - Host capture mode • **1**- Hybrid Mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version Version 5 and above will support EMV.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Identification
Message Sequence Number	4	N	REQD	Message Sequence Number
Administrative Code	5	N	REQD	**71000** - Communications Request Test
Batch/Shift Number	11	N	REQD	Current batch/shift number
* Configuration Information	20	A/N	REQD	See Appendix I, "Configuration Information" for field value information.
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		REQD	See Protocol-Dependent Fields.

3.10 Communications Test Response

TABLE 3-10 Communications Test Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Response Literal	16	A	CNST	SUCCESSFUL X-MIT-Returned for all good communications tests
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

3.11 Update Terminal Configuration Request

This request and response allows the host to determine the types of cards the terminal will accept, and the types of terminal processing allowed for each card accepted. The processing information includes the payment type of cards (for example, credit, debit, or fleet), the amount to be used when requesting a preauthorization transaction, and the maximum amount the terminal is allowed to authorize when communication to the host is down.

If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-11 Update Terminal Configuration Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Lynk Petroleum
Processing Mode	1	N	REQD	Valid values are: • **0** - Host capture mode • **1** - Hybrid Mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version Version 5 and above will support EMV.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Identification
Message Sequence Number	4	N	REQD	Message Sequence Number
Administrative Code	5	N	REQD	**72100** - Update Terminal Configuration
Batch/Shift Number	11	N	REQD	Current batch/shift number
Configuration Information	20	A/N	REQD	See Appendix I, "Configuration Information" for field value information.
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		REQD	See Protocol-Dependent Fields.

3.12 Update Terminal Configuration Response

TABLE 3-12 Update Terminal Configuration Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Config Update Information	0-1584		CNST	Appendix P, "Configuration Update Information" for field value information.
Field Separator	1	A	REQD	0x1c
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

3.13 Update Merchant Configuration Request

This request and response allows the host to control the terminal's communication information. This includes the telephone numbers for connecting to the host (if using a dial-up line), VSAT/IP addresses and the host-capture or hybrid mode. If specific information is to be printed on every receipt, that information is provided here by the host.

If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-13 Update Merchant Configuration Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Lynk Petroleum
Processing Mode	1	N	REQD	**0** - Host capture mode **1** - Hybrid Mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version (Version 5 and above will support EMV.)
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Identification
Message Sequence Number	4	N	REQD	Message Sequence Number
Administrative Code	5	N	REQD	**73100** - Update Merchant Configuration
Batch/Shift Number	11	N	REQD	Current batch/shift number
* Configuration Information	20	A/N	REQD	See Appendix I, "Configuration Information" for field value information.
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		REQD	See Protocol-Dependent Fields.

3.14 Update Merchant Configuration Response

NOTE: Values of zero indicate no change required. POS should use existing POS value for these fields. If the field contains a 0 the POS should not change the value for that field. It should keep the value that is already present. If the field does not contain a 0, then the POS should update the parameter field with the value given on the PDL.

TABLE 3-14 Update Merchant Configuration Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Receipt Header Information	0-164	A/N	CNST	See Appendix N, "Receipt Header Information" for field value information.
Field Separator	1	A	CNST	0x1c
Primary Host Phone	7-20	N	CNST	Primary Host Phone-does not contain formatting characters.
Field Separator	1	A	CNST	0x1c
Secondary Host Phone	7-20	N	CNST	Secondary Host Phone-does not contain formatting characters.
Field Separator	1	A	CNST	0x1c
Processing Mode	2	N	CNST	Valid values are: • **1** - Hybrid • **0** - Host Filler is 1.
Field Separator	1	A	CNST	0x1c
Surcharge Fees	20	N	CNST	See Appendix Q, "Surcharge Fees" for field value information.

TABLE 3-14 Update Merchant Configuration Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Field Separator	1	A	CNST	0x1c
Primary VSAT/IP Address	7-15	A/N	CNST	Primary satellite address or IP address - valid only if the terminal is setup for VSAT or IP communications. (xxx.xxx.xxx.xxx)
Field Separator	1	A	CNST	0x1c
Secondary VSAT/IP Address	7-15	A/N	CNST	Secondary satellite address or IP address - valid only if the terminal is setup for VSAT or IP communications. (xxx.xxx.xxx.xxx)
Field Separator	1	A	CNST	0x1c
URL and Port Address	0-100	A/N	CNST	URL-valid only if the terminal is set up for IP communications
Field Separator	1	A	CNST	0x1c
Miscellaneous Features	0-15	A/N	CDTL	See Appendix R, "Miscellaneous Features" for field value information.
Field Separator	1	A	CNST	0x1c
End of Day (EOD) Posting Options	9	N	CNST	See Appendix S, "End of Day Posting Options" for field value information.
Field Separator	1	A	CNST	0x1c
Download Phone	7-20	N	CDTL	Download Phone -does not contain formatting characters.
Field Separator	1	A	CNST	0x1c
Site Advertising Lines	0-164	A/N	CDTL	Site Advertising contains up to 4 receipt footer fields delimited by <LF> characters (0x0a). Maximum 40 characters per footer field
Field Separator	1	A	CNST	0x1c
Master Cutoff Amount	6	N	CNST	Master Cutoff Amount for all traffic, Formatted as xxxx.xx (implied decimal)
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

3.15 Update Card Ranges Request

This request and response allows the host to update credit and fleet card BIN ranges for a terminal. Only card types accepted by the merchant will be provided with BIN ranges. This message can be sent at any time.

If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-15 Update Card Ranges Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Lynk Petroleum
Processing Mode	1	N	REQD	Valid values are: • **0** - Host capture mode • **1** - Hybrid Mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version Version 5 and above will support EMV.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Identification
Message Sequence Number	4	N	REQD	Message Sequence Number
Administrative Code	5	N	REQD	**74100** - Update Card Ranges
Batch/Shift Number	11	N	REQD	Current batch/shift number
* Configuration Information	20	A/N	REQD	See Appendix I, "Configuration Information".
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		REQD	See Protocol-Dependent Fields.

3.16 Update Card Ranges Response

TABLE 3-16 Update Card Ranges Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
* Card Range Update Data	0-9662		CDTL	See Appendix T, "Card Range Update Data" for field value information.
Field Separator	1	A	REQD	0x1c
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

3.17 Update Notification Request

This optional request/response allows the terminal to inform the host a successful update (terminal, merchant or card range) was received and all PDL values were applied. This message can be sent at any time.

If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

NOTE: All parameter updates must be successfully applied within the POS application before sending the update notification. If the POS has a problem loading or applying updates, it should disregard all the update values and maintain the original PDL values.

TABLE 3-17 Update Notification Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Lynk Petroleum
Processing Mode	1	N	REQD	Valid values are: • **0** - Host capture mode • **1** - Hybrid Mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version Version 5 and above will support EMV.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Identification
Message Sequence Number	4	N	REQD	Message Sequence Number
Administrative Code	5	N	REQD	**77110** - Partial Download Update **78110** - Complete Download Update
Batch/Shift Number	11	N	REQD	Current batch/shift number
Configuration Information	20	A/N	REQD	See Appendix I, "Configuration Information".
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		REQD	See Protocol-Dependent Fields.

3.18 Update Notification Response

TABLE 3-18 Update Notification Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Response Literal	16	A	CNST	NOTIFCATION RCVD
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

3.19 Generic Administration Error Response

This response is returned to the terminal when the host has detected an error in the format or data fields of an administration request. This will only be returned when the error is not covered in the defined requested response.

When the POS receives one of these responses, it treats the error as a failure. It displays the error including the response code. If the error occurs when attempting an automatic Admin Transaction run in the background, the POS should not attempt the transaction again as an automated transaction, unless prompted at the next attempted settlement.

In all cases where the Generic Admin Error Response is sent to the POS, the merchant operator should contact the Worldpay Help Desk for further information and instructions on how to proceed.

TABLE 3-19 Generic Administration Error Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from requestAppendix U, "Response Literal"
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Response Literal	16	A	CNST	DENIED TRANS. 99-where 99 is replaced by a 2-digit error code See Appendix U, "Response Literal" for additional codes.
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

3.20 System Health Check Request

This optional request/response allows the terminal to inquire on the status of the system on a regular basis in order to make decisions at the host as to whether the current connection is stable and should be continued to be used.

If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-20 System Health Check Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	LP - Lynk Petroleum
Processing Mode	1	N	REQD	Valid values are: • **0** - Host capture mode • **1** - Hybrid mode
Message Format Version	1	N	REQD	**6** - Current Host Message Version Version 5 and above will support EMV.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Identification
Message Sequence Number	4	N	REQD	Message Sequence Number
Administrative Code	5	N	REQD	**90000** - System Check
Batch/Shift Number	11	N	REQD	Batch/Shift Number
Configuration Information	20	A/N	REQD	See Appendix I, "Configuration Information".
Request Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		REQD	See Protocol-Dependent Fields.

3.21 System Health Check Response

TABLE 3-21 System Health Check Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Response Literal	16	A	OPTL	NOTIFICAT RCVD
Response Groups	Var	A/N	OPTL	See Chapter 6, "Group Data".
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

3.22 Sample Administrative Request/Response Packets

3.22.1 Host Batch Totals Inquiry

Example: Request

```
LP13542929001000041001177048199996100020070530233EQUPWP?V1.00VFIR1.00
```

Example: Host Response

```
LP13542929001000041001177048199996100020070530233020000050000000010000000400
00000000000000000000000000000002000010000000000000001000000000000000000000
00000000020000530232003000050000000000000005000000000000000000000000000000
00000000000000000000000000000000000000000000000000000020000530114530
```

3.22.2 Host Batch Close

Example: Request

```
LP13542929001000041001177048199996210020070530011020000500000000000000005000
00000000000000000000000000000000000000000000000000000000000000000000000000000
000000000EQUPWP?V1.00VFIR1.00
```

Example: Host Response

```
LP13542929001000041001177048199996210020070530011BATCH CLOSED<FS>020000
50000000000000005000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000002000053011453030011427331O
```

3.22.3 Hybrid Batch Upload (Header Packet)

Example: Request

```
LP13542929001000041001177048199996310020070530011020000500000000000000005000
00000000000000000000000000000000000000000000000000000000000000000000000000000
000000000EQUPWP?V1.00VFIR1.00
```

Example: Host Response

```
LP13542929001000041001177048199996310020070530011READY2000053023
4956
```

3.22.4 Hybrid Batch Upload (Transaction Resubmittal Packet)

Example: Request

```
LP1354292900100004100117704813305031112007053068600212007053017503500007007
4446661234567892=010100000<FS>01?004:S:G:058.44:001.199:00070.07\<FS>ABCD
EFGHIJK0123456 AZ80339248<FS>189023
```

Example: Host Response

```
LP1354292900100004100117704813305031112007053068600212007053017503500007007
0000APPROVED ABCDEFGHIJK0123456 AZ80339248<FS>189023
```

3.22.5 Hybrid Batch Upload (Trailer Packet)

Example: Request

```
LP13429290010000410011770481111164100200705300110200005000000000000000005000
000000000000000000000000000000000000000000000000000000000000000000000000000
000000000EQUPWP?V1.00VFIR1.00
```

Example: Host Response

```
LP135429290010000410011770481111164100200705300118BATCH CLOSED 2007053011
45303001142733
```

3.22.6 Update Terminal Configuration

Example: Request

```
LP13542929001000041001177048111117210020070530011EQUPWP?V1.00VFIR1.00
```

Example: Response

```
LP13542929001000041001177048111117210020070530011C122001002000007200000000000000000
D02200100200000720000000000000000
```

3.22.7 Update Merchant Configuration

Example: Request

```
LP13542929001000041001177048111117310020070530011EQUPWP?V1.00VFIR1.00
```

Example: Response

```
LP13542929001000041001177048111117310020070530011GAS?N?GO<LF>600 MORGAN FAL
```

```
LS RD.<LF>ATLANTA, GA. 30350<LF>(770) 396?1616<FS>9505829<FS>18008275965<
FS>11<FS>00000000000000000000<FS><FS><FS>0000000<FS>00 000<FS>1234567<FS><FS>050000
```

3.22.8 System Health Check

Example: Request

```
LP16134000013793760000000015114159000020093000 3<gs>G001Y<rs>
```

Example: Response

```
LP16134000013793760000000015114159000020200930003APPROVED<gs>R0030108RAFT
E470215RAFTHEALTHY=YES<rs>
```

3.23 Master/Session Make Key Request

This optional request/response allows the terminal to request that Worldpay generate a new, random working key, encrypted under the shared key exchange key. If successful, the system returns the encrypted working key and its check value. If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-22 Master/Session Make Key Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Lynk Petroleum
Processing Mode	1	N	REQD	Valid values are: • **0** - Host Capture Mode • **1** - Hybrid Mode
Message Format Version	1	N	REQD	6 - Current Host Message Version Note: EMV supported in Version 5 and above.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Information
Message Sequence Number	4	N	REQD	Message Sequence Number
Administrative Code	5	N	REQD	**91000** - Make Key Request
Batch/Shift Number	11	N	REQD	Batch/Shift Number
Configuration Information	20	A/N	REQD	See Configuration Information.
Request Groups	Var	A/N	REQD	See Group Data
Protocol Dependent Trailer	Var	A/N	REQD	See Protocol-Dependent Fields.

3.24 Master/Session Make Key Response

This optional request/response allows the terminal to request that Worldpay generate a new, random working key, encrypted under the shared key exchange key. If successful, the system returns the encrypted working key and its check value. If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-23 Master/Session Make Key Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	Echoed from request
Processing Mode	1	N	REQD	Echoed from request
Message Format Version	1	N	REQD	Echoed from request
Terminal Identification	24	N	REQD	Echoed from request
Device Identifier	1	A/N	REQD	Echoed from request
Message Sequence Number	4	N	REQD	Echoed from request
Administrative Code	5	N	REQD	Echoed from request
Batch/Shift Number	11	N	REQD	Echoed from request
Response Literal	16	A	REQD	NOTIFICAT RCVD
Request Groups	Var	A/N	REQD	See Group Data
Protocol Dependent Trailer	Var	A/N	REQD	See Protocol-Dependent Fields.

3.25 Master/Session Key Confirmation Advice Request

This optional request/response allows the terminal to confirm that they have applied the key provided during the Make Key function and that Worldpay should begin using the new key. The system returns both the key and check digits should on the confirm key request. If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-24 Master/Session Key Confirmation Advice Request

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		REQD	See Protocol-Dependent Fields.
Application Type	2	A	REQD	**LP** - Lynk Petroleum
Processing Mode	1	N	REQD	Valid values are: • **0** - Host Capture Mode • **1** - Hybrid Mode
Message Format Version	1	N	REQD	6 - Current Host Message Version Note: EMV supported in Version 5 and above.
Terminal Identification	24	N	REQD	Terminal Identification Information
Device Identifier	1	A/N	REQD	Device Information
Message Sequence Number	4	N	REQD	Message Sequence Number
Administrative Code	5	N	REQD	**92000** - Make Key Request
Batch/Shift Number	11	N	REQD	Batch/Shift Number
Configuration Information	20	A/N	REQD	See Configuration Information.
Request Groups	Var	A/N	REQD	See Group Data
Protocol Dependent Trailer	Var	A/N	REQD	See Protocol-Dependent Fields.

3.26 Master/Session Key Confirmation Advice Response

This optional request/response allows the terminal to confirm that they have applied the key provided during the Make Key function and that Worldpay should begin using the new key. The system returns both the key and check digits should on the confirm key request. If the host encounters an error while processing the header information, it may return the Generic Administration Error Response.

TABLE 3-25 Master/Session Key Confirmation Advice Response

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Protocol Dependent Header	Var		CNST	See Protocol-Dependent Fields.
Application Type	2	A	CNST	Echoed from request
Processing Mode	1	N	CNST	Echoed from request
Message Format Version	1	N	CNST	Echoed from request
Terminal Identification	24	N	CNST	Echoed from request
Device Identifier	1	A/N	CNST	Echoed from request
Message Sequence Number	4	N	CNST	Echoed from request
Administrative Code	5	N	CNST	Echoed from request
Batch/Shift Number	11	N	CNST	Echoed from request
Response Literal	16	A	CNST	NOTIFICAT RCVD
Request Groups	Var	A/N	CNST	See Group Data
Protocol Dependent Trailer	Var	A/N	CNST	See Protocol-Dependent Fields.

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4

Worldpay Communications

Worldpay supports Visa II, ISDN D-Channel and TCP/IP protocols.

This chapter describes the required protocol dependent message headers and trailers and the protocol behavior for single threaded communications. It illustrates various communication scenarios (with and without errors) that may occur during the message exchange between the terminal and host. This only covers standalone terminals, and should not be used by integrated systems.

It is important to note that Visa II, ISDN D-Channel, and TCP/IP protocols all standardize on the same specifications including <STX>-<ETX> packets, ENQs, ACKs, NAKs, and EOTs where appropriate. The TCP/IP interface for a terminal should behave identically to its dial interface.

For integrated systems, disregard this chapter. Refer to Worldpay's *Multi-Threaded Message Protocol Specification*.

The topics discussed in this chapter are:

4.1 Protocol-Dependent Fields

Table 4-1 describes the protocol-dependent field.

4.1.1 Visa II/ISDN D-Channel

TABLE 4-1 Visa II/ISDN D-Channel

Terminal	Direction	Host
Connect	---------->	Connect
	<----------	ENQ
TREQ	---------->	-
	<----------	RESPONSE
ACK	---------->	-
	<----------	EOT
Disconnect	-	Disconnect

4.2 Communication Sessions With No Errors

This section describes the following:

- Single Transaction with No Communications Error
- Multiple Transaction or Hybrid Batch

4.2.1 Single Transaction

Table x-x shows a single transaction session with no communications error:

TABLE 4-2 Single Transaction with No Communications Error

Terminal	Direction	Host
Connect	---------->	Connect
	<----------	ENQ
TREQ	---------->	-
	<----------	RESPONSE
ACK	---------->	-
	<----------	EOT
Disconnect	-	Disconnect

4.2.2 Multiple Transaction or Hybrid Batch

This shows a multiple transaction or hybrid batch upload session with no communications error:

TABLE 4-3 Multiple Transaction or Hybrid Batch

Terminal	Direction	Host
Connect	---------->	Connect
	<----------	ENQ
TREQ 1	---------->	-
	<----------	RESPONSE 1
TREQ 2	---------->	-
	<----------	RESPONSE 2
TREQ 3	---------->	-
	<----------	RESPONSE 3

TABLE 4-3 Multiple Transaction or Hybrid Batch

Terminal	Direction	Host
Transactions may continue to be sent in this manner until all authorizations have completed. Once the multi- transaction session is completed, your software should send an <ACK> to the Host to signify the end of the session. If an <ACK> is not received from the terminal, the host will assume a communications error has occurred and the last transaction transmitted will be reversed.		
ACK	**---------->**	**-**
	<----------	EOT
Disconnect	-	Disconnect

4.3 Communication Sessions With Errors

The section describes the following:

- Host Does Not Send an ENQ
- Host Sends an ENQ
- Host Does Not Respond to Terminal Request
- Host Sends NAK in Response to Terminal Message
- Terminal Either NAKS or Does Not Respond to Host

4.3.1 Host Does Not Send an ENQ

Table 4-4 shows a single/multiple/hybrid upload session where the host does not send an ENQ.

TABLE 4-4 Host Does Not Send an ENQ

Terminal	Direction	Host
Connect	---------->	Connect
	X----------	No ENQ
The terminal should wait 15 seconds for the ENQ character to arrive. If no ENQ is sent within this time frame, the terminal should disconnect.		
Disconnect	-	-

4.3.2 Host Sends an ENQ

Table 4-5 shows a single/multiple/hybrid upload session where the host sends an ENQ and the terminal does not send a request.

TABLE 4-5 Host Sends an ENQ

Terminal	Direction	Host
Connect	---------->	Connect
	<----------	ENQ
No Response	----------X	-
	<----------	ENQ...

TABLE 4-5 Host Sends an ENQ

Terminal	Direction	Host
ENQ characters are transmitted at 3 second intervals. If no response is received from the terminal within a 15 second period, the Host will disconnect.		
-	-	Disconnect

4.3.3 Host Does Not Respond to Terminal Request

Table 4-6 shows a single/multiple/hybrid upload session where the host does not respond to terminal request.

TABLE 4-6 Host Does Not Respond to Terminal Request

Terminal	Direction	Host
Connect	---------->	Connect
-	<----------	ENQ
TREQ	---------->	-
-	X----------	No Response
The terminal should wait no more than 60 seconds for a response before disconnect. Normal host response time is 10 - 15 seconds depending on the response time of the authorizing network. Do not send ACK before ending the communications session as this may interfere with any reversal process the host may have initiated		
Disconnect	-	-

4.3.4 Host Sends NAK in Response to Terminal Message

Table 4-7 shows a single/multiple/hybrid upload session where the host sends NAK in response to the terminal message.

TABLE 4-7 Host Sends NAK in Response to Terminal Message

Terminal	Direction	Host
Connect	---------->	Connect
-	<----------	ENQ
TREQ	---------->	-

TABLE 4-7 Host Sends NAK in Response to Terminal Message

Terminal	Direction	Host
-	<----------	NAK
TREQ	---------->	-
-	<----------	NAK
TREQ	---------->	-
	<----------	NAK
If a NAK is received from the Host, the terminal should immediately retransmit the transaction request packet. If the terminal receives three NAK responses from the Host, the terminal should end the communications session.		
Disconnect	-	-

4.3.5 Terminal Either NAKS or Does Not Respond to Host

Table 4-8 shows a single/multiple/hybrid upload session where terminal either NAKS or does not respond to host response:

TABLE 4-8 Terminal Either NAKS or Does Not Respond to Host

Terminal	Direction	Host
Connect	---------->	Connect
-	<----------	ENQ
TREQ	---------->	-
-	<----------	RESPONSE
NAK or No Response	---------->	-
-	<----------	RESPONSE
NAK or No Response	---------->	-
	<----------	RESPONSE
NAK or No Response	---------->	-
-	<----------	RESPONSE
NAK or No Response	---------->	-
If a NAK is received from the terminal, the Host will immediately retransmit the response packet. If no response is received from the terminal within 4 seconds, the Host will retransmit the response packet three more times at 4 second intervals before reversing the transaction.		
-	<----------	EOT
Disconnect	-	Disconnect

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5

Terminal Application Requirements

This chapter describes the report requirements for terminal applications.

5.1 Reports Requirements

1. The first portion of the Settlement report will be a section devoted to Fraud Prevention and will be a snapshot of the day's processing. When the merchant operator initiates an End of Day, this section of the settlement report will provide the following:
   - Starting Batch Number
   - Closing Batch Number
   - Number of Shift Closes
   - Number of Batch Limit Closes
   - Total of Shift and Batch Closes

   Additionally, this section will provide information on the exceptions. It will provide a breakdown by type with counts, amounts, and totals for refunds, voids, voice authorizations and ticket only transactions. There are type entries for credit, debit, fleet, EBT and prepaid transactions.

   It will include a line item for any Completion transactions not included in the Batch Upload. The portion of the Settlement report must include an Entry Method breakdown of manual, swiped inside, ICR, RFID and AVI transactions, giving count and percentage of total being reported.

   This report reflects the calendar date and goes from End of Day to End of Day. For example an End of Day (EOD) is run on the 10th and the next EOD is run on the 11th. In this scenario, any transaction run on the 10th after the EOD will be included in the Settlement Report run on the 11th.

   If the Settlement run on the 11th is done early in the day and then another Settlement is run late in the day on the 11th, both reports will reflect traffic running from the first transaction run after the Settlement for the 10th. The POS will save 90 days' worth of information. When the 91st day is processed, the oldest information will fall off the saved information.

   The POS will provide an Administrative Function giving the merchant operator the ability to reprint the section of the Settlement Report with the Fraud and Exception information. The merchant operator will be able to select either a single date or a date range.

   See Exception Report.
2. All reports must print the merchant number, terminal number, device id (if applicable), date, time, and batch/shift number (if applicable).
3. All reports must use the Receipt Header Information sent in the Update Merchant Configuration Response. These four lines of receipt header fields contain the information required to meet requirement 1 of this section. See Update Merchant Configuration Response for further definition.
4. Receipt Header Information sent in the Update Merchant Configuration Response and used by the POS cannot be changed by the merchant operator. The information is controlled by the Host
5. A detail report that shows at minimum the transaction sequence number, transaction type, masked account number, authorization number, and total amount is required. The report must also print the batch/shift number, total transaction count, total sales, total returns, and net batch amount.
6. A POS summary report that will print the transaction type and total amount sorted by card type is required. The report must also print the transaction count, total sales, total returns, and net amount for each card type in addition to the total transaction count, total sales, total returns, and net batch amount.
7. The Host Settlement report at a minimum requires the transaction count, total sales, total returns, and net amount for each payment type in addition to the total transaction count, total sales, total returns, and net batch amount. The response literal returned in all batch-close responses must be printed on

the settlement report and for a successful batch close; the host batch control number must also be printed on the report.

The settlement report should include any gift card totals - purchases (count and amount) made using gift cards, activations (count and amount), deactivations (count and amount), and balance inquiries (count).

The settlement report should include any Sprint phone card activation totals (count and amount).

8. A Completion Exception report indicating all Completion transactions not included in the batch upload. At a minimum this report gives the transaction sequence number, account number, Action Code and total amount.

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6

Group Data

This chapter describes the following:

6.1 Group Data Rules

With the introduction of Group Data, the layout of all existing request and response messages is frozen. Worldpay now refers to these as Base Request/Response Messages. The new Group Data fields let you add additional fields to these base messages. Group Data enables logical grouping of similar data and facilitates expansion of existing request and response messages.

Group Data adheres to the following general rules:

- The host considers Group Data optional data.
- You can use Group Data with other Group Data.
- Group Data is not order dependent.
- Group Data can consist of one or more fields.
- All request messages begin with a G.
- All response messages begin with an R.

Worldpay reserves R001 - Error Group Data Response for any errors that may occur during acquirer host processing of Request Group Data fields.

For a request message, the Group Data contains a leading fixed alphabetic character G followed by a unique three-digit value for request messages (for example, G001). For a response message, the Group Data contains a leading fixed alphabetic character R followed by a unique three-digit value for response messages (for example, R001).

Group separators occur at the end of every Group Data appearance. The group separator value is Hex 1D.

Field separators delimit variable length fields within a group unless the field is the only or last in a group, then a group separator appears. Field separators also delimit fixed, variable fields, or both within a field definition. The field separator value is Hex 1C.

When you want group data in request messages or when the host determines that group data is applicable in a response message, record separators appear. Only one record separator exists in request messages, response messages, or both. It immediately follows the base message prior to any group data. The record separator value is Hex 1E.

Optional Group Data appears at the end of a request message. In the following example, the Group Data is G001 and G004, where <gs> is the group separator, and <rs> is the record separator:

```
|<rs>G001Y<gs>|G00400112345678<gs>|
```

Examples may also include the following:

- * - Represents a space
- <fs> - Represents a field separator (Hex 1C)
- <gs> - Represents a group separator (Hex 1D)
- <rs> - Represents a record separator (Hex 1E)

6.2 Request Groups

This section defines the optional request groups that can be sent in request messages to further supplement the transaction.

6.2.1 G001 - Optional Processing Indicators

This is a series of codes that identify terminal capability and environment. All fields must use one of the valid values specified. Worldpay interprets invalid values as 0 or N respectively.

TABLE 6-1 G001 - Optional Processing Indicators

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	Terminal supports response groups	an	01	1	• **Y** - The terminal supports response groups. You must include this to receive any response groups. • **N** - The terminal does not support response groups.
02	Return routing information	an	02	1	• **Y** - Return routing information in response group R002, tag RI • **N** - Do not return routing information.
03	Additional response data	an	03	1	Valid values are **Y** (Yes) and **N** (No). When the response indicator is Y, Worldpay responds with additional reject/response data from the network in R002 with tag AR.
04	Token Request Indicator	an	04	1	If **Y**, tthe system returns a tokenized PAN in field R002.TK if available.
05	Pinless Debit Indicator	an	05	1	• **N** – Not supported by front-end device • **Y** – Indicates that debit transactions can be processed as PINless. Interprets any other values as N.

TABLE 6-1 G001 - Optional Processing Indicators

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
06	PINless Debit Conversion Request Indicator	an	06	1	**N** – Not supported by front-end device **Y** – Indicates that credit purchases and returns can be converted to PINless Debit if applicable. Interprets any other values as N.
07	Request Raw Data Network	an	07	1	• **Y** - Send back data in R075 if available • **N** - Do not return data
08	Debit Optimization Request Indicator	an	08	1	• **N** - Not supported by front-end device • **Y** - Indicates that debit purchases and returns can be converted to signature credit if applicable. Interprets any other values as N.
09	PAN Reference Id	an	09	1	If **Y**, the system returns the PAN Reference Id in field R002, if available.
10	Indicates the customer wants all available data associated with the Worldpay embedded/intelligent scheme token management service (TMS), if applicable.	an	10	1	• **Y** - Return data in Response Group R002 • **N** - Do not return data
11	Flag indicating the customer would like to bypass the Worldpay embedded or intelligent scheme token management service (TMS) for this transaction only.	an	11	1	• **Y** - Bypass service • **N** - Utilize service, if available
12	Request 8 Digit BIN	an	12	1	If **Y** and available, the system returns the 8-digit BIN in Field R002.

TABLE 6-1 G001 - Optional Processing Indicators

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
13	Bypass PINless Conversion	an	13	1	• **N** - Not supported by front-end device or does not wish to override PINless conversion setup. • **Y** - The customer would like to opt out of PINless conversion from credit to debit on this transaction only.
14	Transaction Link Identifier Flag	an	14	1	Indicator **M** designates you are certified to send and receive the Mastercard and Maestro transaction link identifier (**Note**: We did not make this a Y/N flag to make it available for possible other network uses.) The system returns the Link ID in response group R041-Lifecycle Transaction Link ID. Echo back the value in request group G068 on subsequent requests.
15	Transaction Initiation Flag	an	15	1	Possible values: • **C** - Cardholder Initiated Transaction • **M** - Merchant Initiated Transaction • **" "** - Unspecified

6.2.2 G002 - Additional Request Data

This can contain multiple tags in any order with different information.

TABLE 6-2 G002 - Additional Request Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	Tag Type	an	01	2	See Table 6-3.
02	Tag Value Length	n	03	3	000-999

TABLE 6-2 G002 - Additional Request Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
03	Tag Value	an	06	Variable	

NOTE: This is for future use.

TABLE 6-3 G002 Valid Values/Notes (Field 01)

Tag	Description	Notes
AC	mPOS Accessory/dongle with contact ans contactless interfaces, with or without PIN pad	
AS	mPOS Accessory/dongle with contact ans contactless interfaces and PIN on Glass support (SCRP, Software-based PIN on COTS).	
CC	Contactless payment of COTS (Cpoc)	Mobile device based contactless only mPOS without PIN support.
CS	Contactless payment of COTS (Cpoc)	Mobile device based contactless only mPOS with PIN on Glass support.
DB	Deferred Billing Indicator	If present, the data field must contain a **01** length value followed by a data value of **Y**. Any other value will cause the field to be ignored.
PG	Merchant Payment Gateway ID	If the PG parameter is present, the data field must contain a 011 length value followed by a data values.
SF	Terminal Classification Code	The Terminal Classification Code used for transactions that originate from a mobile device.
VF	When R002.VF is included in the pre-auth response message, you must send that data back in the completion request message using this request group/tag.	This field is followed by the character representation of the 16 bytes of binary restriction data coming from Visa. This makes the total length of the field 32 bytes.

TABLE 6-3 G002 Valid Values/Notes (Field 01)

Tag	Description	Notes
WX	Host Based Prompt Pass 2 Flag	If present, the data field must contain a **01** length value followed by a data value of **2**. Any other value will cause the field to be ignored. This is sent on second pre-auth presentment when host-based prompts were requested using the initial pre-auth response message.

6.2.3 G004 - Customer Discretionary Data

This sends up to three user-defined data fields from the POS to the front end in an authorization request message. If you use this group, it requires all 75 bytes of user data and blank fill any remaining data.

TABLE 6-4 G004 - Customer Discretionary Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	User Defined Field 01	ans	1-35	35	Any alphanumeric and/or special character.
02	User Defined Field 02	ans	36-55	20	Any alphanumeric and/or special character.
03	User Defined Field 03	ans	56-75	20	Any alphanumeric and/or special character.

Example: G004 - Customer Discretionary Data

```
|G004**********1234567890**********1234512345**********12345*****1234567890*****<gs>|
```

Where:

Field 01 = `**********1234567890**********12345`

Field 02 = `12345**********12345`

Field 03 = `*****1234567890*****`

6.2.4 G026 - POS Encrypted Data

NOTE: This feature is not currently available. If you plan to code for this feature prior to its availability, you may need to make changes. Contact your Relationship Manager for more information.

This performs end-to-end-encryption (E2EE).

For DUKPT usage, when Field 01 (POS Encryption Format) is D, then Field 03 (Encrypted Data Format) must be T, and you must use the subfield format shown in Table 6-5 for Field 10 (Key Data).

For P2PE (Point-to-Point Encryption usage, authorization requests must include G026 rather than the clear PAN, Track 1, or Track 2.

TABLE 6-5 G026 - POS Encrypted Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	POS Encryption Format	an	1	1	• **S** – Semtek/VeriFone • **D** – DUKPT
02	Reserved	an	2	1	For future expansion Space fill.
03	Encrypted Track Data Format	an	3	1	• **T** – Swiped or manually entered pseudo track data field fully encrypted (required when DUKPT) • **E** – Manually entered account number encrypted and then used to build pseudo track data (expiration date not encrypted) • **P** – Encrypted PAN use only with void request where the encrypted primary account number is provided in the base void request (0400) message.
04	Reserved	an	4	1	For future expansion Space fill.
05	Reserved	an	5	1	For future expansion Space fill.
06	Reserved	an	6	1	For future expansion Space fill.
07	Reserved	an	7	1	For future expansion Space fill.
08	Reserved	an	8	1	For future expansion Space fill.
09	Reserved	an	9	1	For future expansion Space fill.

TABLE 6-5 G026 - POS Encrypted Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
10	Key Data and Encrypted Track/PAN Data (See DUKPT usage below.)	an	10 - 1008	1 - 999	• Valid values depend on the Encryption Format: • Encryption Format S - Populate the key data with the raw eParms value. • Encryption Format D - Populate the key data with the Encrypted Track Data in Base64-encoded format. Populate the Track Data field in the base message with spaces.

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6.2.5 G028 - Tokenization Utilization

Send this with a base request message to request the host to use token data to process transaction request rather than the card account number or track data.

TABLE 6-6 G028 - Tokenization Utilization

Field Number	Request Optional Group Data Description	Data Type	Position	Length (Total Group Bytes: 51)	Valid Values/Notes
01 Required	Token	an	1-19	19	This field must contain the value returned by host from a previous tokenized transaction. Left-justify and space fill it.
02 Optional	Low Value Token Indicator	an	20	1	This field indicates that the previous field contains a low value token (a registration ID). Space fill if not used. Valid values are: • R – Low Value Token / Registration ID • Space – Ignore field

TABLE 6-6 G028 - Tokenization Utilization

Field Number	Request Optional Group Data Description	Data Type	Position	Length (Total Group Bytes: 51)	Valid Values/Notes
03 Optional	Card Expiration Date	an	21-24	4	When in use, this field must contain a four byte numeric value in the format MMYY. When available, valid values for MM are 01-12 and for YY 01- 99; otherwise, use spaces when not applicable or for a de-tokenization conversion request. **Note:** Worldpay recommends that merchants provide expiry date with every transaction using a Token. Expiration Date is one of the simplest methods for fraud prevention in place. They are mandated by operating agreements with card brands to help protect against fraud. The issuing bank will likely decline online purchases and purchases over the phone that do not contain expiry date.
04 Optional	CVV2	an	25-28	4	When present, this field must contain the 3 byte CVV2 or the 4 byte AMEX CID. This field allows a clear CVV2 to be sent when transactions are token initiated, because a pseudo track is not present. Right-justify and space fill this field

6.2.6 G061 - FIS Loyalty Data

Use this field for FIS loyalty requests.

Usage

Use Field 01 to determine merchant (and POS) eligibility and ability to handle the response information in field R061. Set it to **Y** to indicate that a message could be sent to the FIS loyalty program for the customer

for transaction discounts. Set it to **N** when the merchant (and POS) are not eligible or capable to handle the FIS processing.

Only provide Field 02 on the follow-up messages after getting FIS loyalty discounts. When set to **Y**, FIS receives the transaction with the discounted amount. When set to **N**, FIS does not apply the discount and the transaction will be attempted with full amount. Fields 03, 04, 05 and 06 are only provided on follow-up messages after receiving FIS loyalty discount information from the first pass request. It must match information sent back in the R061 response data group.

Edits

Field 01 must be a **Y** or **N** and can be present on any FIS loyalty request. Fields 02, 03, 04. 05 and 06 must be present on the follow up (second pass transaction) of an FIS transaction to release any holds placed on the first pass.

TABLE 6-7 G061 FIS Loyalty Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length (Total Group Bytes: 51)	Valid Values/Notes
01	FIS Loyalty Indicator	an	1	1	• **Y** - FIS loyalty process allowed • **N** - FIS loyalty process not allowed
02	FIS Loyalty Opt In/Out Flag (omitted on first pass)	an	2	1	• **Y** – FIS loyalty accepted by customer and discount should be applied • **N** – FIS loyalty not accepted by customer and transaction will be attempted with full amount
03	Discount amount (omitted on first pass)	an	3-14	12	$$$$$$$$$$CC where $$$$$$$$$$ = dollar amount CC = cents amount
04	FIS Loyalty Transaction ID (omitted on first pass)	an	15-29	15	Left justify and blank fill.
05	Loyalty Reward ID (omitted on first pass)	an	30-41	12	Loyalty reward ID assigned from issuer on first pass (copied from first pass response)
06	Loyalty Promotion ID (omitted on first pass)	an	42-52	11	Loyalty Promo ID assigned from issuer on first pass (copied from first pass response)

Example: G061 - FIS Loyalty Data (1)

```
|G061Y<gs>|
```

The example data is:

- **G061** – Group name
- **Y** – indicates FIS loyalty processing is allowed by merchant/POS

Example: G061 - FIS Loyalty Data (2)

```
|G061YY000000000500123456789OABCDERD0000016891RD000001689<gs>|
```

The example data is:

- G061 – Group name
- Y – indicates FIS loyalty processing is allowed by merchant/POS
- Y – indicates FIS loyalty discount is going to be applied
- 000000000500 – discount amount of $5.00
- 1234567890ABCDE – transaction ID to be used to match FIS loyalty lookup to follow up authorization out to network/issuer
- RD000001689 – Loyalty Reward ID returned by issuer
- RD0000016891 – Loyalty promotion ID returned by issuer

6.2.7 G062 - Visa Merchant ID

This is used by merchants who uses Commercial choice program.

TABLE 6-8 G062 - Visa Merchant ID

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	Visa Merchant ID	n	01	8	Any numeric character.

6.2.8 G068 - Lifecycle Transaction Link Identifier

Use this request group to support Lifecycle Transaction Link Identifiers.You receive the value in response group R041 and use it in this group on subsequent linked transaction. Currently, Worldpay only supports this for Mastercard/Maestro transactions.

TABLE 6-9 G062 - Visa Merchant ID

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	Lifecycle Link ID	ans	1-36	36	Variable, 36 maximum Mastercard/Maestro Transaction Link Identifier maximum length is 22. Valid values are Alpha upper and lower case, numeric, and special characters - and _ only. Future use for additional networks maximum length is 36.

Example: G068 - Lifecycle Transaction Link Identifier

```
|G068RSiUzhfhQi6X-8BPGAt_TA<gs>|
```

6.2.9 G080 - PIN Encryption Data

> **NOTE:** Currently, this field is available only for AES DUKPT transactions which utilize a 24 byte KSN and a 32 byte PIN block.

This field contains various pieces of encryption data used to perform specific PIN functions. The TLV format for this tag is built as a 2-Byte Tag with a 3-Byte length followed by variable data.

TABLE 6-10 G080 – PIN Encryption Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Value/Notes	Required
01	Tag Type	an	01	2	See Table 6-11	
02	Tag Value Length	n	03	3	000-999	
03	Tag Value	an	06	Variable		

TABLE 6-11 G080 – Valid Values/Notes (Field 01)

Tag	Description	Format	Notes
KS	Key Sequence Number (KSN)	ans 1..24	Only available for AES DUKPT transactions which utilize a 24-byte KSN and a 32-byte PIN block.
MS	Master/Session PIN Processing	ans 1..317	This field contains various pieces of encryption data used to perform specific PIN functions. The TLV format for this tag is built as a 2-Byte Tag with a 3-Byte length followed by variable data. See Table 6-12 for information about valid tags.
PB	PIN Block	ans 1..32	Only available for AES transactions which utilize a 32-byte PIN block.
WK	Work Key Type and Length	ans 2	Valid values: • **00** - Triple DES Double Length Key • **01** - Triple DES Triple Length Key • **02** - AES 128 Bit Key • **03** - AES 192 Bit Key • **04** - AES 256 Bit Key

TABLE 6-12 MS Master/Session PIN Processing Subtags

Tag	Description	Format	Notes
CD	PIN Key Check Digits	an6 - TDES (ENC-ZERO) or an10 - AES (CMAC)	Check digits of working key (part of key exchange). Required on key confirmation messages.
EF	Encrypted Key Format	an3	This identifies the type of key processing to use during master/session processing. By default, the system uses ECB Mode Cryptogram if you do not provided a value.
KA	Key Label Acro	an4	This is the label the system associates with all processing with the requested master key and working key sessions. If you do not provide this value during key exchange processing, you must send it on all successive authorizations.
KD	Encryption Key Data	an1..256	This houses the encrypted key information generated during key exchange processing. Required on key confirmation messages.

TABLE 6-12 MS Master/Session PIN Processing Subtags

Tag	Description	Format	Notes
KT	Key Type to Return	an3	This identifies the type of key to return during key exchange processing. By default, the system uses PIN Key if you do not provided a value. Valid values are: • 101 - PIN Key • 102 - MAC Key
MI	Master Key Index	n3	This provides a means to generate multiple master keys for a particular Key Label. If you provide this value during key exchange processing, you must send it on all successive authorizations. By default, the system uses index 001.
WI	Working Key Index	n3	This provides a means to generate multiple working keys for a particular Key Label. If you do not provide this value during key exchange processing, you must send it on all successive authorizations. By default, the system uses index 001.

6.3 Response Groups

This section defines the optional response groups that can be sent in reply messages to further supplement the transaction.

6.3.1 R001 - Error Group Data Response

This is applicable to any transaction that sends group data in a request message and the host determines that it is invalid.

> **NOTE:** A value of 00 in the Group Data field indicates a group level error, but does not specify a particular field.

TABLE 6-13 R001 - Error Group Data Response

Field Number	Data Description	Data Type	Position	Length	Valid Values/Notes
01	Group Data ID	an	1 - 4	4	The first position always begins with the letter G followed by three digits. This group data ID will match one of the group data fields sent in the request message.
02	Group Data Field	n	5 - 6	2	Numeric range 00 - 99
03	Group Response Error Message	an	7 - 26	20	Specific error information regarding the group data ID

Example: Group Field R001

```
|R001G00401INVALID NOT NUMERIC <gs>|
```

6.3.2 R002 - Additional Response Data

This can contain multiple tags in any order with different information.

TABLE 6-14 R002 - Additional Response Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	Tag Type	an	01	2	See Table 6-15.
02	Tag Value Length	n	03	3	000 - 999
03	Tag Value	an	06	Variable	

TABLE 6-15 R002 Valid Values/Notes (Field 01)

Tag	Description	Notes
AR	If G001.03 requests this for a transaction that was rejected with a special reason, Worldpay will send back additional response data.	Valid values are: • **01** - Invalid Fleet ID • **02** - Invalid Driver ID • **03** - Invalid Vehicle Number
BN	If G001.12 requests the return of the 8-digit BIN and the value is available, this field returns that value.	Valid Value: 8-digit BIN
DO	If the terminal indicates support of Conversion to signature credit in G001.08, then this value indicates whether conversion is successful.	**Y** – This transaction was processed as a signature credit. **N** – Conversion was determined to be “not appropriate”.
NG	Network Cryptogram	Returned if G001, Position 10 is Y and data available.
NT	Network Token	Returned if G001, Position 10 is Y and data available.
PL	If the terminal indicates support of Conversion to PINless Debit in G001.06, then this value indicates whether conversion is successful.	**Y** – Transaction processed as a pinless debit transaction. **N** – Conversion was determined to be “not appropriate”.
PN	If G001.09 requests the return of a tokenized PAN, this fields returns that value, if available.	Valid value - PAN Reference Id
RI	If the terminal requests this information via group G001.02, then the routing information for the transaction will be returned.	Following is the tag value layout: • Bytes 1 - 4: Settlement network acronym • Bytes 5 - 8: Issuing institution acronym • Bytes 9 - 12: Worldpay chosen network **Note**: Blanks appear in positions where requested data in unavailable.
TK	If G001.4 requests the return of a tokenized PAN, this field returns that value. The system also returns R002.TK on stand-alone token transactions and stand-alone detokenzation transactions (in which case this value is the clear PAN).	Valid values: • Tokenized PAN • Clear PAN (for stand-alone detokenization calls only. • “TOKEN ERROR” (present if tokenization not possible).
VA	Visa Agreement ID	Visa sends this 4-byte field in the response message.

TABLE 6-15 R002 Valid Values/Notes (Field 01)

Tag	Description	Notes
VF	For Visa Fleet, if terminal features byte 4 indicates 2 or 3 (host-based restrictions supported), the system uses this field to pass the purchase restrictions that Visa may provide in the 0110 response message. For Mastercard Fleet, if terminal features byte 4 is not 0 or blank, the system uses this field to pass the spend control override items Mastercard may provide in the 0110 response message.	This field is followed by the character representation of the purchase restriction/spend control override data. This makes the total length of the field 32 bytes.

6.3.3 R003 - System Health Status Information

This field contains a TLV (tag, length, value) representation of each portion of the information returned to the user regarding the system health status requested. This field can be utilized to make decisions at the host as to whether the current connection is stable and should be continued to be used. Additional tags and text can be added so the user should be able to handle any variations of data returned.

TABLE 6-16 TLV Format

Format	Data Type	Length
Tag	an	2 bytes
Length	n	2 bytes
Value	ans	Variable

TABLE 6-17 Data Fields

Subfield Tag	Subfield Description	Data Type	Position	Length	Valid Values/Notes
01	System Connected To	ans	Variable	1-8	RAFT=047

TABLE 6-17 Data Fields

Subfield Tag	Subfield Description	Data Type	Position	Length	Valid Values/Notes
02	Current System Health HEALTHY (YES) – Current system is up and running as expected UNHEALTHY (NO) – Current system has at least one resource that has been flagged for follow-up. MAINTENANCE (MNT) – Current system is in maintenance	ans	Variable	1-15	RAFTHEALTHY=YES RAFTHEALTHY=NO RAFTHEALTHY=MNT

6.3.4 R035 - WEX Additional Host-Based Prompts Requested

When Terminal Features Wright Express version flag indicates a 2 or 4, use this field to pass on additional available product and limits from Wright Express in the pre-authorization response message.

TABLE 6-18 R035 - WEX Additional Prompts

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	Number of Prompts Included	n	1	1	1-9
02	Prompt Value #1	an	2-3	2	Blank if unused
03	Prompt Value #2				Blank if unused
04	Prompt Value #3				Blank if unused
05	Prompt Value #4				Blank if unused
06	Prompt Value #5				Blank if unused
07	Prompt Value #6				Blank if unused
08	Prompt Value #7				Blank if unused
09	Prompt Value #8				Blank if unused
10	Prompt Value #9				Blank if unused

TABLE 6-18 R035 - WEX Additional Prompts

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
Total Group Bytes:				19	

Example: Group Field R036 (where * = space, <fs>= field separator, <gs>= group separator):

```
|R03640102030F          <gs>|
```

6.3.5 R036 - WEX Available Products Block

When Terminal Features Wright Express version flag indicates a 2 or 4, use this field to pass on additional available product and limits from Wright Express in the pre-authorization response message.

See specifics for Optional Request Group Data. There is no special processing involved.

TABLE 6-19 R036 - WEX Available Products Block

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	Product Restriction Code	n	1-2	2	Numeric
02	Restriction Code Amount	n	3-7	5	This is a whole dollar amount with no decimal place. Pad the value to the left with zeros.
03	Restriction Code Quantity	n	8-12	5	This is a whole number with no decimal place. Pad the value to the left with zeros.
04	Restriction Code Unit of Measurer	an	13	1	
05	Cash Limit	n	14-17	4	This is a whole dollar amount with no decimal place. Pad the value to the left with zeros.
06	Invoice Total Limit	n	18-22	5	This is a whole dollar amount with no decimal place. Pad the value to the left with zeros.

TABLE 6-19 R036 - WEX Available Products Block

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
07	Miscellaneous Amount Limit	n	23-26	4	This is a whole dollar amount with no decimal place. Pad the value to the left with zeros. If it is all zeros, this field can be ignored.
08	Additive Amount Limit	n	27-30	4	This is a whole dollar amount with no decimal place. Pad the value to the left with zeros. If it is all zeros, this field can be ignored.
09	Repair Amount Limit	n	31-34	4	This is a whole dollar amount with no decimal place. Pad the value to the left with zeros. If it is all zeros, this field can be ignored.
10	Customer Name	an	35 - 39	25	
11	Customer City	an	60 - 74	15	
12	Customer State	an	75 - 79	5	
Total Group Bytes:				79	

Example: Group Field R035 (where * = space, <fs>= field separator, <gs>= group separator):

```
|R035080010000050G000000975000000250000ABC Trucking          Dale
TX                  <gs>|
```

6.3.6 R041 - Transaction Link ID

Use this response group to support Lifecycle Transaction Link Identifiers.

Currently, Worldpay returns this field only on response messages for Mastercard/Maestro transactions. It is the value received from Mastercard/Maestro. Use this value in request group G068 to link subsequent transactions in the same transaction stream.

TABLE 6-20 R041 - Transaction Link Identifier Response

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	Lifecycle Link ID	Ans	1-36	36	Variable, 36 maximum Mastercard/Maestro Transaction Link Identifier maximum length is 22. Valid values are Alpha upper and lower case, numeric, and special characters - and _ only. Future use for additional networks maximum length is 36.

Example: R041 - Transaction Link ID

```
| R041RSiUzhfhQi6X-8BPGAt_TA<gs>|
```

6.3.7 R061 - FIS Loyalty Response Data

Use this field for FIS loyalty responses.

Usage

Use Field 01 to send back the actual discount amount to the merchant (and POS), so the customer can opt in or out of the discount. FIS provides Field 02 back to the merchant and required on the follow up messages in the G061.03 field for further processing. Field 03 is the information to be prompted on the terminal on the first pass of the transaction. Field 03 for the follow-up request where the loyalty discount is accepted will have the receipt data to be printed.

Edits

Field 01 must be numeric. Field 02 must be present on the follow up of a FIS transaction request message. Field 03 can contain any alpha-numerics.

TABLE 6-21 R061 - FIS Loyalty Response Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
01	Discounted Amount	n	1-12	12	This is the amount of the discount to be applied to transaction if customer should choose to opt in
02	FIS Loyalty Transaction I	an	13-27	15	Left justify and blank fill.
03	Loyalty Reward ID	an	28-39	12	Loyalty reward ID assigned from issuer on first pass

TABLE 6-21 R061 - FIS Loyalty Response Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Values/Notes
04	Loyalty Promotion ID	an	40-50	11	Loyalty promotion ID assigned from issuer on first pass
05	Prompt / Receipt Text	an	51-251	1-200	Variable up to 200 maximum Two forward slashes (//) indicate line breaks. The first line indicates the loyalty program description.

Example: R061 - FIS Loyalty Response Data

```
|R061000000000500123456789OABCDERD0000016891RD000001689LOYALTY REWARDS//You saved
$5.00<gs>|
```

The example data is as follows:

- R061 – Group name
- 000000000500 – Indicates a $5.00 discount amount
- 1234567890ABCDE – Transaction ID to be used to match FIS loyalty lookup to follow up authorization out to network/issuer
- RD0000016891 – Loyalty reward ID
- RD000001689 – Loyalty promotion ID
- LOYALTY REWARDS //You Saved $5.00 – Prompt data (first pass) or receipt data (second pass)
- <gs> - Group separator

6.3.8 R075 - Raw Network Response Data

This data group can contain multiple tags to provide the acquirer with raw information directly from the network without any translations having taken place. Each subfield is built in TLV format with tags allowed in any order. Any tags that the acquirer does not recognize should be ignored as new tags can be added at any time to provide additional functionality.

TABLE 6-22 R075 - TLV Layout

Format	Data Type	Length
Tag Type	an	2 bytes
Tag Value Length	n	3 bytes
Tag Value	ans	Variable

TABLE 6-23 Data Fields

Subfield Tag	Subfield Description	Data Type	Position	Length	Valid Values/Notes
AM	Additional Amounts	an	Variable	20-120	Up to 6, 20-byte additional amount fields returned by the network. Example Subfield: AM0202002840C000000914800
AV	AVS Result	an	Variable	1	The actual AVS result returned by the network. Example Subfield: AV001Y
CA	3D Secure Result	an	Variable	1	The actual 3D secure result returned by the network. Example Subfield: CA0012
CR	CVV/CVC/CID Result	an	Variable	1	The actual verification value result returned by the network. Example Subfield: CR001M
EM	Entry Mode	an	Variable	2	The entry mode provided by Worldpay to the network.
PC	PIN Entry Capability	an	Variable	1	The PIN entry capability provided by Worldpay to the network.
RC	Response Code	an	Variable	1-5	The actual response code returned by the network. Example Subfield: RC00282
RP	Recurring Payment Result	an	Variable	1	The actual recurring payment result returned by the network. Example Subfield: RP001A

6.3.9 R080 - PIN Encryption Data

This field contains various pieces of encryption data used to perform specific PIN functions. The TLV format for this tag is built as a 2-Byte Tag with a 3-Byte length followed by variable data.

TABLE 6-24 R080 – PIN Encryption Data

Field Number	Request Optional Group Data Description	Data Type	Position	Length	Valid Value/Notes	Required
01	Tag Type	an	01	2	See Table 6-25	
02	Tag Value Length	n	03	3	000-999	
03	Tag Value Data	an	06	Variable		

TABLE 6-25 R080 – Valid Values/Notes (Field 01)

Tag	Description	Format	Notes
MS	Master/Session PIN Processing	ans 1..317	This field contains various pieces of encryption data in order to perform specific PIN functions. The TLV format for this tag is built as a 2-Byte Tag with a 3-Byte length followed by variable data. Table 6-26 contains the valid tags.

TABLE 6-26 MS Master/Session PIN Processing Subtags

Tag	Description	Format	Notes
CD	PIN Key Check Digits	an6 - TDES (ENC-ZERO) or an10 - AES (CMAC)	Check digits of working key (part of key exchange). Required on key confirmation messages.
EF	Encrypted Key Format	an3	This identifies the type of key processing to use during master/session processing. By default, the system uses ECB Mode Cryptogram if you do not provided a value. Valid values are: • **101** - ECB Mode Encryption • **102** - Key Block
KA	Key Label Acro	an4	This is the label the system associates with all processing with the requested master key and working key sessions. If you do not provide this value during key exchange processing, you must send it on all successive authorizations.

TABLE 6-26 MS Master/Session PIN Processing Subtags

Tag	Description	Format	Notes
KD	Encryption Key Data	an1..256	This houses the encrypted key information generated during key exchange processing. Required on key confirmation messages.
KT	Key Type to Return	an3	This identifies the type of key to return during key exchange processing. By default, the system uses PIN Key if you do not provided a value. Valid values are: • 101 - PIN Key • 102 - MAC Key
MI	Master Key Index	n3	This provides a means to generate multiple master keys for a particular Key Label. If you provide this value during key exchange processing, you must send it on all successive authorizations. By default, the system uses index 001.
WI	Working Key Index	n3	This provides a means to generate multiple working keys for a particular Key Label. If you do not provide this value during key exchange processing, you must send it on all successive authorizations. By default, the system uses index 001.

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A

Card Data and Product Information Codes

This appendix describes the following:

A.1 Data Types

The specific information for these fields (maximum and minimum lengths and allowed values) is found in the Worldpay Card Specifications for the Petroleum Industry document with each card type that uses them. An example would be Driver ID (3) and Vehicle ID (2) under the Wright Express section. There are also field definitions in the description of the specific function for which they are used. An example would be E - Postal ZIP Code under the Address Verification function description in Chapter 2: Information overview on page 17.

TABLE A-1 Data Types

Code	Description	Explanation
0	User ID	Unencrypted ID number or PIN (see note 2 below)
1	Trailer Number or ID	(see note 6 below)
2	Vehicle Number	Vehicle tag number or ID (see note 2 below)
3	Driver Number	Driver ID / Employee number (see note 2 below)
4	Odometer Number	Odometer / HUB Reading (see note 3 below)
5	License Number	Driver's License Number WEXP no longer supports this code.
6	State / Province ID	State code of the Driver's License
7	Driver's License Name	Name as shown on the Driver's License
8	Purchase Order Number	Used for fleet cards and purchase cards (see note 4 below)
9	Invoice Number	Merchant's reference number. Used for Check Processing and Fleet Cards (see note 5 below)
A	Trip Number or ID	
AC	Additional Card Data	
ACC	Hard Acceleration	
AV	Additional Vehicle Data	
B	Unit Number or ID	-
BI	Billing ID	
BRK	Hard Braking	
BV	Battery Voltage	
C	Trailer / Refer Hours	-
CES	Check Engine Status	
CN	Control Number	

TABLE A-1 Data Types

Code	Description	Explanation
CT	Coolant Temperature	
D	Date Of Birth	Birth date formatted as MMDDYYYY
DC	Driver or Vehicle Card	
DD	Department Number	
DJ	Job Number	**Note:** For FleetCor/Fuelman, this field is included in R206 - User-Defined Prompt Capture Request.
DS	Purchase device sequence number	From the track data on a WEX card, different from the prompted vehicle number
DSN	Device Serial Number	Var, AN-Serial number for the specific device/PED used for P2PE or P2P Encryption. Variable up to 20 bytes.
DT	Delivery Ticket Number	
E	Postal ZIP Code	-
EH	Engine Hours	
EL	Engine Load	
EOL	Engine Oil Life	
EOP	Engine Oil Pressure	
EOT	Engine Oil Temperature	
ER	Engine RPM	
ETT	Engine Total Time	
F	Misc. Numeric Customer Data	Misc. Numeric Data Used for Visa 2.0 (see note 7 below)

TABLE A-1 Data Types

Code	Description	Explanation
FC	Cardholder device ID-indicates the type of device used at the terminal. In the scope of chip transactions, populate it using the device type field value of chip tag 9F6E.	Values are: • **00** - Card • **01** - Mobile Network Operator (MNO) controlled removable secure element (SIM or UICC) personalized for use with a mobile phone or smart phone • **02** - Key Fob • **03** - Watch • **04** - Mobile Tag • **05** - Wristband • **06** - Mobile Phone Case or Sleeve • **07** - Mobile phone or smart phone with a fixed (non-removable) secure element controlled by the MNO, for example, code division multiple access (CDMA) • **08** - Removable secure element not controlled by the MNO, for example, memory card personalized for used with a mobile phone or smart phone • **09** - Mobile Phone or smart phone with a fixed (non-removable) secure element not controlled by the MNO • **10** - MNO controlled removable secure element (SIM or UICC) personalized for used with a tablet or e-book • **11** - Tablet or e-book with a fixed (non-removable) secure element controlled by the MNO • **12** - Removable secure element not controlled by the MNO, for example, memory card personalized for use with a tablet or e-book • **13** - Tablet or e-book with fixed (non-removable) secure element not controlled by the MNO • **14-99** - Reserved for future use
FE	Fuel Economy	
FF	Misc. Numeric Customer Data 2	Used for Visa 2.0 (see note 8 below)
FGL	Fuel Gauge Level	
FTE	Fleet Employee Number	Visa 2.0 Fleet Employee Number (see note 5 below)
G	Misc. Alphanumeric Data	
GDA	Token Assurance Level	2 AN; Assurance level for a token transaction
GDR	Token Requester ID	11 AN; Assurance level received when the tokenization of the PAN was requested
GDW	Digital Wallet ID	3 AN; Wallet ID received when the PAN was digitized

TABLE A-1 Data Types

Code	Description	Explanation
GT	Split tender count	Number of other different tenders provided by the cardholder
H	Postal Address	-
I	Customer Number	-
IT	Idle Time	
J	Phone Number	Phone number, including the area code, without formatting.
K	Social Security Number	Social Security number without formatting characters
L	Check Sequence Number	Sequence number of the check
M	MICR Reader Status	Status/Type of MICR reader
N	Check Transaction Type	Check Transaction Type, if the requested service does not fall easily into the defined Transaction Code Table or needs further refinement. Refer to the check processing service's specifications for valid values.
O	Original Amount	The original transaction amount, if the check amount is being adjusted.
P	Product Class/Code	Product information.
R	Network Reference/Trace #	Reference/Trace # required for voids or adjusted amounts.
RC	Replacement Car	
RT	Reefer Temperature	
S	Maintenance ID	A unique identifier that specifies a location where Fleet cards can be used for vehicle maintenance functions.
SF	Sub Fleet Number	
T	Transaction Number	
T1	Secondary Track One, Swipe	Track 1 from a second card swipe on dual card programs. This field should be the final field included.
T2	Secondary Track Two, Swipe	Track 2 from a second card swipe on dual card programs. This field should be the final field included.
TI	Total Idle Time	
TM	Secondary Track Two, Manual	Track 2 format from a manually-entered second card on dual card programs. This field should be the final field included.
TLS	Tank Level Start	

TABLE A-1 Data Types

Code	Description	Explanation
UID	Unique Identifier (UID) indicator	Valid values are: • **0** - UID not supported • **1** - UID supported and requested
V	CVV, CVV2, or CID	Normally entered on manual transactions only
VAT	VAT Tax Rate	Conditionally Required (see note 9 below)
VRN	Customer VAT Registration Number	Cardholder or Company VAT Registration Number (see note 10 below)
W	Hubometer	
WP	Web Portal Data	
X-Z	Reserved For Future Use	

Notes for Visa 2.0

1. The “Fleet Service Prompt” value from the magstripe or tag “DF30” from the chip can be used by issuers to determine which codes must be prompted for each transaction (see Fleet Service Prompt below for details).
2. Either data type 0 (User ID), 2 (Vehicle Number), or 3 (Driver Number) must be included if prompted for Field 48 Usage 36 of the Visa message. Visa allows up to 17 bytes (any remaining digits after 17 will be truncated).
3. You must include data type 4 (Odometer) if prompted for Field 104, Dataset 5C, tag ‘0B’ of the Visa message. Visa allows up to 7 digits; any digits after the first 7 will be truncated.
4. Either data type 8 (Purchase Order Number) or 9 (Invoice Number) must be included if prompted as one of these two fields will be used for Field 62.7 of the Visa message. Visa allows up to 25 bytes (any remaining digits after 25 will be truncated). This field is alphanumeric.
5. Data type FTE (Fleet employee number) must be included if prompted for Field 104, Dataset 5C, tag ‘1F11’ of the Visa message. Visa allows up to 12 characters; any character after the first 12 will be truncated.
6. You must include Data type 1 (Trailer number) if prompted for Field 104, Dataset 5C, tag ‘1F12’ of the Visa message. Visa allows up to 16 characters; any characters after the first 16 will be truncated.
7. Data type F (Misc. Numeric Customer Data) must be included if prompted for Field 104, Dataset 5C, tag ‘1F13’ of the Visa message. Visa allows up to 20 characters; any characters after the first 20 will be truncated.
8. Data type FF (Misc. Alphanumeric Data 2) must be included if prompted for Field 104, Dataset 5C, tag ‘1F14’ of the Visa message. Visa allows up to 20 characters; any characters after the first 20 will be truncated.
9. Data type VAT (VAT Tax Rate) is required for Visa 2.0 whenever fuel is purchased. This field maps to Visa field 104, Dataset 5C, tag ‘0E’.
10. Data type VRN (Customer VAT Registration Number) is not required for Visa 2.0, but can be included in the merchant message. If included, this field maps to Visa field 104, Dataset 5C, tag ‘19’.

Fleet Service Prompt

- 0 - Reserved (No Prompt Required)
- 1 - ID and Odometer Reading
- 2 - Vehicle ID and Odometer Reading
- 3 - Driver ID and Odometer Reading
- 4 - Odometer Reading
- 5 - No Prompt
- 6 - ID (6-Digit Numeric Vehicle, Driver, or Generic ID)
- 7 to 9 - Reserved (No Prompt Required)

Prompting (tag DF30) (Optional)

Optionally, issuers may personalize their chip cards to prompt for one or more Visa Fleet data elements using prompting (tag DF30). When personalized on the chip card, the terminal can use tag DF30 to prompt the user to enter the Visa Fleet data into the terminal during the transaction. For example, issuers can personalize the tag to prompt for the driver's ID and odometer reading. During the transaction the terminal reads these data elements from the tag and prompts the cardholder or clerk to enter the information into the terminal at the POS.

The issuer receives the data obtained from the cardholder in the authorization and clearing messages.

The prompting data element, which can be defines at the card level are:

- Vehicle ID, Driver ID, or Generic ID
- Odometer
- Fleet Work Order/Purchase Order Number
- Fleet Trailer Number
- Fleet Employee Number
- Fleet Additional Prompted Data 1 (determined by issuer)
- Fleet Additional Prompted Data 2 (determined by issuer)

A.2 Service Codes

TABLE A-2 Service Codes

Value	Description
F	Full Service
S	Self Service
N	Mini Serve
X	Maxi Serve
O	Other or Non-Fuel

NOTE: For Visa 2.0 This is used to derive Visa field 104, Dataset 5C, tags 01 and 02.

A.3 Measurement Codes

TABLE A-3 Measurement Codes

Value	Description
C	Case / Carton
G	Gallons
K	Kilograms
L	Liters
P	Pounds
Q	Quarts
U	Units
Z	Ounces
X	Undefined

NOTE: For Visa 2.0 This is used to derive Visa field 104, Dataset 5C, tag 04.

A.4 Product Codes

NOTE: This Product Code Listing is a reference that is current as of 4/30/2021, using Conexxus Payment System Product Codes v4.0. Conexxus often makes unscheduled changes to the listing. The POS must maintain and use the most current Conexxus Product Code listing. Refer to Conexxus for the latest list of Product Codes, or request the latest from Worldpay.

NOTE: For Visa 2.0, Merchants can continue to send Conexxus product codes, and FIS-Worldpay will convert these to the 2 character Visa codes to be sent in Visa fields 104, Dataset 5C, tag '1F10' (fuel) and fields Field 104, Dataset 5C, tags '1F01-08' (up to 8 non-fuel products).

TABLE A-4 Product Codes

Code	Description
000	Not Used
001 - 099: Dispensed Motor Fuels and Additives	
001	Regular
002	Mid/Plus
003	Premium/Super
004	Mid/Plus 2
005	Premium/Super 2
006	Reserved for future use
007	Reserved for future use
008	Reserved for future use
009	Reserved for future use
010	Reserved for future use
011	Ethanol (5.7%) - Deprecated
012	Mid/Plus Ethanol (5.7%) - Deprecated
013	Premium/Super Ethanol (5.7%) - Deprecated
014	Ethanol (7.7%) - Deprecated
015	Mid/Plus Ethanol (7.7%) - Deprecated
016	Green Gasoline Regular (Plant based not petroleum based)
017	Green Gasoline Mid/Plus (Plant based not petroleum based)

TABLE A-4 Product Codes

Code	Description
018	Green Gasoline Premium/Super (Plant based not petroleum based)
019	Regular Diesel #2
020	Premium Diesel #2
021	Regular Diesel #1
022	Compressed Natural Gas
023	Liquid Propane Gas
024	Liquid Natural Gas
025	Reserved for future use
026	E-85
027	Reformulated 1
028	Reformulated 2
029	Reformulated 3
030	Reformulated 4
031	Reformulated 5
032	Diesel Off-Road (# 1 and #2 Non-Taxable[1]
033	Diesel Off-Road (Non-Taxable)[1]
034	Biodiesel Blend Off-Road (Non- Taxable)
035	Reserved for future use
036	Racing Fuel
037	Mid/Plus 2 (10% Blend)
038	Premium/Super 2 (10% Blend)
039	Mid/Plus Ethanol 2 (15% Blend)
040	Premium/Super Ethanol 2 (15% Blend)
041	Premium/Super Ethanol (7.7% Blend) - Deprecated
042	Regular Ethanol (10% Blend)
043	Mid/Plus Ethanol (10% Blend)
044	Premium/Super Ethanol (10% Blend)
045	B2 Diesel Blend 2% BioDiesel
046	B5 Diesel Blend 5% BioDiesel

TABLE A-4 Product Codes

Code	Description
047	B10 Diesel Blend 10% Biodiesel
048	B11 Diesel Blend 11% Biodiesel
049	B15 Diesel Blend 15% Biodiesel
050	B20 Diesel Blend 20% Biodiesel
051	B100 Diesel Blend 100% Biodiesel
052	Reserved for future use
053	Reserved for future use
054	Reserved for future use
055	Reserved for future use
056	Reserved for future use
057	Reserved for future use
058	Reserved for future use
059	Reserved for future use
060	Renewable Diesel (>=R95) (meets ASTM D975 in US / EN 590 in Europe)
062	DEF (Diesel Exhaust Fluid)
063	Premium Diesel #1
076-098	Undefined Fuel–Reserved for Proprietary Use
067	Premium Diesel Blend <20% Biodiesel
068	Premium Diesel Blend >= 20% Biodiesel
069	B75 Diesel Blend 75% Biodiesel
070	B99 Diesel Blend 99% Biodiesel
071-075	Reserved for Preauthorization Use Only
099	Miscellaneous Fuel
100 - 149: Vehicle Products/Services	
100	General Automotive Merchandise
101	Motor Oil
102	Car Wash
103	Oil Change
104	Oil Filter

TABLE A-4 Product Codes

Code	Description
105	Work Order
106	Anti-Freeze
107	Washer Fluid
108	Brake Fluid
109	Tires
110	Federal Excise Tax (Tires)
111	Tire Rotation
112	Batteries
113	Lube
114	Inspection
115	Labor
116	Towing
117	Road Service
118	Vehicle Accessories
119	Vehicle Parts
120	Preventive Maintenance
121	Air Conditioning Service
122	Engine Service
123	Transmission Service
124	Brake Service
125	Exhaust Service
126	Body Work
127	Vehicle Glass
128	Synthetic Oil
129	Lamps
130	Wipers
131	Hoses
132	Tire-related (Wheel Balance, Valve Stem)
133	Repairs
134	Service Package

TABLE A-4 Product Codes

Code	Description
135	Vehicle Parking
136	Truck Tank Cleaning
137	Other Lubricants
138	Automotive Fuel Additives/ Treatment (injected)
139	Vehicle Rental
140	Air Filter
141	Vehicle Prep
142	Fuel System
143-148	Undefined Vehicle Product/Services – Reserved for Proprietary Use
149	Miscellaneous Vehicle Products/Services
150 - 174: Aviation Fuels	
150	Jet Fuel
151	Aviation Fuel Regular
152	Aviation Fuel Premium
153	Aviation Fuel JP8
154	Aviation Fuel 4
155	Aviation Fuel 5
156	Biojet (Diesel)
157	Aviation Biofuel (Gasoline)
158-167	Undefined Aviation Fuel–Reserved for Proprietary Use
168-173	Undefined Aviation Fuel
174	Miscellaneous Aviation Fuel
179 - 224: Aviation Products/Services	
175	Storage
176	Aircraft Ground Handling
177	Aircraft Ground Power Unit
178	Aircraft Labor
179	Aircraft Work Order
180	Aircraft Maintenance

TABLE A-4 Product Codes

Code	Description
181	Aircraft Service
182	Transportation
183	De-icing
184	Ramp Fees
185	Catering
186	Hangar Fee
187	Landing Fee
188	Call Out Fee
189	Aircraft Rental
190	Instruction Fee
191	Flight Plans / Weather Brief
192	Charter Fee
193	Communication Fee
194	Aircraft Cleaning
195	Cargo Handling
196	Aircraft Accessories
197	Pilot Supplies
198	Aircraft Parking Fees
199	Aircraft Tie Down Fees
200	Aircraft Sanitation Fees
201	Aircraft Fuel Additive
202	AC Parts052-061
203	Oxygen
204	De-fuel
205	Re-service
206	Static Dissipater Additive
207	Corrosion Inhibitor
208	Airport Fees
209	Overtime Fees
210	IT/Bladder

TABLE A-4 Product Codes

Code	Description
211	Ground Equipment Service Fees
212	Secure Fees
213	Flow Fee
214-215	Undefined Aviation – Reserved for future use
216-223	Undefined Aviation – Reserved for proprietary use
224	Miscellaneous Aviation Products/Services
225 - 249: Marine Fuels	
225	Marine Fuel 1
226	Marine Fuel 2
227	Marine Fuel 3
228	Marine Fuel 4
229	Marine Fuel 5
230	Other Marine Fuel
231	Marine Diesel
232-242	Undefined Marine Fuel – Reserved for future use
243-248	Undefined Marine Fuel – Reserved for Proprietary Use
249	Miscellaneous Marine Fuel
250 - 299: Marine Products/Services	
250	Marine Service
251	Marine Labor
252	Marine Work Order
253	Launch Fee
254	Slip Rental
255-280	Undefined Marine Services – Reserved for future use
281-298	Undefined Marine Services – Reserved for proprietary use
299	Miscellaneous Marine Products/Services
300 - 399: Other Fuels	
300	Kerosene - Low Sulfur

TABLE A-4 Product Codes

Code	Description
301	White Gas
302	Heating Oil
303	Reserved for future use
304	Other Fuel / Non-taxable
305	Kerosene - Ultra Low Sulfur
306	Kerosene -Low Sulfur (Non-Taxable)
307	Kerosene -Ultra Low Sulfur (Non-Taxable)
308	EVC-1 – Level 1 charge = 110v 15 amp
309	EVC-2 – Level 2 charge = 240v 15-40 amp
310	EVC-3 – Level 3 charge = 480v 3 phase charge
311	Biodiesel Blend 2% Off-Road (Non-Taxable)
312	Biodiesel Blend 5% Off-Road (Non-Taxable)
313	Biodiesel Blend 10% Off-Road (Non-Taxable)
314	Biodiesel Blend 11% Off-Road (Non-Taxable)
315	Biodiesel Blend 15% Off-Road (Non-Taxable)
316	Biodiesel Blend 20% Off-Road (Non-Taxable)
317	Diesel #1 Off-Road (Non-Taxable)
318	Diesel #2 Off-Road (Non-Taxable)
319	Diesel #1 Premium Off-Road (Non-Taxable)
320	Diesel #2 Premium Off-Road (Non-Taxable)
321	Additive Dosage
322	Ethanol Blends E16-E84
323	Low Octane UNL
324	Blended Diesel (#1 and #2)
325	Off-Road Regular (Non-Taxable)
326	Off-Road Mid/Plus (Non-Taxable)
327	Off-Road Premium/Super (Non-Taxable)
328	Off-Road Mid/Plus 2 (Non-Taxable)
329	Off-Road Premium/Super 2 (Non-Taxable)
330	Recreational Fuel (90 Octane)

TABLE A-4 Product Codes

Code	Description
331	Hydrogen H35
332	Hydrogen H70
333-380	Undefined Other Fuel – Reserved for future use
381-398	Undefined Other Fuel – Reserved for future use
399	Miscellaneous Other Fuel
400 - 599: General Merchandise	
400	General Merchandise
401	General Ice
402-409	General Undefined – Reserved for future use
410	General Tobacco
411	Cigarettes
412	Tobacco - Other
413-417	Undefined Tobacco – Reserved for future use
418-419	Undefined Tobacco – Reserved for future use
420	General Packaged Beverage
421	Packaged Beverages (non-alcoholic)
422	Packaged Juice
423	Other Packaged Beverages
424-427	Undefined Packaged Beverages – Reserved for future use
428-429	Undefined Packaged Beverages – Reserved for future use
430	General Dispensed Beverage
431	Hot Dispensed Beverages
432	Cold Dispensed Beverages
433	Frozen Dispensed Beverages
434	Other Dispensed Beverages
435-437	Undefined Dispensed Beverages – Reserved for future use
438-439	Undefined Dispensed Beverages– Reserved for future use
440	General Snacks

TABLE A-4 Product Codes

Code	Description
441	Salty Snacks
442	Alternative Snacks
443	Sweet Snacks - Packaged
444-447	Undefined Snacks – Reserved for future use
448-449	Undefined Snacks – Reserved for future use
450	General Candy
451-457	Undefined Candy– Reserved for future use
458-459	Undefined Candy – Reserved for proprietary use
460	General Dairy
461	Fluid Milk Products
462	Packaged Ice Cream/Novelties
463	Other Dairy
464-467	Undefined Dairy - Reserved for future use
468-469	Undefined Dairy – Reserved for proprietary use
470	General Grocery
471	Groceries - Edible
472	Groceries - Non-Edible
473	Groceries - Perishable
474	Bread - Packaged
475	Frozen Foods
476-477	Undefined Grocery – Reserved for future use
478-479	Undefined Grocery – Reserved for proprietary use
480	General Alcohol
481	Beer - Alcoholic
482	Beer - Non-Alcoholic
483	Wine
484	Liquor
485-487	Undefined Alcohol – Reserved for future use
488-489	Undefined Alcohol – Reserved for proprietary use
490	General Deli

TABLE A-4 Product Codes

Code	Description
491	Packaged Sandwiches/Deli Products
492	Prepared Foods
493	Deli Items
494-497	Undefined Deli – Reserved for future use
498-499	Undefined Deli – Reserved for proprietary use
500	General Foodservice
501-507	Undefined Foodservice – Reserved for future use
508-509	Undefined Foodservice – Reserved for proprietary use
510	General Lottery
511	Lottery - Instant
512	Lottery - Online
513	Lottery - Other
514-517	Undefined Lottery – Reserved for future use
518-519	Undefined Lottery – Reserved for proprietary use
520	General Money Order
521	Money Order - Vendor Payment
522	Money Order - Payroll Check
523	Money Order - Gift Certificate
524	Money Order - Refund Check
525	Money Order - Official Check
526	Money Order - Rebate Check
527	Money Order - Dividend Check
528	Money Order - Utility Check
529	Undefined Money Order – Reserved for future use
530	General Store Service
531	Home Delivery
532	Prepaid Cards - Purchase
533	Prepaid Cards - Activation/Recharge

TABLE A-4 Product Codes

Code	Description
534	Membership/Loyalty
535-537	Undefined Store Services – Reserved for future use
538-539	Undefined Store Services – Reserved for proprietary use
540	General Health & Beauty Care
541-547	Undefined Health & Beauty Care – Reserved for future use
548-549	Undefined Health & Beauty Care – proprietary use
550	General Publications
551-557	Undefined General Publications – Reserved for future use
558-559	Undefined General Publications Reserved for Proprietary Use
560-590	Prepaid and Bill Pay (Secondary Network)
560	PIN Activate Prepaid Card
561	PIN Return Prepaid Card
562	Enable Device/Handset Unlock
563	Disable Device/Handset Lock
564	3rd Party Prepaid Card Activate
565	3rd Party Prepaid Card Reload
566	Financial Prepaid Card Activate
567	Financial Prepaid Card Reload
568	Proprietary Prepaid Card Activate
569	Proprietary Prepaid Card Reload
570	General Purpose Activate
571	General Purpose Reload
572	Real Time Recharge
573	Wireless Real Time Recharge
574	Single Payee Bill Pay
575	Multiple Payee Bill Pay

TABLE A-4 Product Codes

Code	Description
576-583	Undefined Prepaid and Bill Pay – Reserved for future use
584-590	Undefined Prepaid and Bill Pay- Reserved for proprietary use
591-599	Undefined Merchandise– Reserved proprietary use
600 - 624: Packaged Fuels	
600	Packaged DEF (Diesel Exhaust Fluid)
601	Packaged B99
602	Packaged B100
603	Packaged Additive
604	Packaged Kerosene
605	Packaged Propane
606-612	Undefined Packaged Fuels – Reserved for future use
613-623	Undefined Packaged Fuels – Reserved for proprietary use
624	Miscellaneous Packaged Fuels
625 - 649: Reserved for future use	
650 - 699: Vehicle Products/Services (continued)	
650	Scales
651	Shower
652	Tire Repair
653	Lodging
654	Wash Out
655	Trailer Wash
656	RV Dump Fee
657	EV Charging Fee
658	EV Battery Exchanges
659	Toll Payments
660-689	Undefined Vehicle Product/Services – Reserved

TABLE A-4 Product Codes

Code	Description
690-699	Undefined Vehicle Product/Services – Reserved for proprietary use
700 - 719: Cannabinoids	
700	Cannabidiol (CBD)
701-717	Undefined Cannabinoid - Reserved for future use
718-719	Undefined Cannabinoid - Reserved for proprietary use
720-799: Reserved for future use	
800-899: Reserved for proprietary use	
900 - 949: Negative Transactions	
900	Discount 1
901	Discount 2
902	Discount 3
903	Discount 4
904	Discount 5
905	Coupon 1
906	Coupon 2
907	Coupon 3
908	Coupon 4
909	Coupon 5
910	Lotto Payout (Instant)
911	Lotto Payout (Online)
912	Lotto Payout (Other)
913	Split Tender
914	Tax Discount/Forgiven
915	Local Discount 1
916	Local Discount 2
917	Local Discount 3
918	Local Discount 4
919	Local Discount 5
920	POS/Loyalty Reserved Discount 1

TABLE A-4 Product Codes

Code	Description
921	POS/Loyalty Reserved Discount 2
922	POS/Loyalty Reserved Discount 3
923	POS/Loyalty Reserved Discount 4
924	POS/Loyalty Reserved Discount 5
925-940	Undefined Negative–Reserved for future use
941-948	Undefined Negative–Reserved for proprietary use
949	Miscellaneous Negative
950 - 999: Administrative	
950	Tax 1
951	Tax 2
952	Tax 3
953	Tax 4
954	Tax 5
955	Cash back
956	Cash back Fee
957	Fee 1
958	Fee 2
959	Fee 3
960	Fee 4
961	Fee 5
962	Miscellaneous Aviation Tax
963	GST/HST (Canadian)/VAT 1
964	PST/QST (Canadian) VAT 2
965	SWT Rate (Canadian)
966	Tax 6
967	Tax 7
968	Tax 8
969	Jet Federal Excise Tax
970	AvGas Federal Excise Tax

TABLE A-4 Product Codes

Code	Description
971	Charity
972	Gratuity
973-990	Undefined Administrative-Reserved for future use
991-998	Undefined Administrative- Reserved for proprietary use
999	Miscellaneous Administrative

[1] Code 032 and 033 should only be used by existing implementations that limit fuel to codes 001-099.The preferred codes are 311-320, which provide more granularity. 032 and 033 are likely to be deprecated in the future.

A.5 Sample Customer Data Fields

Example: Driver ID 001722, Odometer 274911

```
3001722:4274911
```

Example: Driver ID 002915, Vehicle 83122, Odometer 007292

```
3002915:283122:4007292
```

Example: Unencrypted ID 77429138, P.O. 90125

```
077429138:890125
```

A.6 Sample Product Information

In the following example, the customer purchases 58.443 gallons of super unleaded at a self-service. The price per gallon is 1.199 and total fuel cost is $70.07.

```
01-004:S:G:058443:0001199:00007007\
```

In the following example, the customer purchases 120.220 gallons of premium diesel at a full service. The price per gallon is 1.129 and total fuel cost is $135.73. The customer paid for engine repairs for $275.99. The number of units was one and the unit cost was the same as the product cost. The customer also purchased one carton of cigarettes at a cost of $17.99. The customer paid $3.49 in tax.

```
04-020:F:G:120220:0001129:00013573\122:O:X:001000:0275990:00027599\451:O:C:
001000:0017990:00001799\950:O:X:001000:0003490:00000349\
```

worldpay

B

Card Data and Product Information Codes

This appendix describes the following:

B.1 Uploaded Transaction Action Codes and Response Literals

TABLE B-1 Uploaded Transaction Action Codes and Response Literals

Code	Description	Response Literal Returned
0000	Uploaded to Host	UPLOADED
For codes 0201 to 0999, see VSP Response Codes for P2PE.		
1010	Invalid Merchant Number or Check Digit	TERM ID ERROR
1011	Invalid Terminal Number	INV TERM NO
1012	Invalid Terminal Type	INV TERM TYPE
1014	Invalid Tran Code	INV TRAN CODE
1017	Invalid Batch/Shift Number	INV BATCH NUM
1018	Invalid Sequence Number	INV SEQ NUM

B.2 Credit Action Codes and Response Literals

TABLE B-2 Credit Action Codes and Response Literals

Code	Description	Response Literal Returned
0000	Approved	APPROVED
0004	Pick Up Card	PICK UP CARD
0007	Pick Up Card	PICK UP CARD
0011	Approved - Check ID	APPROVED
0019	Risk Parameters Exceeded	SEE ATTENDANT
0024	Exceeded PIN attempts	PIN TRY EXCEEDED
0041	Pick Up Card	PICK UP CARD
0043	Pick Up Card	PICK UP CARD
0055	Invalid PIN	INVALID PIN
0068	Velocity for Pay at the Pump	VELOCITY DECLINE
0076	P2PE Denied Transaction	DENIED TRANSACTION
0101	Refer to Issuer	REFER TO ISSUER
0102	Refer to Issuer	REFER TO ISSUER
0151	NSF	NSF
0161	Exceeds Amount	EXCEEDS AMOUNT
0165	Exceeds Frequency	EXCEEDS FREQ
For codes 0201 to 0999, VSP Response Codes for P2PE.		
1010	Invalid Merchant Number or Check Digit	TERM ID ERROR
1011	Invalid Terminal Number	INV TERM NO
1012	Invalid Terminal Type	INV TERM TYPE
1013	Terminal Deactivated	CALL LYNK
1014	Invalid Tran Code	INV TRAN CODE
1015	Invalid or Unsupported Card Type	INV CARD TYPE
1016	Invalid Application Type	INV APPL TYPE
1017	Invalid Batch/Shift Number	INV BATCH NUM
1018	Invalid Sequence Number	INV SEQ NUM

TABLE B-2 Credit Action Codes and Response Literals

Code	Description	Response Literal Returned
1019	Invalid Mag Stripe or PAN format	INV ACCOUNT DATA
1020	Invalid Expiry Date	INV EXPIRY DATE
1021	Invalid Amount	INV TRAN AMOUNT
1022	Invalid Date or Time	INV DATE/TIME
1023	Invalid Auth Number	INV AUTH NUM
1024	Invalid Retrieval Data	INV RETR DATA
1025	Not Setup For Credit Processing	SERV NOT ALLOWED
1026	Invalid Program Type	INV PROG TYPE
1027	Invalid AMEX Setup	AMEX NOT ALLOWED
1028	Invalid Discover Setup	DISC NOT ALLOWED
1029	Invalid Diner/Carte Blanche Card Setup	DCCB NOT ALLOWED
1030	Invalid JCB Setup	JCB NOT ALLOWED
1040	Invalid ACH Setup	ACH SETUP ERROR
1099	Invalid Data Format In Request	DATA FORMAT ERR
All Others	Undefined	DENIED

B.3 Debit Action Codes and Response Literals

TABLE B-3 Debit Action Codes and Response Literals

Code	Description	Response Literal Returned
0000	Approved	APPROVED
0012	Expired Card	CARD EXPIRED
0013	Invalid Card	INVALID CARD
0014	Invalid PIN	INVALID PIN
0015	Bank Not Available	BANK NOT AVAIL
0019	Risk Parameters Exceeded	SEE ATTENDANT
0021	Unauthorized Usage	UNAUTHORIZED
0024	Invalid PIN	INVALID PIN
0030	Ineligible Account	INELIGIBLE ACCT
0031	Ineligible Transaction	INELIGIBLE TRAN
0032	Network Unavailable	NETWORK UNAVAIL
0040	Whole Dollar Amount Only	RE-ENTER WHOLE $
0041	Insufficient Funds	TRY LESSER AMT
0042	No Further Withdrawals	W/D FREQ LIMIT
0043	Try Lesser Amount	TRY LESSER AMT
0044	Try Lesser Amount/Whole Dollar Only	TRY LESSER AMT-W
0050	Invalid PIN	INVALID PIN
0070	Card Not Supported	UNSUPPORTED CARD
0071	Card Not Supported	UNSUPPORTED CARD
0072	Closed Account	INACTIVE ACCOUNT
0076	P2PE Denied Transaction	DENIED TRANSACTION
0090	Invalid Terminal Type - Call Worldpay	INV TERM TYPE
0091	Invalid Terminal ID - Call Worldpay	INV TERM ID
0092	ACH Information Not Setup - Call Worldpay	ACH SETUP ERROR
0093	Terminal Deactivated - Call Worldpay	CALL LYNK
0094	Format Error In Transaction Request - Call Worldpay	DATA FORMAT ERR

TABLE B-3 Debit Action Codes and Response Literals

Code	Description	Response Literal Returned
0095	Zero Amount Requested	ZERO AMOUNT ERR
0099	Invalid Terminal	INV TERMINAL
For codes 0201 to 0999, see VSP Response Codes for P2PE.		
All Others	Undefined	DENIED

B.4 EBT Action Codes And Response Literals

TABLE B-4 EBT Action Codes And Response Literals

Code	Description	Response Literal Returned
0000	Approved	APPROVED
0012	Expired Card	EXPIRED CARD
0014	PIN Tries Exceeded	PIN TRIES EXCEED
0021	Cannot Process	CANNOT PROCESS
0022	Re-enter Transaction	RE-ENTER TRANS
0030	Ineligible Account	INVALID TRANS
0032	Network Unavailable	NO HOST RESPONSE
0041	Insufficient Funds	VERIFY BALANCES
0050	Invalid PIN	INVALID PIN
0076	P2PE Denied Transaction	DENIED TRANSACTION
0090	Invalid Terminal Type	INV TERM TYPE
0091	Invalid Terminal ID	INV TERM ID
0092	ACH Information Not Setup	ACH SETUP ERROR
0093	Terminal Deactivated	CALL LYNK
0094	Format Error In Transaction Request	DATA FORMAT ERR
0095	Zero Amount Requested	ZERO AMOUNT ERR
0099	Invalid Terminal	INV TERMINAL
0120	Transaction Reversed	TRANS REVERSED
For codes 0201 to 0999, see Table B-8.		
All Others	Undefined	DENIED

B.5 Fleet Action Codes and Response Literals

If processing P2PE, see VSP Response Codes for P2PE.

TABLE B-5 Fleet Action Codes and Response Literals

Code	Description	Response Literal Returned
0000	Approved	APPROVED
0019	Risk Parameters Exceeded	SEE ATTENDANT
0076	P2PE Denied Transaction	DENIED TRANSACTION
0080	Approved - Imprint Card	APPROVED/IMPRINT
0081	Approved - Fraud Suspected	CALL CARD ISSUER
0101	Expired Card	DECLINED
0103	Referral	CALL CARD ISSUER
0104	Restricted Card	DENIED
0107	Refer To Card Issuer	REFERRAL
0109	Invalid Merchant	REFERRAL
0110	Invalid Amount	INVALID DATA
0111	Invalid Account	DENIED
0112	WEX EMV Decline	CRYPTOGRAM FAIL
0113	WEX EMV Decline	EMV FAIL
0114	Invalid ISO	DENIED
0116	Insufficient Funds	DENIED
0119	Invalid Industry	DECLINED
0120	ICR Restricted	SEE ATTENDANT
0121	Daily Dollar Limit Exceeded	DENIED
0123	Daily Frequency Limit Exceeded	DENIED
0180	Invalid Driver ID	INVALID DRIVER
0181	Invalid Vehicle ID	INVALID VEHICLE
0182	Invalid Local Date or Time	INVALID DATA
0183	Exceeds Transaction Dollar Limit	DENIED
0184	Transaction Not Voided	INVALID DATA
0185	Invalid Processing Code	REFERRAL

TABLE B-5 Fleet Action Codes and Response Literals

Code	Description	Response Literal Returned
0186	PL Restricted Site	DENIED
0187	Fleet Restricted Site	DENIED
0190	Billing Cycle Limit	DENIED
0191-0194	Undefined Reason	DENIED
0195	Product Restricted	DECLINED
0196-0199	Undefined Reason	DENIED
0200	Do Not Honor	PICK UP CARD
0208	Lost Card	REPORTED LOST
0209	Stolen Card	REPORTED STOLEN
0331	Invalid ID	INVALID ID
0400	More WEX Prompts Required	MORE PROMPTS REQ
0902	Invalid Message	INVALID DATA
0909	System Malfunction/Failure	REFERRAL
0990	Invalid Terminal Type	INV TERM TYPE
0991	Invalid Terminal ID	INV TERM ID
0992	ACH Information Not Setup	ACH SETUP ERROR
0993	Terminal Deactivated	CALL LYNK
0994	Format Error In Transaction Request	DATA FORMAT ERR
0995	Zero Amount Requested	ZERO AMOUNT ERR
0999	Invalid Terminal	INV TERMINAL
All Others	Any Undefined Action Code	REFERRAL

B.6 Gift and Prepaid Card Action Codes and Response Literals

TABLE B-6 Gift and Prepaid Card Action Codes and Response Literals

Code	Description	Response Literal Returned
0000	Approved	APPROVED
0001	Invalid Card	INVALID CARD
0002	Invalid Card	INVALID CARD
0003	Invalid Card	INVALID CARD
0004	Card Not Active	CARD NOT ACTIVE
0005	Insufficient Funds	TRY LESSER AMT
0006	Card Not Inactive	CARD NOT INACT
0007	Card Already Active	CARD PREV ACTIVE
0008	Over System Limit	OVER LIMIT
0009	Over Client Limit	OVER LIMIT
0010	Invalid Transaction	DENIED 10
0011	Deactivation Not Allowed	DENIED 11
0012	Processing Error	CANNOT PROCESS
0013	Invalid Transaction	DENIED 13
0014	Unknown Message	DATA FORMAT ERR
0015	Network Unavailable	NETWORK UNAVAIL
0017	Activation amount less than set Minimum	ACT BELOW LIMIT
0018	Invalid Card Validation Code	CARDCODE INVALID
0030	Call Help Desk - 12	CALL HELP DESK
0031	Call Help Desk - 14	CALL HELP DESK
0032	Call Help Desk - 15	CALL HELP DESK
0033	Invalid Void Amount	INVLD VOID AMT
0034	No Program in Effect	INVALID CARD
0035	Invalid Void Transaction	INVLD VOID TRANS
0036	Call Help Desk - 20	CALL HELP DESK
0070	Denial - No Previous Authorization	DENIED - NO AUTH
0071	No/Invalid Authorization Number - Special Edit	INVALID AUTH NO

TABLE B-6 Gift and Prepaid Card Action Codes and Response Literals

Code	Description	Response Literal Returned
0072	Unknown Dealer/Store Code - Special Edit	UNKNOWN LOCATION
0073	Maximum Number of Recharges Exceeded	OVER MAX RECHRG
0074	Invalid Card Verification Value	INVALID CVV
0075	Invalid PIN Number	INVALID PIN NUM
0076	Manual Transaction Not Allowed	KEYED NOT ALLOWD
0077	Mag Stripe Read not Valid	SWIPE NOT ALLOWD
0078	Invalid Tender Type	INVALID TENDER
0079	PIN Locked	PIN VELOCITY ERR
0080	Max Number of Redemptions Exceeded	OVER MAX REDEMPT
0081	Invalid Currency Code	INVALID CURR CDE
For codes 0201 to 0999, see VSP Response Codes for P2PE.		
All Others	Undefined	DENIED

B.7 Sprint Phone Card Activation Action Codes and Response Literals

TABLE B-7 Sprint Phone Card Activation Action Codes and Response Literals

Code	Description	Response Literal Returned
0000	Activated	ACTIVATED
0002	Active in 2 hours	ACTIVE IN 2-HRS
0003	Security Failure	SECURITY FAILURE
0005	PIN not found or suspended or deactivated	DECLINED - 05
0006	Unknown Error	DECLINED - 06
0012	Invalid card or card not swiped	INVALID CARD
0096	Card Already Active	ALREADY ACTIVE
For codes 0201 to 0999, see VSP Response Codes for P2PE.		
All Others	Undefined	DENIED

B.8 VSP Response Codes for P2PE

TABLE B-8 VSP Response Codes for P2PE

Code	Reason Description	Response literal returned
0201	Card data not encrypted	CARD NOT ENCRYP
0202	Expiry date too high to encrypt	EXPIRE DATE HIGH
0203	Card is expired	CARD EXPIRED
0204	BIN Excluded from encryption	BIN EXCLUDED
0205	Invalid Track 1	INVALID TRACK 1
0206	Invalid Track 2	INVALID TRACK 2
0207	Invalid PAN	INVALID PAN
0208	Invalid Expiration Date	INV EXP DATE
0211	PAN Luhn failed Mod 10 Check	PAN FAILED MOD
0212	PAN Too Short	PAN TOO SHORT
0298	Unknown Multiple Tracks	UNKNOWN TRACKS
0299	Unknown Reason - No Action	UNKNOWN REASON
0300	Decryption Failure	DECRYPTION FAIL
0301	Invalid Requestor	INVALID REQUESTR
0302	Invalid Transaction ID	INVALID TRAN ID
0303	Invalid Transaction Type	INVALID TRAN TYP
0304	Invalid Amount	INVALID AMOUNT
0305	Invalid Domain Code	INV DOMAIN CODE
0306	Invalid Merchant Code	INV MERCH CODE
0307	Invalid Store Code	INV STORE CODE
0308	Invalid Terminal Code	INV TERM CODE
0309	Invalid Device Code	INV DEVICE CODE
0310	Missing Payment Card Data	MISS CARD DATA
0311	Domain Code not found	DOM CODE NOT FND
0312	Merchant Code not found	MERCH CODE NT FND
0313	Store Code not found	STOR CODE NT FND
0316	Device not added	DEV NOT ADDED

TABLE B-8 VSP Response Codes for P2PE

Code	Reason Description	Response literal returned
0317	Missing PROV key	MISS PROV KEY
0318	Missing PAN or DISC key	MISS PAN OR DISC
0320	Encrypted PAN Mod 10 Failure	MOD 10 FAIL
0321	Invalid eParms Data	INV EPARMS DATA
0322	Key Service is Not Reachable	KEY SERV NOT RCH
0323	Key Sync ID not found	KEY SYNC ID NOT
0324	Missing eParms Data	MISS EPARMS DATA
0325	Missing MDK	MISSING MDK
0326	Missing Derivation Data	MISSING DERIV KY
0327	Derived Key Derivation Error	DERIVE KEY ERR
0328	MAC Error Track 1 PAN	MAC ER TRK 1 PAN
0329	MAC Error Track 1 DISC	MAC ER TRK 1 DIS
0330	MAC Error Track 2 PAN	MAC ER TRK 2 PAN
0331	MAC Error Track 2 DISC	MAC ER TRK 2 DIS
0332	MAC Error Manual PAN	MAC ER MAN PAN
0333	MIV Error Track 1 PAN	MIV ER TRK 1 PAN
0334	MIV Error Track 2 PAN	MIV ER TRK 2 PAN
0339	Virtual Device Conflict Detected	VIRT DEV CONFLCT
0376	Decryption failure	DECRYPTION FAIL
0380	RSA KeyID Not Found	RSA KEYID NT FND
0381	RSA Decryption Error	RSA DECRYP ERROR
0382	RSA Invalid Blob	RSA INV BOB
0383	RSA Configuration Name already exists	RSA CNFG NAM EX
0384	RSA Configuration Name cannot be found	RSA CNFG NAM NT
0385	RSA returned no data	RSA NO DATA
0386	RSA - Locator does not support VTP	RSA NO VTP SUP
0387	RSA Web Service Initialization Error	RSA WEB INIT ERR
0388	RSA Token Creation Error	RSA TOKN CRT ERR
0389	RSA Tokenization Error	RSA TOKN ERROR

TABLE B-8 VSP Response Codes for P2PE

Code	Reason Description	Response literal returned
0390	RSA Detokenization Error	RSA DETOKN ERR
0391	RSA Result Ambiguous	RSA RESULT AMB
0392	Invalid Parameter [Parameter Name]	INV PARAMETER
0393	Host Access Denied - [Host Address]	HOST ACCESS DEN
0397	HSM Error	HSM ERROR
0398	Decryption Error Multiple Tracks	DECRYPT MULT ERR
0399	Decryption Failure - Unknown Error	DECRYPT FAIL
0801	RSA Key Generated Success	RSA KEY SUCC
0802	RSA Key Provided Success	RSA KEY PROV SUC
0803	RSA Certificate Error	RSA CERT ERROR
0804	RSA Deactivate Key Success	RSA DEACT SUCC
0805	RSA Deactivate Key Error	RSA DEACT KEY ER
0806	RSA Revoke Certificate Error	RSA REVOK CERT
0807	RSA Key Pair Generation Error	RSA KEY PAIR ERR
0808	RSA Create Configuration Success	RSA CRT CONFG SU
0810	RSA Certificate Generation Error	RSA CRT GEN ERR
0811	RSA Issue Certificate Error	RSA ISS CERT ERR
0812	RSA Store Certificate Error	RSA STR CERT ERR
0813	RSA Unable to Get Key ID	RSA UNABLE GT KY
0814	RSA Unable to Create Token Type	RSA UNABL CRT TK
0815	RSA Unable to Create Security Class	RSA UNABL CRT SC
0899	Unknown Error	UNKNOWN ERROR
0901	Start Encryption Fail (DK) Server	ENCRYPT FAIL DK
0902	Start Encryption Fail (SRED) Server	ENCRYP FAIL SRED
0904	New Keys Posted	NEW KEYS POSTED
0905	Start Encryption Success (DK)	DEVICE ST CHANGE
0906	Insert Bin Record	INSERT BIN REC
0907	Delete Bin Record	DELETE BIN REC
0908	Reset Bin Table	RESET BIN TABLE
0909	Advance DDK Success	ADV DDK SUCCESS

TABLE B-8 VSP Response Codes for P2PE

Code	Reason Description	Response literal returned
0910	Set terminal options	SET TERM OPT
0911	Exhaustive PAN Max Exceeded	PAN MAX EXCEED
0912	Device Replacement Success	DEV REPLACE SUCC
0913	Upgrade to Unique Key Success	KEY UPGRADE SUCC
0914	Advance DDK Fail Server	ADV DDK FAIL SER
0915	Upgrade to Unique Key Fail Device	UP KEY FAIL DEV
0916	Upgrade to Unique Key Fail Server	UP KEY FAIL SERV
0919	Advance DDK Fail Device	ADV DDK FAIL DEV
0920	BIN Table Rejected By Device	DEV REJ BIN TABL
0921	BIN Table Replace Server Error	BIN TABL REPL ER
0922	BIN Table Replaced	BIN REPLACE SUCC
0923	Settings Update Fail Device	DEV SETTING FAIL
0924	Settings Update Fail Server	SERV SETTIN FAIL
0926	Settings Update Success	SETTINGS SUCCESS
0931	Encryption Start	ENCRYPTION START
0932	Encryption Stop	ENCRYPTION STOP
0933	Stop Encryption Fail	STOP ENCRYP FAIL
0934	Start Encryption Fail	START ENCRY FAIL
0935	Start Encryption Success (SRED)	START SRED SUCC
0936	Start Encryption Fail (SRED) Device	START SRED FAIL
0940	Key Replace Failure - TGK	KEY REPLACE FAIL
0941	TGK - Transaction One	TGK TXN ONE
0942	TGK - Transaction Two	TGK TXN TWO
0943	TGK - Transaction Three	TGK TXN THREE
0944	Replace BIN Table Via TCP/IP	BIN UPDAT TCP/IP
0948	TCP/IP Advance DDK Fail Server	TCP/IP DDK FAIL
0949	Create BIN Mask Range	BIN MASK CREATED
0950	TCP/IP Register Derived Fail Server	PAN KEY CREATED
0951	TCP/IP Get Status	DEV RPT STATUS
0952	TCP/IP Start Encryption	DEV ENABLED ENCR

TABLE B-8 VSP Response Codes for P2PE

Code	Reason Description	Response literal returned
0953	TCP/IP Stop Encryption	DEV DISABLE ENCR
0954	Activate Via ECR	ACTIVATE VIA ECR
0956	TCP/IP Replace PAN and DISC Key	NEW DISC PAN KEY
0957	TCP/IP Device Key Sync	KEY SYNC COMPLET
0958	Register Device	REGISTER DEVICE
0959	Replace Discretionary Key	REPLACE DISC KEY
0960	Terminal moved	TERMINAL MOVED
0961	Terminal Created	TERMINAL CREATED
0962	Key Sync	KEY SYNC
0970	Get Status	GET STATUS
0971	Get Key Status	GET KEY STATUS
0972	Missing Serial Number	MISSING SER NUMB
0973	Missing Store PAN key	MISSING STOR KEY
0974	TCP/IP Register Derived Key	REG DERIVED KEY
0975	TCP/IP Advance DDK Success	ADV DDK SUCCESS
0976	Settings Update Success	SETTINGS UPDATED
0977	TCP/IP Advance DDK Fail Device	ADV DDK FAIL DEV
0978	VCL Device Upgrade Success	VCL DEV UPGRADED
0979	TCP/IP Settings Update Fail Device	UPDATE FAIL DEV
0980	TCP/IP Error	RKDS ERROR
0981	TCP/IP Settings Update Fail Server	UPDATE FAIL SERV
0982	VCL Device Upgrade Fail Device	VCL UP FAIL DEV
0983	VCL Device Upgrade Fail Server	VCL UP FAIL SERV
0984	TCP/IP Derived Key Device Replaced	DERIVED KEY REPL
0985	TCP/IP Register Derived Key Fail Device	DERIVED KEY FAIL
0986	TCP/IP Start Encryption Fail	START ENCRY FAIL
0987	TCP/IP Stop Encryption Fail	STOP ENCRYP FAIL
0988	TCP/IP Start Encryption Success (SRED)	START ENCRY SUCC
0989	TCP/IP Start Encryption Fail (SRED)	START ENCRY FAIL

TABLE B-8 VSP Response Codes for P2PE

Code	Reason Description	Response literal returned
0990	Get Status Derived Key	GET STAT DERIVED
0991	Command Error	COMMAND ERROR
0992	Command Unknown Function	UNKNOWN FUNCTION
0993	Command Not Supported	NOT SUPPORTED
0994	Set DDK Success	SET DDK SUCCESS
0995	Set DDK Fail Device	SET DDK FAIL DEV
0996	Set DDK Fail Server	SET DDK FAIL SER
0999	Unknown Command Error	CDS UNKNOWN ERR

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C

AVS Result Codes

Worldpay marks result codes as positive to indicate they are AVS-approved transactions.

> **NOTE:** You should interpret a space in the AVS response as a positive response.

This appendix describes the following:

C.1 Visa AVS Result Codes

TABLE C-1 Visa AVS Result Codes

Value	Positive	Description
Y	x	Both street address and ZIP Code match
A	-	Street address matches, but ZIP code does not
Z	x	ZIP Code matches but street address does not
N	-	Street address and ZIP Code do not match
P	x	Postal Code Matches
U	x	Address information is unavailable
R	x	Issuer authorization system is unavailable; try again later

C.2 Mastercard AVS Result Codes

TABLE C-2 Mastercard AVS Result Codes

Value	Positive	Description
A	-	Address matches, postal code does not
N	-	Neither address nor postal code matches
R	x	Retry, system unable to process
S	x	AVS currently not supported
U	x	No data from issuer/Authorization System
W	x	For U.S. addresses, 9-digit postal code matches, address does not; all others, postal code matches, address does not
X	x	For U.S. addresses, 9-digit postal code and address match; all others, postal code and address match
Y	x	For U.S. addresses, 5-digit postal code and address matches
Z	x	For U.S. addresses, 5-digit postal code matches, address does not

C.3 Discover AVS Result Codes

TABLE C-3 Discover AVS Result Codes

Value	Positive	Description
X	x	Address matches, nine-digit ZIP Code matches
A	x	Address matches, five-digit ZIP Code matches
Y	-	Address matches, ZIP Code does not
T	x	Nine-digit ZIP Code matches, address does not
Z	x	Five-digit ZIP Code matches, address does not
N	-	Nothing matches
W	x	No data from Issuer/Authorization system
U	x	Retry, system unable to process
S	x	AVS not supported at this time

C.4 American Express AVS Result Codes

TABLE C-4 American Express AVS Result Codes

Value	Positive	Description
Y	x	Yes, Billing Address and Postal Code are both correct
N	-	No, Billing Address and Postal Code are both incorrect
A	-	Billing Address only correct
Z	x	Billing Postal code only correct
U	x	Information Unavailable
S	x	SE not allowed AAV function
R	x	System unavailable; retry
L	x	CM Name and Billing Postal Code match
M	x	CM Name, Billing Address and Postal Code match
O	-	CM Name and Billing Address match
K	-	CM Name matches
D	x	CM Name incorrect, Billing Postal Code match
E	x	CM Name incorrect, Billing Address Postal Code match
F	x	CM Name incorrect, Billing Address and Postal Code match
W	-	No, CM Name, Billing Address and Postal Code match

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D

Card Verification Value Result Codes

Worldpay marks result codes as positive to indicate they are Card Verification Code/Value approved transactions.

> **NOTE:** Worldpay does not support a space to represent CVV2 for this card type.

This appendix describes the following:

D.1 Visa and Discover CVV2/CID Result Codes

TABLE D-1 Visa and Discover CVV2/CID Result Codes

Value	Positive	Description
M	x	CVV2/CID match
N	-	CVV2/CID no match
P	x	Not processed
S	x	CVV2/CID is on the card, but the merchant has indicated that CVV2/CID is not present
U	x	Issuer is not certified for CVV2/CID

D.2 Mastercard CVC 2 Result Codes

TABLE D-2 Mastercard CVC 2 Result Codes

Value	Positive	Description
M	x	Valid CVC 2 (match)
N	-	Invalid CVC 2 (non-match)
P	x	Unable to processed
U	x	Issuer unregistered to process CVC 2

D.3 American Express CID Result Codes

TABLE D-3 American Express CID Result Codes

Value	Positive	Description
Y	x	CID matched
N	-	CID did not match
U	x	CID was not checked

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E

Transaction Code Values

Table E-1 includes the descriptions and field values of the transaction code values. In addition, see Transaction Set for related transaction set information.

TABLE E-1 Transaction Code Values

Value	Transaction Type
Credit	
01	Sale
02	Preauthorization
03	Completion/Force Sale
04	Return
05	Void Sale
06	Void Return
07	Card Activation
08	Card Deactivation
09	Card Balance Inquiry
10	Reload/Recharge
18	Issue Card
19	Information Update
Debit	
11	Sale
12	Sale with Cash Back
13	Preauthorization
14	Completion

TABLE E-1 Transaction Code Values

Value	Transaction Type
15	Void Sale
16	Void Sale with Cash Back
17	Return
Value	Transaction Type
EBT	
Note: EBT Completion transactions (Value 24) are used only for off-line EBT Food Stamp transactions.	
21	Sale
22	Sale w/Cashback
24	Completion
25	Post Auth Sale w/Cashback
26	Return
27	Balance Inquiry
41	Reversal Sale
42	Reversal Sale w/Cashback
44	Reversal Completion
45	Reversal Post-Auth Sale w/Cashback
46	Reversal Return
Fleet Card	
31	Sale
32	Preauthorization
33	Completion or Force Sale
34	Return
35	Void Sale
36	Void Return
38	Information Update
Loyalty Card (N/A)	
51	Sale Accumulation
52	Void Sale Accumulation
53	Return Accumulation

TABLE E-1 Transaction Code Values

Value	Transaction Type
54	Void Return Accumulation
55	Balance Inquiry

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F

Account Types

Table F-1 lists includes the descriptions and field values for Account Types.

TABLE F-1 Account Types

Value	Transaction Type
Credit	
1	Visa
2	Mastercard
3	American Express
4	Discover
8	Gift Card
B	SVS
E	PayPal
Fleet	
1	WEX
2	Voyager
4	Visa Fleet
5	Mastercard Fleet
6	FuelLynk
8	MFA Preferred
9	Loyalty
B	Fleet One
C	Fuelman/GasCard
D	Alon Fleet

TABLE F-1 Account Types

Value	Transaction Type
Debit	
0	Not Specified
1	Checking
2	Savings
Value	Transaction Type
EBT	
0	Not Specified
1	Food Stamps
2	Cash Benefits

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G

Entry Type Values

Table G-1 lists includes the descriptions and field values for Entry Methods.

For pump transactions, the Entry Type and Alpha Device ID value must remain the same on the Pre-Auth and the Completion.

For inside Pre-Pay transactions, the Entry Type and a Numeric Device ID value must remain the same on the Pre-Auth and the Completion.

TABLE G-1 Entry Type Methods

Value	Transaction Type
A	Mastercard credential on file
0	Manual Entry (card present); Manual Entry is not allowed for debit transactions
1	Swiped (Track I/II or MICR read)
2	Island Card Reader
3	Transponder or RFID
4	Automated Vehicle ID (AVI)
5	EMV Contact
6	EMV fallback magstripe
7	EMV fallback voice
8	EMV contactless
9	e-commerce/MOTO

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H

Terminal Features

Table H-1 includes the descriptions and field values for terminal feature field value information.

> **NOTE:** All POS development must support partial authorization processing, real-time clearing processing, and Wright Express Version 2.0.2 processing.

TABLE H-1 Terminal Features

Byte(s)	Size	Type	Condition	Description/Field Values
0	1	N	Conditional	Partial Authorization Enabled • **1** - Terminal accepts partial authorization responses • **2** - Terminal accepts partial authorization responses for US and foreign amounts
1	1	N	Conditional	Real-Time Clearing (RTC) Enabled • **1** - Terminal supports RTC
2	1	N	Conditional	Wright Express Version Flag • **1** – Supports Wright Express Version 2.0.2. • **2** – Supports WEX Available Products Block (2.02 assumed) • **3** – Supports WEX Host Bases Prompts (2.02 assumed) • **4** – Both WEX HBP and APB Supported (2.02 assumed)

TABLE H-1 Terminal Features

Byte(s)	Size	Type	Condition	Description/Field Values
3	1	A/N	Conditional	Terminal capabilities See Appendix X, "Terminal Input Capabilities".
4	1	A/N	Visa 2.0 Purchase Restrictions/Mastercard Merchant Spend Control Override Flag	This flag indicates your participation in Visa's Purchase Restriction and/or Mastercard Enhanced Fleet's Spend Control Override programs. The following values are supported for both Visa or Mastercard. The system ignores other values. • **Space** or **0** - No support • **1** - Card-based only • **2** - Host-based only • **3** - Host-based and Card-based **Note:** For Visa 2.0, you must include this field. It is optional for Mastercard Enhanced Fleet.
5 - 7	3		Reserved for future usage.	

Configuration Information

Table I-1 includes the field value information for configuration information.

TABLE I-1 Configuration Information

Bytes	Size	Type	Condition	Descriptions/Field Value(s)
0-3	4	A/N	REQD	Hardware Type-This value will be assigned by Worldpay
4-11	8	A/N	REQD	Software Version-Software release/revision identification
12-19	8	A/N	REQD	Firmware Version-Firmware/Opsys release/revision identification

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J

Host Gift Totals

Host totals are for current batch/shift for gift card activations, deactivations, and balance inquiries. Table J-1 includes the field value information.

TABLE J-1 Host Gift Totals

Byte	Size	Type	Condition	Descriptions/Field Value(s)
0-3	4	N	CNST	Number of Balance Inquiries (Current Batch)
4-7	4	N	CNST	Number of Activation Transactions (Current Batch)
8-15	8	N	CNST	Amount of Activations (Current Batch)
16-19	4	N	CNST	Number of Deactivation Transactions (Current Batch)
20-27	8	N	CNST	Amount of Deactivations (Current Batch)

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K

Terminal Batch Totals

Local batch totals from the terminal do not include any fees charged by the merchant. Zero fill non-processed payment types.

Table K-1 includes the field value information.

TABLE K-1 Terminal Batch Totals

Byte	Size	Type	Condition	Descriptions/Field Value(s)
0-2	3	N	CNST	Number of Credit Transactions
3-10	8	N	CNST	Amount of Credit Sales
11-18	8	N	CNST	Amount of Credit Returns
19-26	8	N	CNST	Net Credit Amount
27-29	3	N	CNST	Number of Debit Transactions
30-37	8	N	CNST	Amount of Debit Sales/Cash Backs
38-45	8	N	CNST	Amount of Debit Voids
46-53	8	N	CNST	Net Debit Amount
54-56	3	N	CNST	Number of EBT Transactions
57-64	8	N	CNST	Amount of EBT Sales
65-72	8	N	CNST	Amount of EBT Returns
73-80	8	N	CNST	Net EBT Amount
81-83	3	N	CNST	Number of Fleet Transactions
84-91	8	N	CNST	Amount of Fleet Sales
92-99	8	N	CNST	Amount of Fleet Returns
100-107	8	N	CNST	Net Fleet Amount

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L

Product Information Values

Worldpay requires product information for all Fleet transactions. Table L-1 includes the descriptions and field values.

NOTE: Depending upon the fleet network, you can repeat bytes 3-34 up to 7 or 8 times for a total of 8 or 9 products using the following network rules:

- Wright Express and FleetCor - maximum of 9 products
- Visa Fleet - maximum of 1 fuel product + up to 8 non-fuel products
- All other fleet networks - maximum of 8 products

See Appendix A, Card Data and Product Information Codes.

TABLE L-1 Product Information Values

Byte(s)	Size	Type	Condition	Description/Field Values
0-1	2	N	REQD	Total number of products described in the field.
2	1	A	REQD	Delimiter - 0x2d (-)
3-5	3	N	REQD	Product Code
6	1	A	REQD	Delimiter - 0x3a (:)
7	1	A	REQD	Service Code
8	1	A	REQD	Delimiter - 0x3a (:)
9	1	A	REQD	Unit measurement
10	1	A	REQD	Delimiter - 0x3a (:)
11-16	6	N	REQD	Number of Units. Formatted as xxx.xxx (implied decimal)
17	1	A	REQD	Delimiter - 0x3a (:)
18-24	7	N	REQD	Unit Cost. Formatted as xxxx.xxx (implied decimal)

TABLE L-1 Product Information Values

Byte(s)	Size	Type	Condition	Description/Field Values
25	1	A	REQD	Delimiter - -0x3a (:)
26-33	8	N	REQD	Total price of product purchased. Formatted as xxxxxx.xx (implied decimal)
34	1	A	REQD	Delimiter - 0x5c (\)

Notes for Visa 2.0:

- Visa Field 104, Dataset 5C, tag '01' will be derived from field based on the product codes included in each product record.
- Visa Field 104, Dataset 5C, tag '04' will be derived from the unit measurement field for the fuel product.
- Visa Field 104, Dataset 5C, tag '05' will be mapped from the number of units field for the fuel product.
- Visa Field 104, Dataset 5C, tag '06' will be mapped from the unit cost field for the fuel product.
- Visa Field 104, Dataset 5C, tag '07' will be mapped from the total price of product purchased field for the fuel product.
- Visa Field 104, Dataset 5C, tag '09' will be calculated as sum of the total price of product purchased fields for each of the non-fuel product entries

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M

Transaction Type and Card Specific Data

This appendix includes the descriptions and field values for the following:

- Transaction Type Specific Data 1
- Card Type Specific Data
- Transaction Type Specific Data 2 (EBT and Loyalty)

M.1 Transaction Type Specific Data 1

TABLE M-1 Transaction Type Specific Data 1

Byte(s)	Size	Type	Condition	Description/Field Value(s)
0-7	8	N	CDTL	Returned on Debit and EBT Transactions. Amount of cashback authorized. Formatted as xxxxxx.xx (implied decimal)
0	1	A	CNST	AVS Result Code See Appendix C, "AVS Result Codes".
1	1	A	CNST	CVV2 Result Code See Appendix D, "Card Verification Value Result Codes".
2	1	A/N	CNST	Print fuel prices • **N** - Do not print fuel prices on the receipt. • Any other value - Print fuel prices on the receipt.
3	1	N	CNST	Additional cardholder prompts • **0** (zero) - None • **1** - Customer number
4	1	A/N	CNST	Add to Denial Table (N/A) • **Y** - Add to the local denial table • Any other value - Do not add to the local denial table.
5	1	N	CNST	Partially approved transaction flag • **0** (zero) - No • **1** - Yes

TABLE M-1 Transaction Type Specific Data 1

Byte(s)	Size	Type	Condition	Description/Field Value(s)
6	1	A/N	CNST	Purchase card indicator • **B** - Business card • **R** - Corporate card • **S** - Purchase card • **0** (zero) - Non-commercial card • Space - Purchase card not supported
7	1	N	CNST	Host Velocity hit indicator = n/a

M.2 Card Type Specific Data

NOTE: Each of the following three return field values are eight characters in length. Worldpay returns only one eight character field value on a given transaction.

TABLE M-2 Card Type Specific Data

Field Name	Size	Type	Condition	Description/Field Value(s)
Food Account Balance	8	N	CDTL	• Amount of available funds in food benefit account. Formatted as xxxxxx.xx (implied decimal) • Returned on EBT transactions only
Card Balance	8	N	CDTL	• Amount of available funds on a credit card, gift card, or prepaid account. Formatted as xxxxxx.xx (implied decimal) • Returned on credit card, gift card, debit, fleet, and prepaid transactions
Loyalty Card Balance 1 (N/A)	8	N	CDTL	• First balance on a Loyalty Card account. Whole numbers only • Returned on Loyalty Card transactions only

M.3 Transaction Type Specific Data 2 (EBT and Loyalty)

NOTE: Each of the following two return field values are eight characters in length. Only one eight character field value is returned on a given transaction.

TABLE M-3 Transaction Type Specific Data 2 (EBT and Loyalty)

Field Name	Size	Type	Condition	Description/Field Value(s)
Cash Account Balance	8	N	CDTL	• Amount of available funds in cash benefit account. For- matted as xxxxxx.xx (implied decimal) • Returned on EBT transactions only
Loyalty Card Balance (N/A)	8	N	CDTL	• Second balance on a Loyalty Card account. Formatted as xxxxxx.xx (implied decimal) • Returned on Loyalty Card transactions only

N

Receipt Header Information

Table N-1 includes the descriptions and field values of the Receipt Header Information.

TABLE N-1 Receipt Header Information

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Receipt Header Information	0-164	A/N	CNST	The content of the field will be: • Merchant store name • Merchant street address • Merchant city • Merchant state • Merchant ZIP code • Merchant store phone number

Each field can have a variable length and is separated by a line feed (0x0A) character. No individual field will be over the 40-character limit specified in the Worldpay specs. No formatting of the ZIP code or the phone number is sent, only the value of the field.

O

Configuration Change Flag

Table O-1 includes the descriptions and field values of the Configuration change flag.

TABLE O-1 Configuration Change Flag

Value	Transaction Type
0	No configuration changes
1	Request Terminal Configuration updates
2	Request Merchant Configuration updates
3	Request Terminal and Merchant Configuration updates
4	Request Card Range updates
5	Request Terminal Configuration and Card Range updates
6	Request Merchant Configuration and Card Range updates
7	Request Terminal, Merchant, and Card Range updates
C	Request a full download from the stand alone download system
P	Request a partial download from the stand alone download system

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P

Configuration Update Information

Table P-1 includes the field value information for configuration update information.

Bytes 0-44 are repeated as necessary for each authorized payment and account type. Debit and EBT updates will always be sent with account type 0 in this message but should apply to all Debit and EBT accounts. Any other payment and account types should not be accepted.

*Values of zero indicate no change required. The POS should use existing POS value for these fields. If the field contains a 0, the POS should not change the value for that field. It should keep the value that is already present. If the field does not contain a 0, then the POS should update the parameter field with the value given on the PDL.

TABLE P-1 Configuration Update Information

Byte(s)	Size	Type	Condition	Descriptions/Field Value(s)	Default
	0-1584		CNST	-	-
0	1	A	CNST	This is the payment type. Valid values are: • **C** - Credit • **D** - Debit • **E** - EBT • **F** - Fleet	-
1	1	A/N	CNST	Account Type See Transaction Request Message (TREQ).	-

TABLE P-1 Configuration Update Information

Byte(s)	Size	Type	Condition	Descriptions/Field Value(s)	Default
2	1	N	CNST	Accept Flag: • **1** - Inside Only • **2** - Inside and Outside • **3** - Outside Only **Note**: The standard default for all cards should be disabled until a PDL provides the information to enable a card. Enabled cards will normally be enabled for both inside and outside sales.	
3	1	N	CNST	Hot Pump Allowed:* • **1** - Yes • **2** - No	2
4-8	5	N	CNST	Pre-auth Amount: * (formatted 999.99 for implied Decimal) (Sent in the preauthorization request.)	See Appendix V, "Table Information".
9	1	N	CNST	Offline Stand In:* • **1** - Yes • **2** - No	2
10-14	5	N	CNST	Offline Stand In Amount, Formatted as xxx.xx (implied decimal) *	0

TABLE P-1 Configuration Update Information

Byte(s)	Size	Type	Condition	Descriptions/Field Value(s)	Default
15	1	A/N	CNST	AVS Prompting:* • **1** - Inside Manual/ Outside Off • **2** - Inside Swipe/ Outside Off • **3** - Inside Both/ Outside Off • **4** - Inside Manual/ Outside Swiped • **5** - Inside Swipe/ Outside Swiped • **6** - Inside Both/ Outside Swiped • **7** - Inside Off/ Outside Swiped • **8** - Inside Off/ Outside Off	8
16	1	A/N	CNST	CVD, CVC, CVV2 or CID Prompting:* • **1** - Enabled Inside Only • **2** - Disable Prompting	-
17	1	N	CNST	Manual Transactions Enabled: • **1** - Yes • **2** - No	1
18-23	6	N	CNST	DCR Cutoff Amount, Formatted as xxxx.xx (implied decimal)*	See Appendix V, "Table Information".
24	1	N	CNST	Floor Limit Enabled*: • **1** - Yes • **2** - No	2
25-28	4	N	CNST	Floor Limit Amount, Formatted as xx.xx (implied decimal)*	00.00
29	1	N	CNST	Small Ticket Enabled*: • **1** - Yes • **2** - No	2

TABLE P-1 Configuration Update Information

Byte(s)	Size	Type	Condition	Descriptions/Field Value(s)	Default
30-33	4	N	CNST	Small Ticket Amount, Format- ted as xx.xx (implied decimal) *	00.00
34	1	N	CNST	Debit First Prompt Enabled*: • **1** - Yes • **2** - No*	1
35-44	10	A/N	CNST	Referral Number (left-justified, space filled without format- ting): If the Referral Number contains 10 spaces, then there is no change made to the current Referral Number.	

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Q

Surcharge Fees

Table Q-1 lists the merchant processing fees for various services with descriptions and field values of the surcharge fee values.

TABLE Q-1 Surcharge Fees

Byte(s)	Size	Type	Condition	Descriptions/Field Value(s)
0-3	4	N	CNST	• Not used at this time • Debit Inside Sales
4-7	4	N	CNST	• Not used at this time • Debit Inside w/Cashback
8-11	4	N	CNST	• Not used at this time • Debit Outside Sales
12-15	4	N	CNST	• Not used at this time • EBT Cash Benefit Inside Sales
16-19	4	N	CNST	• Not used at this time • EBT Cash Benefit Outside Sales

R

Miscellaneous Features

Table R-1 includes the descriptions and field values of the miscellaneous features values.

*Values of zero indicate no change required. The POS should use existing POS value for these fields. If the field contains a 0, the POS should not change the value for that field. It should keep the value that is already present. If the field does not contain a 0, then the POS should update the parameter field with the value given on the PDL.

TABLE R-1 Miscellaneous Features

Bytes	Size	Type	Condition	Descriptions/Field Value(s)
Byte 0	1	N	CNST	Enable Returns*: • **1** - Yes • **2** - No
Byte 1	1	N	CNST	Enable Voids*: • **1** - Yes • **2** - No
Byte 2	1	N	CNST	Enable Merchant and Journal PAN Masking*: • **1** - Yes • **2** - No
Byte 3	1	N	CNST	Enable Check ID Prompting*: • **1** - Yes • **2** - No
Byte 4	1	N	CNST	Mismatch Prompting AVS*: • **1** - Yes • **2** - No
Byte 5	1	N	CNST	Mismatch Prompting CVV2*: • **1** - Yes • **2** - No

TABLE R-1 Miscellaneous Features

Bytes	Size	Type	Condition	Descriptions/Field Value(s)
Byte 6	1	N	CNST	Process Partial Authorizations*: • **1** - Yes • **2** - No
Byte 7-15	-	-	-	To be determined

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S

End of Day Posting Options

The EOD Posting Options controls if and how a customer's POS processes with a behind-the-scenes EOD function. The POS devices that process on the Worldpay host send up batches of transactions during a day. A site may close one batch or many batches during a day, which are either merchant operator-initiated manual shift closes or automatic 99 transaction batches. These may be held by the Worldpay host pending an EOD close.

When the merchant operator closes a day using an EOD close, the POS will close the current batch that it has open and forward the transactions in that batch to the Worldpay host. If there are no transactions in the current batch, the POS must still send a Host Batch Close Request transaction requesting a batch close for a zero amount with the Administrative Code of 62400 for Host Day Close (Post) to close the batch. The POS will then balance this last batch against the Worldpay host totals.

A day is the period between EOD closes. If the POS does not perform an EOD for several calendar days, and the customer is set up for EOD processing, Worldpay will hold funds until the customer performs an EOD. EOD reports should reflect all transaction data that has occurred since the last EOD not just the most recent batch.

You can set the EOD Posting Options using a parameter in the parameter download file or as a site setting. It will determine how the POS processes the EOD. See Update Merchant Configuration. The first parameter in the EOD Posting Option controls whether batches are posted when received.

Table S-1 includes the descriptions and field values of the End of Day Posting Options values.

*Values of zero indicate no change required. The POS should use existing POS values for these fields. If the field contains a 0, the POS should not change the value for that field. It should keep the value that is already present. If the field does not contain a 0, then the POS should update the parameter field with the value given on the PDL.

TABLE S-1 End of Day Posting Options

Bytes	Size	Type	Condition	Descriptions/Field Value(s)
End of Day (EOD) Posting Options	9	N	CNST	-
Byte 0	1	N		EOD Host Posting*
Bytes 1-5	5	N		CCW EOD Close*
Bytes 6-8	3	N		Batch Size Auto-close*

T

Card Range Update Data

Table T-1 includes the descriptions and field values of the Card Range Update Data values.

TABLE T-1 Card Range Update Data

Field Name	Size	Type	Condition	Descriptions/Field Value(s)
Byte 0	1	N	CNST	Valid values for Account Category are: • **1** - Credit • **4** - Fleet
Byte 1	1	A/N	CNST	Account Type - See Appendix F, "Account Types" for listing.
Bytes 2-3	2	N	CNST	Number of BIN ranges to follow
Ranges (inclusive):				
Bytes 4-11	8	N	CNST	First number in range
Bytes 12-19	8	N	CNST	Final number in range
Note: Bytes 4-19 are repeated the number times indicated in the Number of BIN ranges field. Bytes 0-19 are repeated as necessary for each Account Category/Type accepted by the merchant. The maximum field size is 9662 bytes but will be lower in practice.				
Protocol Dependent Trailer	Var		CNST	See Protocol-Dependent Fields.

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U

Response Literal

Table U-1 includes the field value information for Response Literal information on Administrative transactions only.

TABLE U-1 Response Literal

Value	Transaction Type
10	Batch number does not match the expected batch number
12	Attempting a hybrid transaction with a host capture process type
20	The administrative code is not a multiple of 1000

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V

Table Information

This appendix presents visual representations of several Worldpay codes, defaults, and processing options to help POS developer understand the Worldpay Message Formats and the processing of traffic to the Worldpay Host.

V.1 Default Dispenser Card Reader Pre-Auth Amounts and Cut-off Amounts

Table V.1 lists the Worldpay required Pre-Auth and Cutoff Amounts for Pump transactions. All Point of Sale devices that support pump processing should use these default values.

TABLE V-1 Pre-Auth and Cutoff Amounts for Pump Transactions

Card Brand	Pre-Auth Amount	DCR Limit	Limit with EMV Enabled
Visa	$1.00	$100.00	$125
Mastercard[1]	$1.00	$125.00	
American Express	$100.00	$100.00	
Discover	$1.00	$100.00	
Gift Card	$100.00	$100.00	
Wright Express	$1.00	$150.00	
Voyager	$75.00	$75.00	
Visa Fleet	$1.00	$150.00	
Mastercard Fleet	$1.00	$350.00	
FuelLynk	$1.00	$300.00	
Debit	$50.00[2]	$50.00[2]	
FleetOne	$250.00	$250.00	
Fuelman GasCard	$50.00	$50.00	
Prepaid (SVS)	$100.00	$100.00	

[1] Prior to October 15th, the limit was $100.00.

[2] For Pre-Auth for Debit, the merchant can set an arbitrary amount. The cut-off must not exceed the Pre-Auth.

V.2 General POS Default Settings

Table V.2 provides the Worldpay recommended default settings for the processing parameters on Point of Sale devices. It is understood that not all POS will use all the processing parameters. For all the processing parameters used by a POS, these defaults should be used.

TABLE V-2 General POS Default Settings

Parameter	Brief Description	Defaults
Merchant Level Defaults		
Site ID Parms	Merchant store name	Worldpay
	Merchant street address	201 17th Street NW
	Merchant city	Atlanta
	Merchant state	GA
	Merchant ZIP code	30363
	Merchant store phone number.	18002005965
Comm Parms	Primary Host Phone--does not contain formatting characters	18776665965
	Secondary Host Phone --does not contain formatting characters	18002955965
	URL and Port Address	tptrans.lynksystems.com: 6662
	Master Cutoff Amount for all traffic.	999.99
Single Flag for All Cards	Enable Returns: • **1** - Yes • **2** - No	1
	Enable Voids: • **1** - Yes • **2** - No	1
	Enable Merchant and Journal PAN Masking: • **1** - Yes • **2** - No	1

TABLE V-2 General POS Default Settings

Parameter	Brief Description	Defaults
	Enable Check ID Prompting: • **1** - Yes • **2** - No	1
	Mismatch Prompting AVS: • **1** - Yes • **2** - No	1
	Mismatch Prompting CVV2: • **1** - Yes • **2** - No	1
	Process Partial Authorizations: • **1** - Yes • **2** - No	1
Merchant Settlement Defaults	Processing Mode: • **0** - Host Capture • **1** - Hybrid	1
	EOD Host Posting • **1** - Worldpay will post all batches associated with a shift close • **2** - Worldpay will post all batches associated with an EOD close • **3** - Worldpay will post all batches sent, independent of Shift or EOD closes **Note**: See End of Day Close Processing for further description.	1
	CCW EOD Close • **1** - Display EOD request prompt at HHMM • **3** - Automated EOD close prompting disabled	3
	Batch Size Auto-close	99
Fraud Prevention Defaults		

TABLE V-2 General POS Default Settings

Parameter	Brief Description	Defaults
For Each Card Type	AVS Prompting • 1 - Inside Manual/ Outside Off • 2 - Inside Swipe/ Outside Off • 3 - Inside Both/ Outside Off • 4 - Inside Manual/ Outside Swiped • 5 - Inside Swipe/ Outside Swiped • 6 - Inside Both/ Outside Swiped • 7 - Inside Off/ Outside Swiped • 8 - Inside Off/ Outside Off	8
For Each Card Type	CVD, CVC, CVV2 or CID Prompting 1 = Accepted Inside Only 2 = Disable Prompting	2

V.3 Exception Report

Figure V-1 represents an acceptable facsimile that the POS produces as the first part of the settlement process. See item 1 in Reports Requirements for a description.

FIGURE V-1 Exception Report

NETWORK SETTLEMENT

TID 542929000000000/ 123456

VER

DATE 08/13/08 TIME 21:59

EOD # 20070213 003

LAST EOD # 20080812 002 TIME 06:45:30 AM

* EXCEPTION TOTALS *

STARTING BATCH #	001
CLOSING BATCH	001
# SHIFT CLOSES	001
# BATCH LIMIT CLOSES	001
TOTAL BATCH CLOSES	001

* EXCEPTION TOTALS *

	CRE	DEB	FLT	EBT	PRE	TOT#	TOT AMT
RETURN	000	000	000	000	000	0000	00.00
VOID	001	001	001	001	001	0005	55.00
TKT ONLY	000	000	000	000	000	0000	00.00
STAND IN	000	000	000	000	000	0000	00.00

ENTRY METHODS

		COUNT	PERCENTAGE
INSIDE			
	SWIPED	333	45%
	MANUAL	111	15%
	RFID	000	00%
OUTSIDE			
	PUMP	222	30%
	RFID	000	00%

EMV Data Elements

EMV (Europay, Mastercard and Visa) is a global standard for the interoperation of integrated circuit cards (IC cards or chip cards), IC card capable point of sale (POS) terminals, and automated teller machines (ATMs) for authenticating credit and debit card transactions.

The purpose and goal of the EMV standard is to specify interoperability between EMV-compliant IC cards and EMV-compliant credit card payment terminals throughout the world. Following are the major benefits to moving to smart card based credit card payment systems:

- Improved security (with associated fraud reduction)
- The possibility for finer control of offline credit card transaction approvals

The TREQ includes an updated value for terminal capabilities and the EMV data structure.

Because request and response messages are sent to Worldpay as ASCII in a fixed length format, note the following:

- You must right justify and zero fill all numeric fields.
- You must left justify and space fill all alphanumeric fields.

W.1 EMV Request Fields

TABLE W-1 EMV Request Fields

Field Name	Tag	Tag Length	Data Length ASCII	Format	Total Length	Descriptions/Field Value(s)
Application PAN Seq	5F34	4	2	N	6	Identifies and differentiates cards with the same PAN; when Tag 5F34 is absent, this field will be space-filled
Track 2 Equiv Data	57	2	38	AN	40	Contains the data elements of track 2 according to ISO/IEC 7813 **Note**: For EMV Transactions, if Tag 57 is present it should be used to populate track data. If it is an P2PE transactions, the data is encrypted.
Other Amount	9F03	4	12	N	16	Secondary amount associated with the transaction representing a cashback amount
Dedicated File Name	84	2	32	AN	34	Identifies the name of the DF as described in ISO/IEC 7816-4
Application Version # term	9F09	4	4	AN	8	Version number assigned by the payment system for the application
Cardholder Verify Method Result	9F34	4	6	AN	10	Indicates the results of the last CVM performed
Interface Device Serial #	9F1E	4	16	AN	20	Unique and permanent serial number assigned to the IFD by the manufacturer
Term Capabilities	9F33	4	6	AN	10	Indicates the card data input, CVM, and security capabilities of the terminal
Term Type	9F35	4	2	N	6	Indicates the environment of the terminal, its communications capability, and its operational control

TABLE W-1 EMV Request Fields

Field Name	Tag	Tag Length	Data Length ASCII	Format	Total Length	Descriptions/Field Value(s)
Transaction Sequence Counter	9F41	4	8	N	12	Counter maintained by the terminal that is incremented by one for each transaction
Application Cryptogram	9F26	4	16	AN	20	Cryptogram returned by the ICC in response of the GENERATE AC command
Application Interchange Profile	82	2	4	AN	6	Indicates the capabilities of the card to support specific functions in the application
Application Transaction Counter	9F36	4	4	N	8	Counter maintained by the application in the ICC (incrementing the ATC is managed by the ICC)
Cryptogram Info Data	9F27	4	2	AN	6	Indicates the type of cryptogram and the actions to be performed by the terminal
Issuer Application Data	9F10	4	64	AN	68	Contains proprietary application data for transmission to the issuer in an online transaction
Amount, Authorized	9F02	4	12	N	16	Authorized amount of the transaction (excluding adjustments)
Term Country Code	9F1A	4	4	N	8	Indicates the country of the terminal, represented according to ISO 3166
Term Verification Results	95	2	10	AN	12	Status of the different functions as seen from the terminal
Tran Currency Code	5F2A	4	4	N	8	Indicates the currency code of the transaction according to ISO 4217
Tran Date	9A	2	6	N	8	YYMMDD. Local date that the transaction was authorized
Transaction Reference Currency Code	9F3C	4	4	N	8	Code defining the common currency used by the terminal in case the Transaction Currency Code is different from the Application Currency Code

TABLE W-1 EMV Request Fields

Field Name	Tag	Tag Length	Data Length ASCII	Format	Total Length	Descriptions/Field Value(s)
Transaction Type	9C	2	2	N	4	Indicates the type of financial transaction
Unpredictable Number	9F37	4	8	N	12	Value to provide variability and uniqueness to the generation of a cryptogram
Application Usage Control	9F07	4	4	AN	8	Indicates issuer's specified restrictions on the geographic usage and services allowed for the application
Auth Response Code	8A	2	4	AN	6	Code that defines the disposition of a message
Application Identifier	9F06	4	32	AN	36	Identifies the application as described in ISO/IEC 7816-5
Issuer Script Result	9F5B	4	10	AN	14	Present if scripts were sent by Issuer in original response
Secondary PIN block	SCPB	4	74	AN	78	Discover also allows the cardholder to change pins at the terminal so the TCMP needs to allow for the secondary PIN Block
Obsolete	NA	4	8	A	12	This field no longer in use; must space fill to maintain data structure.
Customer Exclusive Data	9F7C	4	20	AN	24	In US contactless transactions, issuer proprietary info
Transaction Category Code	9F53	4	1	AN	5	Indicates the type of transaction being processed
Application Expiration date	5F24	4	6	N	10	YYMMDD. Application Expiration Date. For P2PE transactions, tag 5F24 is sent in the clear

TABLE W-1 EMV Request Fields

Field Name	Tag	Tag Length	Data Length ASCII	Format	Total Length	Descriptions/Field Value(s)
Third Party Data	9F6E	4	64	AN	68	May indicate the form factor of the consumer payment device or contain proprietary information from a third party/device 9F6E applies to all Mastercard issued cards.

W.2 EMV Response Fields

Although some networks define scripts 71 and 72, only one of them is sent per transaction, you will not receive both 71 and 72.

TABLE W-2 EMV Response Fields

Field Name	Tag	Tag Length	Data Length ASCII	Format	Total Length	Descriptions/Field Value(s)
Issuer Authentication Data	91	2	32	AN	34	Data sent to the ICC for online issuer authentication
Field Separator				A	1	0x1c - Required if additional data fields follow, including response groups.
Issuer Script Template1	71	2	252	AN	254	Contains proprietary issuer data for transmission to the ICC before the second GENERATE AC command
Field Separator				A	1	0x1c - Required if additional data fields follow, including response groups.
Issuer Script Template1	72	2	252	AN	254	Contains proprietary issuer data for transmission to the ICC before the second GENERATE AC command

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X

Terminal Input Capabilities

This appendix describes the various methods by which a terminal can capture PAN/track data and remains constant for each transaction from the terminal. This is different from the values in Appendix G, "Entry Type Values" values, which define how an individual transaction was captured.

TABLE X-1 Terminal Input Capabilities

Value	Description
0	Unknown
1	No Terminal
2	Key Entry Manual
3	Magnetic Stripe and Key Entry
4	Bar Code
5	MICR Read
6	MICR Read and Image
7	Radio Frequency Identification (RFID)
8	Contact Integrated Circuit Chip (ICC) and Magnetic Stripe
9	ICC/EMV Contact and Contactless
A	Magnetic Stripe Only
B	Optical Character Reader (OCR)
C	ICC/EMV, Magnetic Stripe and Key Entry
D	Contact ICC Only
E	ICC/EMV and Key Entry
F	Contactless (Magnetic Stripe Mode Only)
G	ICC/EMV, Magnetic Stripe, RFID and Key Entry

TABLE X-1 Terminal Input Capabilities

Value	Description
H	ICC/EMV Contactless Only
I	Magnetic Stripe, RFID and Key Entry
J	ICC/EMV, RFID and Key Entry
R	Magnetic Stripe and RFID
S	Secure Electronic Transaction (SET) w/Certificate
T	SET without Certificate
U	Channel-Encrypted eCommerce (SSL)
V	Non-Secure eCommerce (email for example)
W	ICC/EMV and RFID

Glossary

A

Administrative Interface

The Point of Sale uses this interface or mode for all functions not associated with running a financial transaction. When entering this mode, you cannot run financial transactions. Functions in this interface include, but are not limited to: End of Day, requesting Parameter Download, printing station reports, and so on.

Authorization Code

Authorization code, either from host response to the original pre-auth request or obtained from the voice authorization center. The Authorization code must be sent up on all Void Transactions, whether voiding an online or offline transaction.

Valid characters are 0-9 (hex 0x30 - hex 0x39), Space (hex 0x20) and A-Z (hex 0x41 - 0x5a). All other characters will result in the transaction being rejected.

AVS Check

The Point of Sale prompts the Cardholder for his ZIP Code. This feature can be allowed for Pay at the Pump and/or Inside Transactions. Feature is a fraud deterrent and may be turned on or off at the site level. **See Address verification on page 26**.

C

Customer Data

Customer Data requirements vary by card issuer and consist of one or more of the data elements. Data is delimited by a colon (0x3a) and is formatted as follows:

`<TYPE><DATA>:<TYPE><DATA>:<TYPE><DATA>…`

Framing characters of < > are provided for readability and should not be placed in this field. If including a second card's track data, the track data should be the last field. See Appendix A, "Card Data and Product Information Codes" for examples of customer data fields.

Communication Test

The Point of Sale has the capability to manually send up a communication test. This allows the Site to work with the Worldpay Help Desk or other Help Desks to trouble shoot suspected communication problems.

Completion

The Completion transaction provides the final dollar amount of a PrePay at the Pump Transaction. The Completion transaction has to match the Time Stamp, Date Stamp, Account number, sequence number, and Authorization number of the PrePay at the Pump Authorization Transaction.

CVV2 Check

The Point of Sale prompts the merchant operator to enter the three or four digit CVV2 or CVC2 number on the back or front of the card. This feature is for inside Transactions and is a fraud deterrent. See Cardholder Verification.

D

Debit Account Type

All Point of Sale debit transactions have an Account Type of 0 for Not Specified on the TREQ. The Account Type field may be updated by the host on the TRSP. If the Host updates the Account Type, then all resubmittal transactions carry that information.

Debit Encryption

The process or algorithm used to change a PIN # in the clear (for example 1234) and turn it into an encrypted PIN block that is decrypted by the Host, and re-encrypted prior to sending to the Debit Card issuer. The Worldpay preferred method of Debit Encryption is 3DES/DUKPT

E

EBT Inside

EBT Cash Benefits may be run for inside transactions. EBT Cash Benefits may include Cash Back amounts on Inside transactions. EBT Food Stamps are allowed for Inside transactions, but Cash Back is not allowed.

Encrypted PIN Block

Encrypted pin blocks are required for all Debit and all online EBT transactions with the exception of the completion request

Any transaction which does not have a valid encrypted PIN block must be sent to Worldpay as a credit transaction, including debit AIDs and BIN ranges.

Encrypted pin block is required for EMV online PIN for credit transactions.

Offline EBT approval data is required for all EBT transactions that were voice authorized either due to the transaction being denied online or due to system downtime.

G

Greenwich Mean Time is the mean solar time at the Royal Observatory in Greenwich, London, reckoned from midnight.

It is also known as UTC (Coordinated Universal Time).

H

Hot Pump

Allows for a faster Pay at the Pump transaction. Using a POS Parameter value, the Pump may be turned on for a Site Specific dollar amount while waiting for the response to the authorization. If the Auth is approved, the pumping may continue to the Site Specific Cutoff Amount. If an approval hasn't been received by the time the Site Specific Hot Pump Cutoff Amount has been dispensed, the Pump turns off, and displays SEE ATTENDANT. If the Auth is declined, the pump shuts off and the Cardholder is directed to see the attendant.

I

Idle Prompt

The display that is present on the POS when in the Sales Interface and no transactions are being run.

M

Multi-threaded

The Multi-threaded method of communicating to the Host allows the POS to send more than one inquiry without receiving a response. This allows for higher speed at busy times, in that some transactions take longer to authorize.

O

Offline EBT Approval Data

Encrypted pin blocks are required for all Debit and all online EBT transactions with the exception of the completion request. Offline EBT approval data is required for all EBT transactions that were voice authorized either due to the transaction being denied online or due to system downtime.

Offline Stand In

This function allows the POS to approve a transaction after it has determined the Host cannot be reached. See Field Descriptions for full explanation.

P

Parameter Download Setting

This function allows Customer and Site Specific information to be downloaded from the Worldpay Host to the POS. Various parameters and settings are downloaded. This can be as straight forward as which cards are accepted or what settings for Velocity Checking or AVS Checking apply to each card type. The Parameter Download can be initiated by the merchant operator or automatically after an administrative function is run.

R

Real-Time Clearing (RTC) Enabled Flag

This flag indicates that the POS supports Real-Time Clearing (RTC). The flag equaling 1 must be present on all transactions sent to the host. All POS development must allow for RTC

processing and should set this Flag to 1, indicating ON. This is required on all transactions, not just Visa or credit cards.

Request Type

There are two types of request types:

0 - Original request

The host authorizes transaction if required and posts the transaction to the merchant's account.

1 - Resubmittal/Hybrid request

The host does not authorize the transaction and only posts the transaction. This action flag signifies a settlement record sent from the terminal.

Retrieval Data

Retrieval data must be stored by the POS and returned by the terminal in an unaltered format for all completion requests, reversal or void requests, and all resubmittal transactions in order to solicit a host match to a previously authorized or captured transaction. If the Retrieval Data is not maintained and sent on all resubmittal transactions, they will most likely be rejected by the authorizer and Charge Backs will result for the Customer. Forced Sale (for example Ticket Only or Force Draft) transactions where retrieval data cannot be returned, must have this field padded with space characters (0x20) to a length of 30 bytes.

Whether a completion or a resubmittal, the latest host computer retrieval data must be maintained by the POS. For example, the POS receives the host computer retrieval data on a pump preauthorization response. The POS sends that retrieval data to the host computer on the pump completion. The host computer replies and sends updated retrieval data. The POS must maintain this updated retrieval data. If there is a hybrid upload, the POS sends up the updated retrieval data.

Return

The Return transaction is used to credit a Cardholder's Account. Typically, this is used to return something to the Customer site, after the Sale or Capture has been sent to the Host for settlement and closed out of the POS. It is counted in the POS and Host Totals.

S

Sale

An Inside transaction, the Sale is the most straightforward of the Worldpay transaction set. The final amount of the transaction is known, applied to the message packet and forwarded to the host. It is either approved or declined or referred.

Sales Interface

Generic term for the Point of Sale mode used for all normal financial transactions run by the merchant operator. Elements associated with the Sales Interface include, but are not limited to, cashier/merchant operator sign on and sign off, running of Credit, Debit, EBT, PrePaid and Fleet transactions and reprinting of a given transaction. While in the Sales Interface, the POS will normally have an Idle Prompt as the display.

Site Parameter Setting

Parameter settings that can be changed at the site by a service technician or merchant operator-the administrative menu. Unless otherwise stated, all parameter download settings will have a site setting. Depending on the value sent down in the parameter download, an individual site may or may not have the ability to change certain POS settings.

Small Ticket

A parameter controlled feature that allows for a no signature required receipt for inside sales. This processing is a Customer decision whether to use. It may be applied to various credit cards.

T

Total Amount

Total amount authorized. For Debit and EBT transactions, this amount will include any cashback amount specified in the request, but will not include any fee amount charged to the customer.

On pre-auth transactions for credit, debit, and prepaid, the approved amount may be lower than the amount requested. On sales for credit and prepaid, the approved amount may be lower. On preauthorization transactions for Fuelman and

Fleet One, the returned amount is the maximum fuel purchase allowed even when the amount is greater than requested.

Track Data

Track II is required for Debit transactions and swiped EBT transactions Track I may only be used for credit card transactions if Track II cannot be extracted from the magnetic stripe. For resubmittal request transactions, Worldpay only requires PAN and YYMM, where PAN is the primary account number and YYMM is the card expiration date.

If you use UID for subsequent transactions, use it in place of PAN.

For EMV transactions, if Tag 57 is present, use it to populate track data. If it is a P2PE transaction, the data is encrypted.

V

Voice Authorization

A given sale is approved by an alternate method, for example the card issuer, or a Local Bank issuing the card. The POS must allow for entry of the card, the amount of the transaction and the Voice Authorization Approval Code #. This approval code is loaded into the TREQ Authorization Code field. This is sent up to the host as a Ticket Only transaction.

See Appendix V, "Table Information".

Void

Use the void transaction to remove a given transaction (Sale, Return, Capture or Ticket Only) from an active batch. You use void transactions for Credit, Debit, Fleet, Prepaid and EBT transactions.

The Void transaction has to match the Time Stamp, Date Stamp, Account Number, Sequence Number, Authorization Number and Dollar Amount of the transaction being voided.

The Void transaction must match the original transaction's account type, for example if the original sale had a Transaction Code of 01 for Credit Sale, the Void Transactions must have a Transaction Code of 05 for Credit Void. The void cannot have a transaction code of 15 indicating Debit or 35 indicating Fleet. The transaction is sent to the host to adjust the host's totals. All voids must be sent prior to Batch Close. There is a single exception to this rule, for example when a Void/Auto-Void is processed after a Batch Close or when a Void/ Auto-Void exceeds a Batch Size Limit, resulting in a Cross BatchVoid. Voids, and the transactions that were voided, are counted in the POS and Host Totals.

For example, there are three sale transactions for $5.00 each, and the last sale is voided. The batch contains the following:

Sale	1	$5.00
Sale	1	$5.00
Sale	1	$5.00
Void	1	$5.00
Total	4	$10.00

W

Wright Express Version Flag

This flag indicates that the POS supports Wright Express 2.0.2 prompting. All POS development must allow for processing Wright Express 2.0.2 and this flag should be set to 1 to indicate On. The flag equaling 1 must be sent on all transactions sent to the host. This covers all card types including credit, fleet, debit, EBT, and gift.