



Information about this Replacement

Replacement	The June 2006 <i>MDS Implementation Manual</i> replaces your existing manual.
What is in the new version?	<p>This manual contains information that will help member personnel with the implementation and support of MasterCard Debit Switch (MDS) optional services.</p> <p>Please refer to:</p> <ul style="list-style-type: none">• “Summary of Changes” for a comprehensive list of changes reflected in this update.• “Using this Manual” for a complete list of the contents of this manual.
Billing	MasterCard will bill principal members for this document. Please refer to the appropriate <i>MasterCard Consolidated Billing System Manual</i> for billing-related information.
Questions?	If you have questions about this manual, please contact the Customer Operations Services team or your regional help desk. Please refer to “ Using this Manual ” for more contact information.
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Summary of Changes

MDS Implementation Manual, June 2006

To locate these changes online—search on the date next to the revision bar. On the Adobe Reader toolbar, click Search. In the Search pane, type Jun 2006 and then click Search.

Change Summary	Description of Change	Where to Look
Added missing MTIs	Added missing Message Type Indicators to table 2.2.	Chapter 2
Clarified text	Clarified text explaining “Potential Customer Impact.”	Chapter 9
Added new chapter	Added new chapter (12) explaining procedures for acquirers and issuers to implement, support and process a partial approval transaction.	Chapter 12



MDS Implementation Manual

June 2006

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Media

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Purpose

The MasterCard *MDS Implementation Manual* helps member personnel with the implementation and support of MasterCard Debit Switch (MDS) optional services. These services are available only to customers that connect directly to the MDS.

Audience

MasterCard provides this manual for members and their authorized agents. Specifically, the following personnel should find this manual useful:

- Acquirers (Both acquiring members and processors that process on behalf of acquirers)
- Issuers (Both issuing members and processors that process on behalf of issuers)

Overview

The following table provides an overview of this manual:

Chapter	Description
Table of Contents	A list of the manual's chapters and subsections. Each entry references a chapter and page number.
Using this Manual	A description of the manual's purpose and its contents.
1 Online Exception Item Processing	Documents the implementation of 04XX Online Exception Item messages for customers and processor host systems
2 250-byte Batch Data File	Documents the implementation of the 250-byte Batch Data File for customers and processor host systems
3 MasterCard SecureCode Validation	Documents the implementation of MasterCard SecureCode Validation messages for customers and processor host systems
4 Online File Update Processing	Documents the implementation of File Update/03XX messages for customers and processor host systems
5 Debit ISIS	Describes the implementation process of Debit ISIS for customers and processor host systems
6 Member Level Settlement	Documents the implementation of Member Level Settlement for customers and processor host systems

Chapter	Description
7 Payment Transactions	Documents the MDS implementation for payment transactions that support the payment service provider industry fulfilling the consumer-to-consumer, consumer-to-business, and business-to-business transfer of funds
8 MasterCard Debit Switch Stand-In Processing	Documents the Stand-In processing enhancement that allows Automated Teller Machine (ATM) and purchase transactions processed using Financial Transaction Request/0200 messages are eligible for MDS Stand-In processing
9 ATM Deposit Sharing	Documents the ATM Deposit Sharing service for Processors who are connected to the MasterCard Debit Switch.
10 Cross Border Acquiring	Documents cross border acquiring for Processors who are connected to the MasterCard Debit Switch.
11 Debit MasterCard Intracurrency	Documents the implementation of Debit MasterCard ISIS for customers and processor host systems
12 Partial Approval Processing	Documents the changes and procedures associated with the testing and implementation of Partial Approval processing
A Test Scripts	Contains the test scripts for the products discussed in the <i>MDS Implementation Manual</i>

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Excerpted Text

At times, this document may include text excerpted from another document. A note before the repeated text always identifies the source document. In such cases, we included the repeated text solely for the reader's convenience. The original text in the source document always takes legal precedence.

Language Use

The spelling of English words in this manual follows the convention used for U.S. English as defined in *Merriam-Webster's Collegiate Dictionary*. MasterCard is incorporated in the United States and publishes in the United States. Therefore, this publication uses U.S. English spelling and grammar rules.

An exception to the above spelling rule concerns the spelling of proper nouns. In this case, we use the local English spelling.

Times Expressed

MasterCard is a global company with locations in many time zones. The MasterCard operations and business centers are in the United States. The operations center is in St. Louis, Missouri, and the business center is in Purchase, New York.

For operational purposes, MasterCard refers to time frames in this manual as either “St. Louis time” or “New York time.” Coordinated Universal Time (UTC) is the basis for measuring time throughout the world. You can use the following table to convert any time used in this manual into the appropriate time in another time zone:

	St. Louis, Missouri USA	Purchase, New York USA	UTC
	Central Time	Eastern Time	
Standard time	09:00	10:00	15:00
(last Sunday in October to the first Sunday in April ^a)			
Daylight saving time	09:00	10:00	14:00
(first Sunday in April to the last Sunday in October)			

^a For Central European Time, the last Sunday in October to the last Sunday in March.

Revisions

MasterCard periodically will issue revisions to this document as we implement enhancements and changes, or as corrections are required.

With each revision, we include a “[Summary of Changes](#)” describing how the text changed. Revision markers (vertical lines in the right margin) indicate where the text changed. The month and year of the revision appear at the right of each revision marker.

Occasionally, we may publish revisions or additions to this document in a *Global Debit Operations Bulletin* or other bulletin. Revisions announced in another publication, such as a bulletin, are effective as of the date indicated in that publication, regardless of when the changes are published in this manual.

Related Information

The following documents and resources provide information related to the subjects discussed in this manual. For descriptions of these documents, please refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine®.

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- [Chargeback Guide](#)
- [MasterCard Debit Financial Simulator](#)
- [MDS Online Specifications](#)
- [MDS Programs and Services](#)
- [MDS Settlement and Reports](#)
- [NICS Users' Guide](#)
- [SecureCode Member Enrollment and Implementation Guide](#)

Members that use the Cirrus® service and logo or that process online debit transactions should refer to the debit processing manuals recommended by the Customer Operations Services team.

For definitions of key terms used in this document, please refer to the [MasterCard Dictionary](#) on the Member Publications home page (on MasterCard OnLine® (www.mastercardonline.com), and the MasterCard Electronic Library CD-ROM). You also may access the MasterCard Dictionary from the main menu and bookmark pane of most manuals.

To order MasterCard manuals, please use the Ordering Publications service on MasterCard OnLine®, or contact the Customer Operations Services team.

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Please address your questions to the Customer Operations Services team as follows:

- Phone:** 1-800-999-0363 or 1-636-722-6176
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Member Relations Representative

Member Relations representatives assist U.S. members with marketing inquiries. They interpret member requests and requirements, analyze them, and if approved, monitor their progress through the various MasterCard departments. This does not cover support for day-to-day operational problems, which the Customer Operations Services team addresses.

For the name of your U.S. Member Relations representative, contact your local Member Relations office:

Atlanta	1-678-459-9000
Chicago	1-847-375-4000
Purchase	1-914-249-2000
San Francisco	1-925-866-7700

Regional Representative

The regional representatives work out of the regional offices. Their role is to serve as intermediaries between the members and other departments in MasterCard. Members can inquire and receive responses in their own languages and during their offices' hours of operation.

For the name of the location of the regional office serving your area, call the Customer Operations Services team at:

Phone: 1-800-999-0363 or 1-636-722-6176
1-636-722-6292 (Spanish language support)

1

Online Exception Item Processing

This chapter documents the implementation of 04XX Online Exception Item messages for customers and processor host systems.

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Overview

Customers currently have the option of sending exception items via NICS™ or online via 04XX messages. This chapter documents the implementation of 04XX Online Exception Item messages for customers and processor host systems. Support of this service is optional.

This service is available only to customers that connect directly to the MasterCard Debit Switch (MDS). MasterCard requires simulator and online testing for customers that elect to use this service.

[Table 1.1](#) indicates the products and roles that may participate in this service.

Table 1.1—Product Impact

Product Impacted	Acquirer	Issuer
Cirrus	Y	Y
Maestro	Y	Y
Debit MasterCard® card	N/A	Y

Customers are required to send a letter or e-mail to their Customer Implementation Services specialist authorizing initiation of this service.

Potential Customer Impact

Table 1.2 contains a list of possible impacts that customers should consider. This list is not complete; there may be additional changes necessary for each customer's environment.

Table 1.2—Potential Customer Impact

Area of Impact	Changes (Y/N)	Comments
Reports	N	Reports will continue to appear on the SWCHD53, Exception Audit Report.
NICS™	N	None
Known lead times	N	Support for this service is not mandatory. Implementation of this service will be a minimum of five (5) weeks.
Prerequisites		None
Potential Customer Considerations	Y	The customer must have procedures for its system to create exceptions with their online system as an alternative to the NICS™ system.
Files Types	N	None
Hardware	N	None
Potential procedural changes	Y	The customer must have the ability to incorporate information from Online Exception Item message into existing exception item processing procedures.

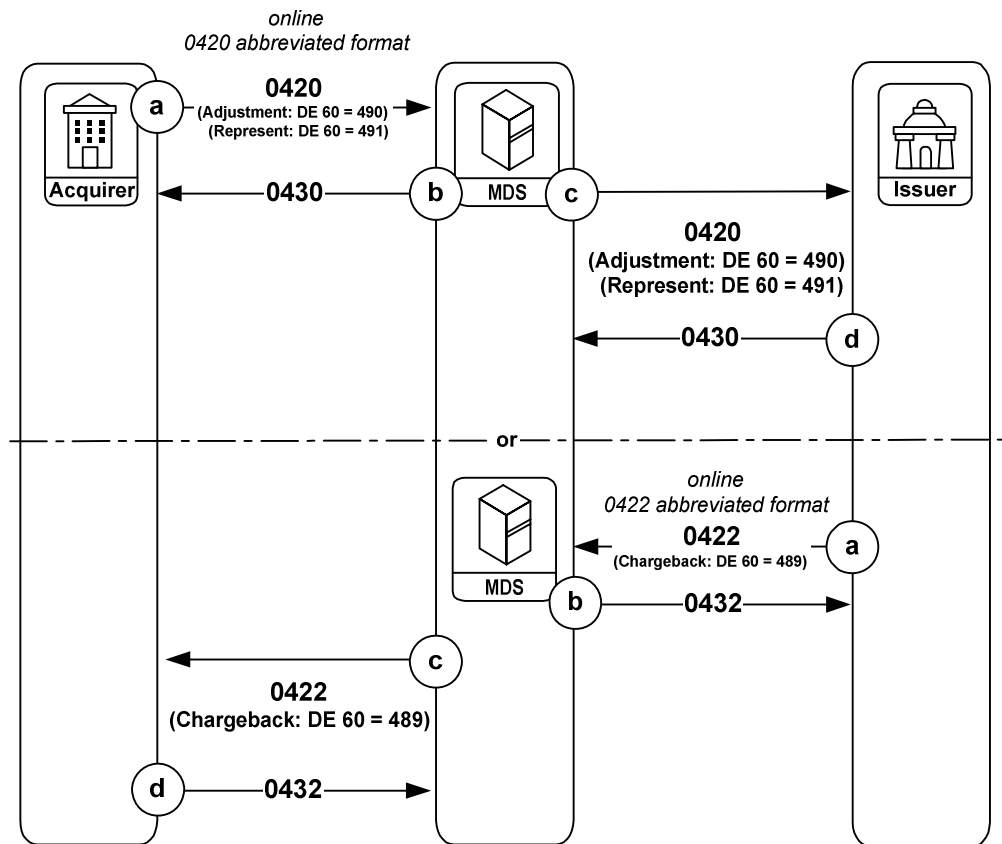
Technical Description

Acquirer Reversal Advice/0420 and Issuer Reversal Advice/0422 messages that occur within the same settlement day as the original request message are processed as same day reversals.

To have the 04XX message processed as an Online Exception Item, the message must be submitted following MDS settlement of the original transaction.

Figure 1.1 presents the Online Exception Item Processing flow.

Figure 1.1—Online Exception Item Processing



All reversal advice messages contain settlement amount and transaction fee data that are included with MDS reconciliation and settlement.

Online Exception Item Processing

Technical Description

The sequence of events:

- a. The processor initiates an online exception message:
 - Chargeback/0422 (issuer)
 - Adjustment/0420 (acquirer)
 - Representment/0420 (acquirer)
- b. The MDS responds with the appropriate Reversal Advice Response/043X message (0430 to an acquirer, 0432 to an issuer).
- c. If the MDS receives a valid adjustment or a representment from the acquirer, the MDS creates an Acquirer Reversal Advice/0420–Exception message to the issuer. If the MDS receives a valid chargeback from the issuer, the MDS creates an Issuer Reversal Advice/0422 message to the acquirer. The following advice reason codes (DE 60) apply:
 - Chargeback: DE 60 = 489nnnn
 - Adjustment: DE 60 = 490nnnn
 - Representment: DE 60 = 491nnnn

nnnn = 4 digit advice detail code (for further information, see the description of DE 60 in the [MDS Online Specifications](#).)
- d. Issuing processors reply to the Acquirer Reversal Advice/0420 message with an Acquirer Reversal Advice Response/0430 message. Acquiring processors reply to the Issuer Reversal Advice/0422 message with an Issuer Reversal Advice Response/0432 message.



Note

For a complete message flow diagram for Online Exception Item Processing messages, refer to the [MDS Online Specifications](#) manual.



Note

Refer to the [NICS Users' Guide](#) for specific information about the procedures for processing chargebacks, adjustments, and representments.

Acquirer-generated Exception Items

An acquirer may initiate an exception request by sending an Acquirer Reversal Advice/0420 message to the MDS after end of day processing. The MDS will match the request to the original logged transaction. If the requested exception passes the appropriate editing, the MDS will forward a positive response to the acquirer with an Acquirer Exception Advice Response/0430 message where the Response Code (DE 39) is '00' (completed successfully). If the acquirer receives a positive response, the MDS will format the appropriate Acquirer Exception Advice/0420 message and forward it to the issuer of the transaction.

If the requested exception fails to pass the appropriate editing, the MDS will deny the acquirer exception with an Acquirer Exception Advice Response/0430 message. A Response Code of '30' (format error) will be returned in DE 39, and Additional Response Data (DE 44) will contain the reason code for the denial. Where possible, the data element in error is also present in DE 44. No advice will be sent to the issuer.

Issuer-generated Exception Items

An issuer may initiate an exception request by sending an Issuer Reversal Advice/0422 message to the MDS after end of day processing. The MDS will match the request to the original logged transaction. If the requested exception passes the appropriate editing, the MDS will forward a positive response to the issuer with an Issuer Exception Advice Response/0432 message, where the Response Code (DE 39) is '00' (completed successfully). If the issuer receives a positive response, the MDS also will format the appropriate Issuer Exception Advice/0422 message and forward it to the acquirer.

If the requested exception fails to pass the appropriate editing, the MDS will deny the issuer exception with an Issuer Exception Advice Response/0432 message. A Response Code of '30' (format error) will be returned in DE 39, and Additional Response Data (DE 44) will contain the reason code for the denial. Where possible, the data element in error is also present in DE 44. No advice will be sent to the acquirer.

Data Element Impacts

[Table 1.3](#) describes the impact to data elements for 04XX messages that will be required to support this service.

Table 1.3—Data Element Impacts

No.	Data Element Name	Comments
2	Primary Account Number (PAN)	Mandatory for this service
7	Transmission Date and Time	Mandatory for this service
11	System Trace Audit Number	Mandatory for this service
15	Date, Settlement	Mandatory for this service
44	Additional Response Data	Conditional for this service, only provided for MDS denied transactions.
60	Advice Reason Code	Mandatory for this service
63	Network Data	Mandatory for this service
95	Replacement Amounts	Mandatory for this service

Requirements for Cirrus and Maestro

For Cirrus and Maestro transactions, representment reason code 13 requires acquirer contact information. This information is not required for other reason codes.

[Table 1.4](#) documents the format of the text in DE 60, positions 8-60. For additional information, refer to the [MDS Online Specifications](#) manual.

Table 1.4—Advice Detail Text DE 60, subelement 3—Cirrus/Maestro additional information

DE 60 position	Length	Definition
8-28	21 bytes	Contact name
29-44	16 bytes	Contact phone
45-60	16 bytes	Contact fax

Requirements for Debit MasterCard

Exception transactions for Debit MasterCard cards require specific information in the Advice Reason Detail Text (DE 60, subelement 3, positions 8-60). The formatting of the message block, (DE 60, subelement 3, positions 12-49), varies based on the reason code in DE 60 positions 6-7. For additional information, refer to the [Chargeback Guide](#).

[Table 1.5](#) documents the format of the text in DE 60, positions 8-60.

Table 1.5—Advice Detail Text DE 60, subelement 3—Debit MasterCard additional information

DE 60 position	Length	Definition
8	1 bytes	Usage code
9	1 bytes	Documentation indicator
10-11	2 bytes	Condition code
12-49	38 bytes	Message block. Left justified, fill with spaces
50-51	2 bytes	Chargeback flag
52-53	2 bytes	Filler (future use)—fill with spaces
54	1 bytes	Reject code—fill with spaces
55-60	6 bytes	Filler (future use)—fill with spaces

Testing Requirements

In preparation for migrating to production, customers must meet minimum requirements during the testing phase.

Simulator and online testing must include all variations of the 04XX request, such as approved, negative response situations, and report receipt.

Offline simulator testing must be performed using the MDS Debit Financial Simulator. A Customer Implementation Service specialist must review and approve the results of the test.

Items to consider when planning to implement this service are contained in [Table 1.6](#).

Table 1.6—Service-Testing Considerations

Preparing for Service Implementation	Comments
Estimate costs	Standard testing costs will apply to Online Exception Item Processing testing.
Establish a schedule	Online testing must be scheduled at least five (5) business days in advance, after simulator testing is complete and trace files are approved.
Test using the simulator	Ensure that you are using the correct version of the MasterCard Debit Financial Simulator.

[Table 1.7](#) contains a list of testing requirements that are necessary before implementing this service.

Table 1.7—Testing Requirements

Testing Items	Comments
Simulator Testing	Complete and accurate trace files must be submitted at least seven (7) business days before online testing is scheduled to begin. The Customer Implementation Services specialist must approve the results of the simulator testing.
Forms	No forms are required for this service.

Testing Items	Comments
Schedule Testing	Online testing must be scheduled at least five (5) business days in advance, after simulator testing is complete and trace files are approved. A minimum of three test sessions will be required for this project. This allows the performance of current-day transactions, chargebacks, and representment exception items.
Online Testing	Online testing will be performed with a Customer Implementation Services test analyst or specialist. Standard testing costs will apply to Online Exception Item Processing testing.
Scripts	The Online Exception Item Processing test scripts are used to test this service with the MasterCard Debit Financial Simulator and online with the MasterCard Debit Test Facility.
Expected Results	The appropriate results must be generated as defined in the test scripts. A combination of approved and denied transactions must be performed for this project. The customer must be able to reconcile all transactions with its internal system (for online testing only).
Testing complete	The Customer Implementation Services specialist will provide a completion letter to the customer when the project is complete and ready for production implementation. The Customer Implementation Services specialist will contact the customer to schedule a production implementation date.

Implementation

The Customer Implementation Services specialist and the customer will schedule a production implementation date at least 10 business days in advance.

After implementation of this service, the Customer Implementation Services specialist will monitor the production performance for 30 days.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

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- [*Chargeback Guide*](#)
- [*MasterCard Debit Financial Simulator*](#)
- [*MDS Settlement and Reports*](#)
- [*MDS Online Specifications*](#)
- [*MDS Programs and Services*](#)
- [*NICS Users' Guide*](#)

2

250-byte Batch Data File

This chapter documents the implementation of the 250-byte Batch Data File for customers and processor host systems.

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Overview

MasterCard supports a 250-byte Batch Data File used during the automated reconciliation process. The 250-byte Batch Data File replaces the existing 80-byte, 120-byte, and 320-byte formats currently supported by MDS. The 250-byte Batch Data File provides more flexibility by allowing customers to select the specific addendum data to meet individual customer's processing requirements. The record format provides standard financial and non-financial data as well as the custom addendum data. The 250-byte Batch Data File provides a single format for customers and processors to use when performing settlement, posting, reporting, and reconciliation processing of MDS activity. The format supports financial, non-financial, and addendum record types. Customers converting to the 250-byte Batch Data File must receive the new 80-byte FIT data file. Optionally, customers may receive the new 80-byte FIT data file before converting to the 250-byte Batch Data File.

Customers using the 250-byte Batch Data File will realize a number of benefits, including:

- The file contains ISO data elements instead of the existing ANSI data elements—matching the members' online messages
- Simpler reconciliation by Settlement Service through the use of trailer totals
- The availability of more data through addendum records
- The ability to select and to receive only those records that provide useful information
- Amounts are provided in local currency

Potential Customer Impact

The 250-byte Batch Data File contains record formats. In addition to receiving the standard File Header, Financial, Non-Financial, Exception and Settlement records, customers may choose optional custom addendum records. The addendum records provide more flexibility by allowing customers to select specific data to meet individual processing requirements. The file format also will include conditional records to support region specific products.

The 80-byte Batch FIT Data File will contain record formats. In addition to receiving the standard FIT Data Record, the file will also include FIT Header and FIT Trailer records. The file will contain one 80-byte record for each prefix.

250-byte Batch Data File

Service Description

[Table 2.1](#) contains a list of possible impacts that the customer should consider. This list is not complete; there may be additional changes necessary for each customer's environment.

Table 2.1—Potential Impact

Area of Impact	Changes (Y/N)	Comments
Reports	N	None
NICS™	N	None
Known lead times	Y	Implementation of this service will be a minimum of four (4) weeks.
Prerequisites	N	None
Potential Customer Considerations	N	Customers have the option of testing the 250-byte file parallel to their current production file or performing online testing. Customers must request optional addendum records.
Files Types	N	The-250 byte Batch Data File—Transaction Detail for production will be in bulk file T464 and in T470 for test. The 80-byte FIT file will be in bulk file T458 for production and in T459 for test.
Hardware	N	None
Potential procedural changes	N	None

Service Description

Either a Message Type Indicator or Addendum Indicator in the first four (4) positions of each record identifies records in the 250-byte Batch Data File format.

The customer may receive any of the Batch Data File records listed in [Table 2.2](#). The table depicts which records are standard, conditional, or optional.

Table 2.2—Valid Values for Message Type Indicators (MTI)

Message Type Indicator	Name	Description
FHDR	File Header Record	This record is standard and contains processor data.
FREC	Financial Record	This record is standard and contains detail financial transaction data.
NREC	Non-Financial Record	This record is standard and contains detail non-financial data.
EREC	Exception Record	This record is standard and contains adjustment, chargeback, and representment data.
FTRL	File Trailer Record	This record is standard and contains the files total record count including the file header and file trailer.
SHDR	Settlement Header Record	This record is standard and contains the currency of settlement data.
FPST	Financial/Non-Financial Addendum Record Force Post	This record is optional and used to post financial transactions. When created, this record will follow the corresponding 'FREC' core record.
DBMC	Financial/Non-Financial Debit MasterCard Addendum Record	This record is optional and used for Debit MasterCard force post transactions. When created, this record follows any corresponding 'FPST' and/or 'FEER' addendum records.
AIRA	Financial/Non-Financial Debit MasterCard Airline Ticket Addendum Record	This record is conditional and is created when airline ticket information is available in the online message. When created, this record follows any corresponding 'FPST', 'FEER', and/or 'DBMC' addendum records.

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250-byte Batch Data File

Service Description

Message Type Indicator	Name	Description	
PARC	Financial/Non-Financial Parcelas Addendum Record (Available For Brazil Only)	This record is conditional and is created when Parcelas information is available in the online message. When created, this record follows any corresponding 'FPST' and/or 'FEER' addendum records	Jun 2006
MCDC	Financial/Non-Financial Maestro CDC Addendum Record (Available For Brazil Only)	This record is optional and is created when Consumer Direct Credit information is available in the online message. When created, this record follows any corresponding 'FPST' and/or 'FEER' addendum records.	Jun 2006
MPDT	Financial/Non-Financial Maestro Post Dated Addendum Record (Available For Brazil Only)	This record is optional . This record is for Maestro Post Dated transaction information. It follows the core FREC Financial and any FPST Force Post and/or FEER Fee addendum records.	Jun 2006
MIST	Financial/Non-Financial Maestro Installment Payment Addendum Record (Available For Brazil Only)	This record is optional . This record is for Maestro Installment transaction information. It follows the core FREC Financial and any FPST Force Post and/or FEER Fee addendum records.	
INTC	Interchange Compliance Issuer Detail Adjustment Record	This record is optional . When created, this record is forwarded to the MDS from GCMS through the MasterCard File Express or Bulk File. Once received, the MDS will identify the receiving processor by identifying the ICA number with the IPT (ICA Processor Table). This record, when received, will provide issuers and acquirers with information to determine the effect of interchange compliance on their net settlement.	

Message Type Indicator	Name	Description
ADDR	Financial/Non-Financial Additional Data Addendum Record	This record is optional . This record will follow the core FREC/EREC Financial record, FPST Force Post or EPST Exception Posting records, FEER Fee records, DBMC Debit MasterCard records, and AIRA Airline Ticket addendum records.
FEER	Financial/Non-Financial Fee Addendum Record	This record is optional and is created to include online fee data. When created, this record follows the corresponding 'FREC', 'NREC' or 'EREC' core records or any corresponding 'FPST' or 'EPST' addendum records.
EPST	Financial/Non- Financial Addendum Record Exception Force Post	This record is optional . When created, it includes an exception posting record.
STRL	Settlement Trailer Record	This record is standard and reflects the settlement position at a processor level by settlement currency.
FTRL	File Trailer Record	This record is standard . This record contains total number of record in file.
FITH	FIT Header Record	This record is standard
FITD	FIT Data Record	This record is standard
FITT	FIT Trailer Record	This record is standard
FTRL	File Trailer Record	This record is standard

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Technical Description

The 250-byte Batch Data File transmission contains Financial, Non-Financial, and Exception Records as standard records for a particular settlement date. At the customer's request, optional records are added to the file. See [Table 2.2](#) for a list of optional records.

The **File Header Record** (FHDR) contains the settlement date for the data in the file.

The **Settlement Header Record** represents the count and dollar totals from the online message. The Settlement Header Record is required when there is activity on the file. The Settlement Header Record specifies the settlement currency of transactions, so it is possible to have multiple Settlement Header Records on the file to define each settlement currency.

The **Financial/Non-Financial Records** (FREC/NREC) contains data elements of both the online ISO message and batch calculated settlement. These data elements provide information that can be used by the processor for reconciliation and reporting purposes. Transaction records are sorted by Settlement Currency, PAN, and Serial Number. The data is provided with the acquirer information followed by the issuer information.

The **Exception Record** (EREC) is for exception items generated by Financial Transaction Advice/0220 or Reversal Advice/04xx messages. If receiver of the file is the acquirer in the transaction, the last four positions of field 4 (Card-issuer institution) will contain the issuer processor ID (not found in the ISO online message, the processor must request). The issuer processor ID appears in the last four positions of DE 100 (Receiving Institution Identification Code) in the ISO online message. If the receiver of the file is the issuer in the transaction, the last four positions of field 4 will contain the acquirer processor ID. The acquirer processor ID appears in the last four positions of DE 33 (Forwarding Institution Identification Code) in the ISO online message.

The **Settlement Trailer Record** (STRL) provides as a summary of all activity for an MDS settlement day. A separate Settlement Trailer Record will be present for each currency that has representative transaction settlement. Processors that receive the file as both an acquirer and issuer will receive a Settlement Trailer record as acquirer, one Settlement Trailer as issuer, and one Settlement Trailer record with the net of acquirer and issuer position reported. Each record is identified as to what settlement it contains—A (acquirer), I (issuer), or N (Net). The Settlement Trailer Record is used to reflect the settlement position at a processor level by settlement currency.

The **File Trailer Record** (FTRL) contains the total number of records sent within the file. It includes the file header record, addendums, financial control records, and the file trailer.

For additional information on the record types described above and other records types reference the *MDS Settlement and Reports* manual.

Batch FIT Data File

Customers converting to the 250-byte Batch Data File must receive the 80-byte FIT data file. Optionally, customers may receive the 80-byte FIT data file before converting to the 250-byte Batch Data File.

The 80-byte Batch FIT Data File contains record formats. In addition to receiving the standard FIT Data Record, the file will also include FIT Header and FIT Trailer records. The file will contain one 80-byte record for each prefix.

Testing

There are two options for testing. Customers may perform online testing to receive a test batch data file or perform production parallel testing.

Customers who elect to perform production parallel testing must provide two dataset names (one for test—bulk file type 470, and one for production—bulk file type 464). Customers who use the bulk type in their production dataset name will be required to provide a new production dataset name within 10 business days of scheduled production date.

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Online testing consists of customers sending transactions, receiving transactions, or both in their test environment. On the day following testing, a batch data file is created and then transmitted to the customer.

Customers who choose Production parallel testing receive a test file each day containing the same data as the previous day production file. This test file transmits using a test dataset name specified by the customer. The minimum requirement for production parallel testing is two consecutive days. Production parallel testing may not give customers every required record type and therefore an online test session may still be required. For example, customers supporting stand-in may not experience any down time during the parallel testing.

[Table 2.3](#) contains a list of items for consideration when planning testing for this service.

Table 2.3—Service Testing Considerations

Preparing for Service Implementation	Comments
Estimate Costs	Standard testing costs will apply to online Batch Data File testing. For Production parallel testing, standard test file costs will apply for each file tested.
Establish a schedule	Customers who support Cirrus and/or Maestro are required to perform online testing for two consecutive days. Customers who support Debit MasterCard are required to perform three days of online testing. The minimum requirement for production parallel testing is two consecutive days.
Simulator Testing	Not Applicable

In preparation for migration to production, all requirements must be performed during the testing phase.

[Table 2.4](#) contains a list of testing requirements that are necessary before implementing this service.

Table 2.4—Testing Requirements

Testing Items	Comments
Simulator Testing	Not applicable
Forms	No forms are required for this service.
Schedule Testing	Customers should contact their Customer Implementation Services Specialist or CIS@mastercard.com to schedule testing.
Online Testing	Online testing is performed with a Customer Implementation Services test specialist. The testing will consist of the following transactions: financial, non-financial, international, same day reversals, adjustments, chargebacks, stand-in and special transactions for any requested optional addendum records. The Customer Implementation Services test specialist will review the test batch data file for customers who choose production parallel testing to ensure all required record types are included.
Scripts	250-byte Batch Data File scripts
Expected Results	Customers must be able to reconcile all the transactions with their internal system. Customers are required to confirm in writing that all transactions were reconciled.

Testing Items	Comments
Testing complete	The Customer Implementation Services specialists will coordinate a production implementation date with the customer.

Forms

[Table 2.5](#) indicates the debit forms required for this project.

Table 2.5—Enter caption text

Debit Form	Required (Y/N)
Processor Information Questionnaire (PIQ)	N
Institution Routing and Transit (IRT)	N
Institution Definition Form (IDF)	N
Issuer Functionality Form (IFF)	N
Acquirer Functionality Form (AFF)	N
Stand-In Parameter Profile	N

Implementation

Scheduling a production implementation date requires advance notice of five business days. The Customer Implementation Services specialist and the customer will schedule a mutually agreeable production implementation date.

After implementation of this service, the Customer Implementation Services specialist will monitor the production performance for 15 days.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

- [MDS Online Specifications](#)
- [MDS Settlement and Reports](#)

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3

MasterCard SecureCode Validation

This chapter documents the implementation of MasterCard SecureCode Validation messages for customers and processor host systems.

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Overview

This chapter documents the implementation of SecureCode Validation messages for customers and processor host systems. Support of this service is optional.

This service is only available to customers that connect directly to the MasterCard® Debit Switch (MDS). If you elect to use this service, simulator and online testing is required.

[Table 3.1](#) indicates the products and roles that may participate in this service.

Table 3.1—Product Impact

Product Impacted	Acquirer	Issuer
Cirrus	N	N
Maestro	Y	Y
Debit MasterCard	Y	Y

Before implementation, customers are required to send a letter or email message to their Customer Implementation Services specialist authorizing initiation of this service.

Potential Customer Impact

Table 3.2 contains a list of possible impacts that customers should consider. This list is not complete; it is possible there are other changes that will be necessary for your environment.

Table 3.2—Potential Customer Impact

Area of Impact	Changes (Y/N)	Comments
Reports	N	None
NICS™	N	None
Known lead times	N	Support for this service is not mandatory. Implementation of this service will be a minimum of five weeks.
Prerequisites	Y	The customer should provide the Accountholder Authentication Value (AAV) to MasterCard so that the same AAV generated by the customer will be included in DE 48, subelement 43, and passed in the Financial Transaction Request to the customer.
Potential Customer Considerations	Y	The customer must have procedures for their system to generate and validate Accountholder Authentication Value (AAV). MasterCard does not have the capability to validate the AAV using the simulator.
Files Types	N	None
Hardware	N	None
Potential procedural changes	N	None

Technical Description

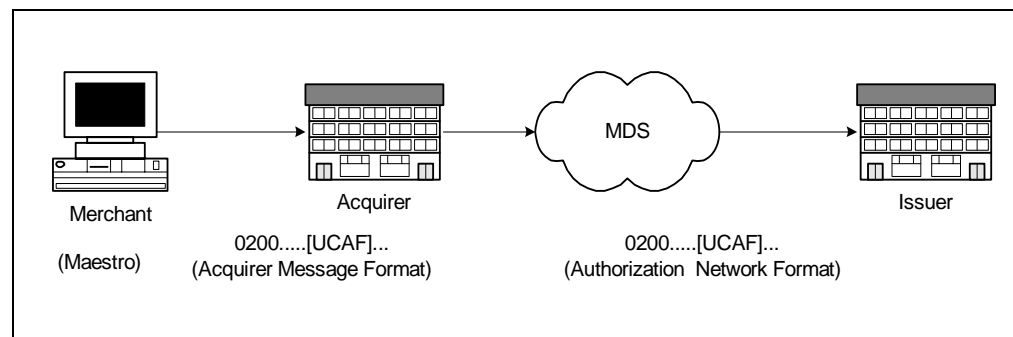
MasterCard defines subelement 43 within Data Element 48 (DE 48) to carry the Universal Cardholder Authentication Field (UCAF) data, and subelement 42 to carry the Electronic Commerce Security Level Indicator and UCAF data status. This UCAF data transports cardholder authentication data for electronic commerce transactions, including mobile commerce, within the Financial Request messages.

The Accountholder Authentication Value (AAV) is a MasterCard SecureCode-specific implementation of UCAF related to issuer authentication platforms that incorporate the Secure Payment Application (SPA) algorithm. AAV is a unique authentication value generated by the issuer's Access Control Server each time a cardholder conducts an electronic commerce transaction. Upon successful authentication of the cardholder, the AAV transmits to the merchant. The AAV incorporates elements specific to each transaction and effectively binds the cardholder to a transaction at a particular merchant.

The merchant is required to pass the AAV to the acquirer via the UCAF field within the request message. The acquirer passes the AAV value back to the issuer as part of the Financial Transaction Request message in DE 48, subelement 43, also setting the UCAF Data status in subelement 42 position 3, to a value of '2'. Subelement 42 indicates that the merchant is UCAF-enabled and that the authentication data is present in DE 48, subelement 43. The issuer checks that the AAV matches the original value (generated by the issuer's Access Control Server), and returns a positive authorization.

Figure 3.1 illustrates the standard message flow of AAV.

Figure 3.1—Standard Message Flow, Accountholder Authentication Value



Accountholder Authentication Value Layout

Table 3.3 shows the layout of the AAV as defined for use with MasterCard SecureCode. If you need further detailed information regarding creation and validation of these structures, refer to:

- **MasterCard SecureCode:** *SecureCode Member Enrollment and Implementation Guide*

Before the AAV passes to the acquirer as part of a Financial Transaction Request, MasterCard requires that it be Base64 encoded. The purpose of this encoding is to produce a character representation of the associated binary data because binary format is not an option for passing the AAV value through to MasterCard Debit Switch. For more detail regarding the Base64 Encoding, refer to:

- **MasterCard SecureCode:** *SecureCode Member Enrollment and Implementation Guide*



Note

For any issues or problems encountered during the Base64 Encoding, please contact the customer's own technical support person.

Table 3.3—Detail of the Accountholder Authentication Value Layouts

No.	Field Name	Data Sourced: Access Control Server (ACS)	Length (Bytes)	Byte Number
1	Control Byte (Format Version Number)	The Control byte indicates the format and content of the associated AAV structure. The following hexadecimal values have been defined for MasterCard's implementation of 3-D Secure: <ul style="list-style-type: none">• x'8C' for an AAV created as the result of a successful cardholder authentication.• x'86' for an AAV created as the result of Attempts processing.	1	Byte 1
2	Hash of Merchant Name	The left most 8 bytes of the SHA-1 hash of the Merchant Name field from the PAREq. <ul style="list-style-type: none">• Prior to creating the hash:• Remove all leading and trailing spaces• Remove all non-displaying characters	8	Bytes 2-9
3	ACS Identifier	Allows an issuer to use up to 256 different ACS facilities	1	Byte 10

No.	Field Name	Data Sourced: Access Control Server (ACS)	Length (Bytes)	Byte Number
4	Authentication Method	<p>Indicates how the cardholder was authenticated to the ACS:</p> <ul style="list-style-type: none"> 0 No Cardholder Authentication Performed (This is only valid for an AAV created using control byte value x '86'—Attempts processing.) 1 password 2 Secret Key (e.g. Chip card) 	½ (4 bits)	Byte 11, 1 st hex digit
5	BIN Key Identifier	<p>Indicates which one of the possible 16 issuer-known secret keys for a given BIN range was used by the ACS identified by the ACS identifier to create the MAC.</p> <p>It is recommended that during the time a chargeback can occur, any given key associated with each identifier be maintained. To roll new keys into the system, select a new identifier value.</p>	½ (4 bits)	Byte 11, 2nd hex digit
6	Transaction Sequence Number	<p>Unique number used to identify the transaction within the ACS identified by the ACS identifier.</p> <p>The number should recycle back to 0 upon reaching the maximum value.</p> <p>This number must be unique for every PAREs created for a given ACS identifier for a given issuer during the time that a chargeback can occur.</p>	4 (8 hex digits)	Byte 12-15
7	MAC	<p>Message Authentication Code, created by ACS.</p> <p>MasterCard currently requires creating the MAC using the SHA-1 HMAC hashing algorithm with a minimum key length of 160 bits.</p>	5	Bytes 16-20

Data Element Impacts

Requirements for Data Element 48, Subelement 42

Table 3.4 documents the format of DE 48, subelement 42. For additional information, refer to the [MDS Online Specifications](#) manual.

Table 3.4—Security Text DE 48, subelement 42

Subelement 42	Length	Definition
Subelement Identifier	2 bytes	42

MasterCard SecureCode Validation

Technical Description

Subelement 42	Length	Definition
Subelement Data Length	2 bytes	07
Subfield Number	2 bytes	01
Subfield Data Length	2 bytes	03
Security Level Code	2 bytes	11 UCAF (Universal Card Authentication Field) encryption; cardholder certificate not used
		12 UCAF encryption; cardholder certificate used
		13 UCAF encryption; chip cryptogram used, cardholder certificate not used
		14 UCAF encryption; chip cryptogram used, cardholder certificate used
		21 Channel encryption; cardholder certificate not used
		23 Channel encryption; chip cryptogram used, cardholder certificate not used
		91 No Security Protocol; cardholder certificate not used
Universal Cardholder Authentication Field (UCAF) data status	1 byte	0 UCAF data collection is not supported at the merchant's Web site.
		1 UCAF data collection is supported by the merchant but the UCAF data is not populated in the Financial Transaction Request/0200 preauthorization message (DE 48, SE 43 is not present)
		2 UCAF data collection is supported by the merchant and the UCAF data is populated (DE 48, SE 43 must be present).
		Both merchant and issuer are UCAF enabled, as indicated in the Financial Transaction Request/0200 preauthorization and Financial Transaction Request response/0210 messages

Requirements for Data Element 48, Subelement 43

Table 3.5 documents the format of DE 48, subelement 43. This subelement is only present when a UCAF-enabled merchant has collected the authentication data from the Issuer's Access Control Server and passed it to the acquirer for inclusion in the 0200 financial request or 0200 preauthorized request.

For additional information, refer to the [MDS Online Specifications](#) manual.

Table 3.5—UCAF Text DE 48, subelement 43

Subelement 43	Length	Definition
Subelement Identifier	2 bytes	43
Subelement Data Length	2 bytes	Variable up to 40 bytes
UCAF data	32 bytes	Accountholder Authentication Value (AAV)

Testing Requirements

Customers must perform minimum requirements during the testing phase in preparation for migrating to production.

Simulator and online testing must include the cross edit between subelement 43 (UCAF-AAV) and subelement 42 (UCAF data status) in DE 48.

The performance of offline simulator testing using the MDS Debit Financial Simulator is required. It is also required that test results be submitted to the Customer Implementation Service specialist for review and approval.

Table 3.6 contains a list of items to consider when planning for this service.

Table 3.6—Service-Testing Considerations

Preparing for Service Implementation	Comments
Estimate Costs	Standard testing costs will apply to SecureCode testing.
Establish a schedule	Schedule online testing at least 5 business days in advance; after simulator testing is complete, and a Customer Implementation Service specialist approves trace files.
Simulator Testing	Ensure correct version of the MasterCard Debit Financial Simulator.

Table 3.7 contains a list of testing requirements that are necessary before implementing this service.

Table 3.7—Testing Requirements

Testing Items	Comments
Simulator Testing	At least seven business days before online testing is to begin, customers must submit complete and accurate trace files so the Customer Implementation Service specialist can approve the results of the simulator testing.
Forms	No forms are required for this service.
Schedule Testing	The customer must schedule online testing at least five business days in advance, but only after simulator testing is complete, and trace files have been approved.
Online Testing	The customer will perform online testing with a Customer Implementation Service test analyst or specialist. Standard testing costs will apply to SecureCode testing.
Accountholder Authentication Value data	Issuer should provide the AAV to MasterCard so that the AAV can be passed in DE 48 Subelement 43 in the request message. The issuer can just compare the AAV, if it matches the issuer's AAV, the issuer can return a positive authorization; if not the authorization is declined.
Base64 Encoded AAV	The AAV must be Base64 encoded prior to sending it in the request message.
Scripts	The online transactions following transactions from SecureCode test scripts will be used to test this service with the MasterCard Debit Financial Simulator and online with the MasterCard Debit Test Facility.
Expected Results	The customer must generate appropriate results as defined in the test scripts. They are required to perform a combination of approved and denied transactions for this project. The customer must be able to reconcile all transactions with their internal system, (for online testing only).
Testing complete	The Customer Implementation Service specialist will provide a completion letter to the customer when the project is complete and ready for production implementation. The Customer Implementation Service specialist will contact the customer to schedule a production implementation date.

Implementation

The Customer Implementation Services specialist and the customer will schedule a production implementation date at least two business days in advance.

After implementation of this service, the Customer Implementation Services specialist will monitor the production performance for 30 days.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

- [*MasterCard Debit Financial Simulator*](#)
- [*MDS Online Specifications*](#)
- [*MDS Programs and Services*](#)

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Online File Update Processing

This chapter documents the implementation of File Update/03xx messages for customers and processor host systems.

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Overview

Customers currently have the option of sending file updates via NICS™ or online via 03XX messages. This chapter documents the implementation of 03XX Online File Updates messages for customers and processor host systems. Support of this service is optional.

An ISO connection to the MasterCard Debit Switch (MDS) supports the Online File Update messages. Issuers may send File Update Request/0302 messages to update the following:

- Maestro and Cirrus accounts in the MDS Stand-In Account File for negative listings.
- Debit MasterCard accounts in the MasterCard Account file for negative and VIP listings, along with debit MasterCard restricted card listings in the *Electronic Warning Bulletin*.

This service is available only to customers that connect directly to the MDS. If you elect to use this service, simulator and online testing is required.

[Table 4.1](#) indicates the products and roles that may participate in this service.

Table 4.1—Product Impact

Product Impacted	Acquirer	Issuer
Cirrus	N/A	Y
Maestro	N/A	Y
Debit MasterCard	NA	Y

Customers must send a letter or e-mail to their Customer Implementation Services specialist authorizing initiation of this service.

Potential Customer Impact

Possible impacts that the customer should consider are contained in [Table 4.2](#). This list is not complete; there may be more changes necessary for your environment.

Table 4.2—Potential Customer Impact

Area of Impact	Changes (Y/N)	Comments
Reports	N	Online File Updates will appear on the SWCHD141-1, Account File Updates, SWCHD141-2, Account Management File Updates , and SWCHD147-1, Negative File Update reports.
NICS™	N	None
Known lead times	N	Support for this service is not mandatory. Implementation of this service will be a minimum of 5 weeks.
Prerequisites		None
Potential Customer Considerations	Y	The customer must have procedures to create file updates via their online system as an alternative to the NICS™ system.
File types	N	None
Hardware	N	None
Potential procedural changes	Y	The customer must have the ability to incorporate information from Online File Update messages into existing file update processing procedures.



Note

The SWCHD141-1, Account File Updates, SWCHD141-2, Account Management File Updates and SWCHD147-1, Negative File Update reports summarize all updates to the Account, Account Management, and MDS negative card files, whether received via NICS or online. This report must be review daily for rejected requests. Additional action may be required to ensure chargeback rights.

Technical Description

Issuers may use file update messages to update individual account files. Examples of these files include “hot card” files or system parameter files defined within the MasterCard Account Management System (AMS) or within MDS Stand-In processing. MasterCard uses these account files to control the operation of standard and optional features that members may select when they participate in MasterCard programs.

File Update/03xx Message Definitions

The following information defines the File Update Request/0302 message and the File Update Request Response/0312 message.

File Update Request/0302

Type:	Interactive
Purpose:	Requests update of a file, typically a file used to minimize fraudulent usage of, or give preferential treatment to, the financial transaction cards provided by the issuer to its cardholders or to other customers.
Routing:	<p>Routing is directly from an issuer or through NICS™ to the MasterCard AMS. For MDS Stand-In processing, routing is to the MDS. Both systems will receive messages if the issuer participates in both services.</p> <p>In cases where the file update request is routed to both AMS and Stand-In, the MDS must receive an approved response from both systems to send an approved response to the issuer. If either system does not provide this response, the MDS will return a File Update Request Response/0312 message to the issuer containing a declined/failed response in DE 39 (Response Code).</p>
Response:	A File Update Request Response/0312 message is required .

File Update Request Response/0312

Type:	Interactive
Purpose:	Carries response information to the File Update Request/0302 message.
Routing:	Routing is from the MasterCard AMS via the MDS to the issuer. For MDS Stand-In processing, routing is from the MDS to the issuer.
Response:	None

File Update/03xx Transaction Flows

The transaction flows provided throughout the remainder of this chapter define all of the ISO 8583–1987 transaction flow procedures implemented on the MDS. These flows sometimes depict a “timeout” or late response situation.

File Update Request/0302 Message Format and File Update Request Response/0312 Message Format

Figure 4.1 and Figure 4.2 illustrate the message flow for file update messages. Issuers use file update messages to maintain fraudulent card use (“hot card”) or VIP databases that are available for users at the MDS in the AMS.

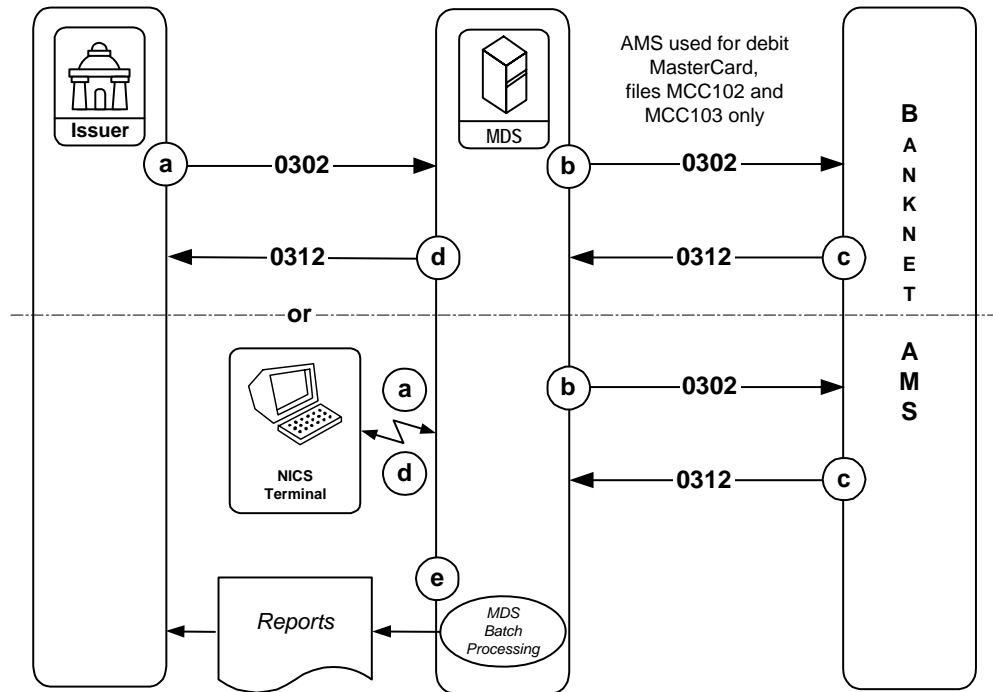
Two file update services are available:

- Debit MasterCard accounts that require access to AMS through use of MCC102 and MCC103 updates.
- Maestro and Cirrus accounts that use the MDS negative file (MCCNEG) updates.

In the first case, the MCC102 and MCC103 files maintained through AMS receive updates. These updates apply to debit MasterCard cards only. For debit MasterCard issuers participating in the MDS Stand-In service, accepted AMS updates also receive updates in the MCCNEG file.

The following figure shows two separate paths: number one originating from the issuer’s online transaction processing (OLTP) system and the other from the NICS™ terminal originated by the issuer or issuer’s authorized personnel.

Figure 4.1—File Update/03xx Message Flow, Case 1—Debit MasterCard



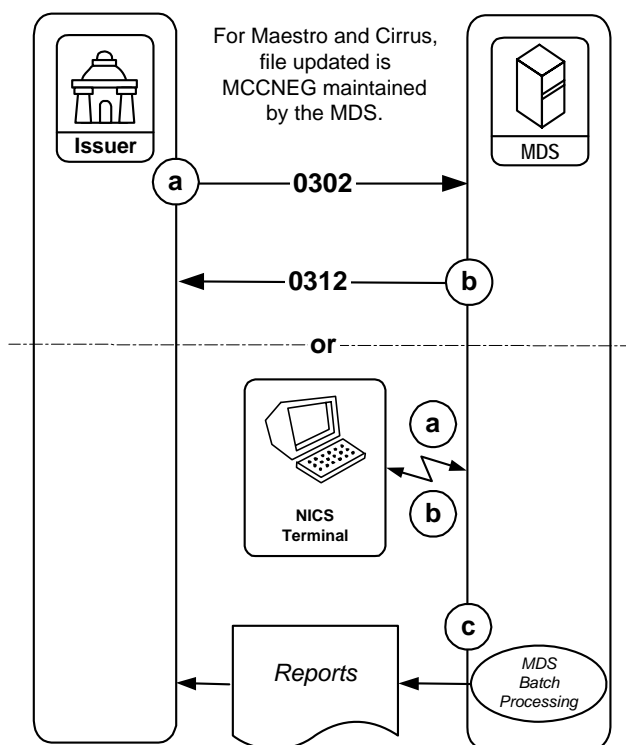
The sequence of events:

- Issuers send File Update Request/0302 messages from their OLTP systems or from their NICS™ terminals. When issuers send file updates from their OLTP systems, the File Update Request/0302 message is sent to the MDS online interface. When issuers send file updates from a NICS™ terminal, the file update request information is in an internal message format (IMF), but contains the same essential data as the File Update Request/0302 message.
- The MDS receives the File Update Request/0302 message through its file update processing facility, which passes the 0302 message to AMS.
- AMS responds to the File Update Request/0302 message with a File Update Request Response/0312 message.
- The MDS returns the response to the issuer.
 - For the OLTP connection, the issuer will receive a File Update Request Response/0312 message.
 - For the NICS™ connection, the issuer will obtain a screen image update reflecting the response. (The MDS sends an IMF message, which contains the File Update Request Response/0312 message data, to the terminal).

- e. Before sending the response to the issuer, the update processing facility logs the completed transaction data. From this update log file, the MDS batch processing facility generates update reports and makes them available to the issuer. These reports indicate to the issuer all the file updates that have been processed both through OLTP and NICS™.

Figure 4.2 shows how the file update process works for the Cirrus and Maestro negative card files, which the MDS maintains on behalf of the issuer.

Figure 4.2—File Update/03xx Message Flow, Case 2—Maestro and Cirrus



In this case, the issuer is updating the negative file that contains card numbers for which transactions should not be accepted. The name of this file is MCCNEG. The MDS maintains and reads this file for Stand-In authorization of financial requests. These updates apply to Maestro and Cirrus transactions only.

Figure 4.2 shows two separate paths: number one originating from the issuer's online transaction processing (OLTP) system and the other from the NICS™ terminal by the issuer or issuer's authorized personnel.

The sequence of events:

- a. The File Update Request/0302 message is sent to the MDS from the OLTP system. From the NICS™ terminal, the file update request information is in an internal message format (IMF), but contains the same essential data as the File Update Request/0302 message.
- b. The MDS receives the File Update Request/0302 message through its file update processing facility, which updates the MCCNEG file. Then the MDS returns a response to the issuer.
 - For the OLTP connection, the issuer will receive a File Update Request Response/0312 message.
 - For the NICS™ connection, the issuer will obtain a screen image update reflecting the response. (The MDS sends an IMF message, which contains the File Update Request Response/0312 data, to the terminal.)
- c. Before sending the response to the issuer, the update processing facility logs the completed transaction data. From this update log file, the MDS batch processing facility generates update reports and makes them available to the issuer. These reports indicate to the issuer all the file updates that have been processed through both OLTP and NICS™.



Note

For a complete message flow diagram for Online File Update Processing messages, refer to the [MDS Online Specifications](#).

File Update Messages

An update request with the file name of MCC102 will update the MasterCard Account File. This functionality is available to debit MasterCard issuers. The MCC102 update request is equivalent to the existing functionality in NICS under the **MasterCard Debit Hotcard Facility** option on the transaction menu.

An update request with the file name of MCC103 will update the MasterCard Account Management File, also referred to as, the Electronic Warning Bulletin file. This functionality is available to debit MasterCard issuers. The MCC103 update request is equivalent to the existing functionality in NICS under the **MasterCard Debit Hotcard Facility** option on the transaction menu.

All updates to the MasterCard Account Management File are copied into the MasterCard Account File. If the desired result is to have a card listed on both the Account Management and Account files, only a MCC103 request may be necessary. Each issuer must analyze the timing of the updates to these files.

An update request with the file name of MCCNEG will update the MDS negative card file. The MCCNEG update request is equivalent to the existing functionality in NICS under the **Stand-In Negative Card Facility** option on the transaction menu. This functionality is available to debit MasterCard, Maestro, and Cirrus issuers that participate in the MDS Stand-In program.

Both the MCC102 and MCC103 update requests, if completed successfully, will automatically generate a MCCNEG update for any issuer that participates in the MDS stand-in program.

The information required in Record Data (DE 120) is dependent on the type of file update requested. [Table 4.3](#) outlines the data element structure for DE 120 for each update request file name.

An issuer may initiate an Online File Update request by sending an Issuer Advice/0302 message based on the filename (DE 101) and the File Update Code (DE 91). The valid values for DE 101 are MCC102, MCC103, and MCCNEG and the valid File Update Codes in DE 91 are listed in [Table 4.3](#)—Valid Values for DE 101 and DE 91

Data Element Impacts

[Table 4.3](#) lists the valid values for DE 101 and the valid File Update Codes for DE 91.

Table 4.3—Valid Values for DE 101 and DE 91

DE 101 File Name	DE 91 File Update code
MCC102 (Account File)	1 add record
	2 change record
	3 delete record
	5 inquiry
MCC103 (Account Management File)	1 add/change record
	3 delete record
MCCNEG (MDS Stand-In Negative File)	1 add record
	2 change record
	3 delete record
	5 inquiry

File Update messages may originate from the issuer's online transaction processing system or from the issuer or the issuer's authorized representative through NICS.

Both the MCC102 and MCC103 update requests, if completed successfully, will automatically generate a MCCNEG update for any issuer that participates in the MDS Stand-In program.

The information required in the DE 120 depends on the type of file update requested. [Table 4.4](#) outlines the data element structure for DE 120 for each update request file name.

Table 4.4—Message Type 0302 DE 120 Structure for MCC102

Account File MCC102 DE 120 (Note: Only PAN and Issuer ICA are required for delete or inquiry requests)			
Subelement	Position	Attribute	Description
PAN	1-19	n-19	Primary account number (PAN) to be updated by this request
Issuer ICA	20-25	n-6	MasterCard assigned member ID
Entry Reason	26	an-1	Must be one of the following codes: P Capture card S Stolen card O Other V VIP C Credit L Lost X Counterfeit F Fraud G Gold U Unauthorized use
Date Last Update	27-32	mmddyy	Returned in inquiry, ignored on add, update, and delete
Time Last Update	33-36	hhmm	Returned in inquiry, ignored on add, update, and delete
PIN Length	37-38	n-2	Always has a value of "00"
VIP Limit	39-50	n-12	Amount, whole dollars. Zero except for Entry Reason = V

Account File MCC102 DE 120
(Note: Only PAN and Issuer ICA are required for delete or inquiry requests)

Subelement	Position	Attribute	Description
VIP Currency Code	51-53	n-3	Currency code for VIP, only valid for Entry Reason = V

Table 4.5—Message Type 0302 DE 120 Structure for MCC 103

Account Management File MCC103 DE 120
(Note: Only PAN and Issuer ICA are required for delete requests)

Subelement	Position	Attribute	Description
PAN	1-19	n-19	Primary account number to be updated by this request
Issuer ICA	20-25	n-6	MasterCard assigned member ID.
Card Program	26-28	an-3	Must be one of the following codes: <ul style="list-style-type: none"> MCB MasterCard Corporate card MCC Mixed BIN MCD Debit MasterCard MCF MasterCard Corporate Fleet card MCG Gold MasterCard Corporate Purchasing card MCP MasterCard Corporate Purchasing card MCS MasterCard Standard card MCW World MasterCard card MNS Non-standard MPL Platinum MasterCard card OTH Other
Response Code	29-30	n-2	Value is "04", capture card
Entry Reason	31	an-1	Must be one of the following codes: <ul style="list-style-type: none"> C Credit X Counterfeit O Other F Fraud
Filler	32-56	an-25	Reserved for future AMS enhancements

Account Management File MCC103 DE 120
(Note: Only PAN and Issuer ICA are required for delete requests)

Subelement	Position	Attribute	Description
Regional Information			Nonpositional, may occur up to six times in ascending order
Indicator	57	an-1	Valid regions are: 1 United States A Canada B Caribbean, Central America, Mexico and South America C Asia/Pacific D Europe E Middle East/Africa
Purge Date	58-63	yymmdd	The member-requested purge date

Table 4.6—Message Type 0302 DE 120 Structure for MCCNEG

MDS Stand-In Negative File MCCNEG DE 120
(Note: Only PAN and Issuer ICA are required for delete or inquiry requests)

Subelement	Position	Attribute	Description
PAN	1-19	n-19	Primary account number to be updated by this request
Issuer ICA	20-25	n-6	MasterCard assigned member ID
Capture Code	26	an-1	Y(es) or N(o), indicates whether to capture the card
Entry Reason	27	an-1	Must be one of the following codes: P Capture card S Stolen card O Other L Lost X Counterfeit F Fraud U Unauthorized use

MDS Stand-In Negative File MCCNEG DE 120
(Note: Only PAN and Issuer ICA are required for delete or inquiry requests)

Subelement	Position	Attribute	Description
Purge Date	28–33	yymmdd	The member-requested purge date. If not included, the MDS calculates a purge date 180 days from the date of the account listing.

The reason code “G” for an MCC102 update request should be used for mixed bank identification numbers (BINs), which do not have a specific BIN range defined as a Gold MasterCard card account range. If an issuer has established a Gold MasterCard card range, any account added to the Account File within the range will be deleted automatically to avoid any duplicate file record charges.

For any MCC103 update request with a reason code of “X”, the purge date will be updated to 60 days from the date of the update request, regardless of the date sent by the issuer.

Table 4.7 describes the format of the File Update Request Response/0312 message:

Table 4.7—File Update Request Response/0312

No.	Data Element Name	Org	Sys	Dst	Comments
-	Message Type Identifier (MTI)	M	P	M	Value must be 0312 ^a
-	Bit Map, Primary	M	P	M	Mandatory
1	Bit Map, Secondary	M	P	M	Mandatory
2	Primary Account Number (PAN)	M	P	M	Contains the primary account number to be listed
7	Transmission Date and Time	M	P	M	The transmission date and time expressed in Universal Time (UT)
11	System Trace Audit Number	M	P	M	Transaction trace number that must have a unique value for each transaction initiator within each UT day
33	Forwarding Institution Identification Code	M	P	M	Contains the MasterCard customer ID number, which identifies the entity to which this file update action applies
39	Response Code	M	P	M	Indicates whether the file update was completed successfully

No.	Data Element Name	Org	Sys	Dst	Comments
44	Additional Response Data	C	X	C	Provides additional information in the event of a format error
63	Network Data	M	P	M	Banknet reference number
91	File Update Code	M	P	M	File function code; value same as in 0302 request
96	Message Security Code	C	P	C	File update password or security code; value same as in 0302 request
101	File Name	M	P	M	Name of the updated file; value same as in 0302 request
120	Record Data	M	P	M	Used to return file inquiry and reject records associated with reject responses
122	Additional Record Data	C	P	C	A free-form field used to return additional data for some requests. Refer to Chapter 4 of the MDS Online Specifications Manual for a detailed record description and valid values of DE 122.
126	Switch Private Data	M	P	M	Must contain the same value from the original request message.
127	Private Data	O	X	C	Available for private use by the message originator. The data does not pass through the MDS. The MDS returns this data to the request/advice message originator (with contents intact) in any subsequent response message.

^a File update response messages originate at the MasterCard Account Management System or, in the case of MDS Stand-In, from the MDS. The responses ultimately are returned to the issuer.

For MCC102 add, change, or delete requests, DE 120 in the File Update Request Response/0312 message will contain the same information as received in the File Update Request/0302 message. For a message MCC102 inquiry request, DE 120 of the File Update Response/0312 message will contain the full record on file for the cardholder account number requested.

For MCC103 add, change, and delete requests, DE 120 in the File Update Request Response/0312 message will contain the same information as received in the File Update Request/0302 message. For MCC103 add/change requests, Additional Record Data (DE 122) in the File Update Request Response/0312 message will contain the effective dates and purge dates for each region on file for the account.

**Note**

If an MCC103 add/change request is sent for a cardholder account number already on file, the information on file will be replaced with the contents of the add request.

For MCCNEG add, change, and delete requests, the File Update Request Response/0312 message echoes the information received in DE 120 of the File Update Request/0302 message. For MCCNEG inquiry requests, the File Update Request Response/0312 message will return the record on file in DE 120.

Table 4.8 contains valid response codes for the File Update Request Response 0312 message.

Table 4.8—Valid Response Codes

Response Code	Definition
00	Approved or completed successfully.
25	Unable to locate record on file (no action taken.).
27	File maintenance error.
30	Format error.
40	Requested function not supported.
96	System error.

Additional information may be provided in Additional Response Data (DE 44) if there is a format error in DE 120. Table 4.9 describes the values that may be present in DE 44.

Table 4.9—DE 44 Error Codes

Error Code	Error Message
120001	This code has one of the following meanings: <ul style="list-style-type: none">• PAN is not numeric• BIN in PAN is not numeric• BIN does not belong to message initiator• Check digit of PAN is incorrect• PAN is not on the Account file

Error Code	Error Message
120002	Entry reason is not one of the following: P, L, S, X, O, F, V, G, C, U
120005	PIN length is not numeric or spaces
120006	Entry reason V and VIP limit is not numeric

Table 4.10—Message Type 0312 Data Element 122 Structure

Subelement	Position	Attribute	Description
Regional data on file			Nonpositional, may occur up to six times in ascending order.
Indicator	1	an-1	Valid regions are: 1 United States A Canada B Caribbean, Central America, Mexico and South America C Asia/Pacific D Europe E South Asia/Middle East/Africa
Effective Date	2-7	yymmdd	Effective date of the listing within this region.
Purge Date	8-13	yymmdd	Purge date of the regional listing.

Table 4.11 describes impacts to data elements for 03XX messages that will be required to support this service.

Table 4.11—Data Element Impacts

No.	Data Element Name	Comments
2	Primary Account Number (PAN)	Mandatory for this service
7	Transmission Date and Time	Mandatory for this service
11	System Trace Audit Number	Mandatory for this service
33	Forwarding Institution Identification Code	Mandatory for this service

No.	Data Element Name	Comments
91	File Update Code	Mandatory for this service. Contains the MasterCard customer ID number that identifies the entity to which this file update action applies.
96	Message Security Code	Conditional for this service. File update password or security code that may be required to enable the file update.
101	File Name	Mandatory for this service. Name of the file to be updated.
120	Record Data	Mandatory for this service. Contains record location for file update action, and if file add or change, contains new or changed data.
126	Switch Private Data	Must contain the same value from the original request message
127	Processor Private Data	Private use data element. Available for the message initiator's optional use.

Testing Requirements

In preparation for migrating to production, minimum testing requirements must be met during the testing phase.

Simulator and online testing must include all variations of the 03XX request, such as approved, negative response situations, and report receipt.

Offline simulator testing must be performed using the MDS Debit Financial Simulator. The results of the test must be submitted to the Customer Implementation Service specialist for review and approval.

Table 4.12 contains a list of items that should be considered when planning for this service.

Table 4.12—Service Testing Considerations

Preparing for Service Implementation	Comments
Estimate Costs	Standard testing costs will apply to Online File Update testing.
Establish a schedule	Online testing must be scheduled at least five business days in advance, after simulator testing is complete and after trace files are approved.
Simulator Testing	Ensure that you have the correct version of the MasterCard Debit Financial Simulator.

Table 4.13 contains a list of testing requirements that are necessary before implementing this service.

Table 4.13—Testing Requirements

Testing Items	Comments
Simulator Testing	Complete and accurate trace files must be submitted at least seven business days before online testing is scheduled to begin. The Customer Implementation Services specialist must approve the results of the simulator testing.
Forms	No forms are required for this service.
Schedule Testing	Online testing must be scheduled at least five business days in advance, after simulator testing is complete, and after trace files are approved. A minimum of one session will be required for this project. This allows the completion of current day transactions, and review of reports.
Online Testing	Online testing will be performed with a Customer Implementation Services test analyst or specialist. Standard testing costs will apply to Online File Update testing.
Scripts	The Online File Update test scripts will be used to test this service with the MasterCard Debit Financial Simulator and online with the MasterCard Debit Test Facility.

Testing Items	Comments
Expected Results	The appropriate results must be generated as defined in the test scripts. A combination of approved and denied transactions must be used for this project. The customer must be able to reconcile all transactions with their internal system, (for online testing only).
Testing complete	The Customer Implementation Services specialist will provide a completion letter to the customer when the project is complete and ready for production implementation. The Customer Implementation Services specialist will contact the customer to schedule a production implementation date.

Implementation

The Customer Implementation Services specialist and the customer will schedule a production implementation date at least 10 business days in advance.

After implementation of this service, the Customer Implementation Services specialist will monitor the production performance for 30 days.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

- [MasterCard Debit Financial Simulator](#)
- [MDS Online Specifications](#)
- [MDS Programs and Services](#)
- [NICS Users' Guide](#)

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5

Debit ISIS

This chapter documents the implementation of Debit ISIS for customers and processor host systems.

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Overview

This chapter documents the implementation of Debit ISIS for MasterCard customers and processors. The MasterCard Debit ISIS functionality allows its customers and processors to settle in their own desired settlement rates within their own desired currency. It is also possible to implement Debit ISIS for multiple settlement currencies within a country.

[Table 5.1](#) indicates the products and roles that may participate in this service.

Table 5.1—Product Impact

Product Impacted	Acquirer	Issuer
MasterCard	NA	Y
Cirrus	Y	Y
Maestro	Y	Y
Debit MasterCard	N	Y



Note

For ISIS related to MasterCard Acquirer and non-PIN based transactions for MasterCard Issuer, please refer to the [Customer Interface Specifications](#) manual.

Customers are required to send a letter or e-mail to their Customer Implementation Services specialist authorizing initiation of this service.

Potential Customer Impact

Table 5.2 contains a list of possible impacts that to be considered by the customer. This list of changes is not complete; there may be additional changes necessary for your environment.

Customer/processors participating in debit ISIS must ensure that their host is capable of handling value of 2 in subelement 3 of DE 63. In addition, customers must ensure that they can accept the same values of DE 49 and DE 50 for all ISIS branded transactions.

Customer must enhance their reconciliation systems to process the balance, the SWCHD363 Daily Control report balances to the net settlement amount in the GCMS Fee Collection/1740 miscellaneous records in the T112 file.



Note

Please note that the MDS provides settlement amounts in batch files and not in online messages.

Table 5.2—Potential Customer Impact

Area of Impact	Changes (Y/N)	Comments
Reports	Y	SWCHD363 Daily Control report and the T112 file
NICS Forms	Y	YES – ISIS agreement code on the FIT and IDF forms
Known lead times	Y	For a new country entering an ISIS agreement, the minimum lead-time to implement is 30 days.
Prerequisites	Y	Customers must fulfill treasury requirements and successfully reconcile with the settlement created by online testing.
Potential Customer Considerations	Y	
Files Types	N	T112, T458, T461, T462, T464, and T470
Hardware	N	None
Potential procedural changes	Y	Customers may need to enhance their back office systems to perform reconciliation for settlement for ISIS and non-ISIS transactions.

Customer/processors participating in debit ISIS are required to maintain an account in the ISIS settlement bank in the local settlement currency of ISIS. Movement of funds for all ISIS transactions will occur via the account.

All ISIS exception item processing can be done through NICS™ or online.

Technical Description

The MasterCard ISIS functionality grants its customers the freedom to choose their own settlement currency and settlement rates. The Debit ISIS supports multiple ISIS settlement currencies within a country. It does not allow inter country settlement at this time. Debit ISIS is only applicable to MasterCard branded products.

MasterCard customers (issuers and acquirers) within a country need to select a local settlement bank where all participating customers and/or processors will need to have a local account. In addition, they would need to determine the settlement rates and settlement currency.

MasterCard Debit Switch will include the settlement rates in the system once the criteria discussed above, are complete. All participating customers would need to have a valid ICA set up in GCMS for settlement to occur.

ISIS transactions are branded by the MDS as ISIS by using position 3 in DE 63 as 2 and by using the same currency code in DE 49 and DE 50 in the online message. All participating issuers and acquirers are required to support the following changes in the DE 63, DE 49, and DE 50 in the online messages.

To facilitate the branding of the online messages, the IDF (Institution Definition file) and the FIT (Financial institution Table) will be set up in NICS™ as ISIS. The ISIS determination flag is the 4-digit ISIS agreement code on the IDF and FIT forms. The code starts with the letter C followed by the 3-digit numeric settlement currency code.

Debit ISIS reports (Batch)

To assist our customers with reconciliation of ISIS transactions, MasterCard provides a SWCHD363 report for all our debit customers. The report is a summary report for all ISIS transactions settled under a processor. The daily report consists of financial information pertaining to the settlement day.

For downstream customers underneath a processor, routing and transit numbers break down the SWCHD363 report. For further details on the SWCHD363 report, please refer to the [MDS Settlement and Reports](#) manual.

Data Element Impacts

This program affects the following data elements:

Requirements for Data Element 49

The currency code, Transaction (DE 49) is the local currency of the source location of the transaction. The MDS uses it to specify the currency used in Amount, Transaction (DE 4). For all ISIS transactions, the currency value of DE 49 is equal to the currency value of DE 50.

Requirements for Data Element 50

The currency code, Settlement (DE 50) is the currency code determining the settlement currency. For all ISIS branded transactions, settlement currency in DE 50 is equal to the transaction currency in DE 49.

Requirements for Data Element 63, Sub-element 2

[Table 5.3](#) documents the format of DE 63. For all ISIS branded transactions, position 3 of DE 63 will have a value of 2. The MDS switch adds the value. Participating issuer and acquirers are required accept value of 2 in position 3 in the online messages. For additional information, refer to the [MDS Online Specifications](#) manual.

Table 5.3—Security Text DE 63, sub-element 2

Subfield	Length	Definition
Financial network code	2 bytes	Identifies the financial bank card product associated with the transaction. MC MasterCard CI Cirrus® MS Maestro® MD MasterCard® debit card PL Plus® VI VISA

Subfield	Length	Definition
Interchange Rate Indicator	1 bytes	<p>Identifies the transaction as domestic (within the U.S.A. and Canada), International (Asia Pacific, Europe, Latin America and the Caribbean and Middle East/Africa), or intra-currency (within a country where an ISIS agreement is in effect).</p> <p>0 U.S. and Canada Regions</p> <p>1 Asia Pacific, Europe, Latin America and the Caribbean, and Middle East/Africa Regions</p> <p>2 Intracurrency (ISIS)</p>
Network Reference Number	9 bytes	A unique transaction identification number (switch serial number) generated (or assigned) by the MDS.
Banknet Reference Number	9 bytes	A unique transaction identifier assigned to Debit MasterCard authorizations and is present in both Financial Transaction/0200 Authorization and Financial Transaction Advice/0220 Clearing messages. Only present in Debit MasterCard transactions.
Acquirer's reference number	23 bytes	A unique identifier assigned by the acquirer of Debit MasterCard transactions. Only present in debit MasterCard 0220 clearing messages
GCMS Processing Date and Cycle Number	5 bytes	<p>Contains the Global Clearing Management System's business processing date and cycle number (pds0158 subfield 5 and subfield 6 of the GCMS 1240 message).</p> <p>Only present in debit MasterCard 0220 advice messages (Valid value; mmdd# where # = cycle number)</p>

Testing Requirements

To prepare for migration to production, customers must perform minimum requirements during the testing phase.

Participating customers and the MasterCard Treasury department must approve ISIS settlement rates before testing initiates.

Simulator testing is required for all ISIS projects. Customer must set up the simulator as an acquirer or issuer in their local currency by overwriting the values of DE 50 in the simulator configuration to match DE 49. In addition, customers will be required to change the value of DE 63 position 3 to a 2.

Online testing for all ISIS projects is a mandate. Customers/processors must submit the following debit test forms 10 business days prior to the test date.

- PIQ
- IDF
- IRT
- Key exchange form
- IFF2 form

[Table 5.4](#) contains a list of items for consideration when planning for this service.

Table 5.4—Service Testing Considerations

Preparing for Service Implementation	Comments
Estimate Costs	Standard testing costs will apply to Debit ISIS testing.
Establish a schedule	Schedule online testing at least 5 business days in advance, after simulator testing is complete and trace files are approved.
Simulator Testing	Ensure correct version of the MasterCard Credit Simulator.

[Table 5.5](#) contains a list of testing requirements that are necessary before implementing this service.

Table 5.5—Testing Requirements

Testing Items	Comments
Simulator Testing	Submit complete and accurate trace files at least seven business days before online testing is to begin. The Customer Implementation Services specialist must approve results of the simulator testing.
Forms	Debit test forms (PIQ, IDF, IRT, IFF2, and key exchange forms) are required 10 business days in advance.
Schedule Testing	Schedule online testing at least five business days in advance, after simulator testing is complete and trace files are approved.
Online Testing	Online testing will be performed with a Customer Implementation Services test analyst or specialist. Standard testing costs will apply to Debit ISIS testing.
Online Message	For all ISIS branded transactions, DE 63 position 3 will have a value of 2 and DE 49 and DE 50 will have similar currency values.
Settlement	All customer/processors are required to download and process the batch reports in the Debit test files. A written confirmation will be required stating successful reconciliation with the Debit files and the GCMS T120 file.
Scripts	The online transactions following transactions from Debit ISIS test scripts will be used to test this service with the MasterCard Credit Simulator and online with the MasterCard Debit Test Facility.
Expected Results	The appropriate results must be generated as defined in the test scripts. For this project, the customer must perform a combination of approved and denied transactions. The customer must be able to reconcile all transactions with their internal system, (for online testing only).
Testing complete	The Customer Implementation Services specialist will provide a completion letter to the customer when the project is complete and ready for production implementation. The Customer Implementation Services specialist will contact the customer to schedule a production implementation date.

Implementation

The Customer Implementation Services specialist and the customer will coordinate a production implementation date.

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After implementation of this service, the Customer Implementation Services specialist will monitor the production performance for 30 days.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

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- [*MasterCard Debit Financial Simulator*](#)
- [*MDS Online Specifications*](#)
- [*MDS Settlement and Reports*](#)

6

Member Level Settlement

This chapter documents the implementation Member Level Settlement for customers and processor host systems.

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Overview

This chapter describes the Member Level Settlement (MLS) product offered by the MasterCard. MLS allows the MasterCard Debit Switch to settle Debit transactions to the acquirer and issuer at the ICA level instead of the processors level.

This chapter will list the technical and implementation requirements.

[Table 6.1](#) indicates the products and roles that may participate in this service.

Table 6.1—Product Impact

Product Impacted	Acquirer	Issuer
MasterCard	N	N
Cirrus	Y	Y
Maestro	Y	Y
Debit MasterCard	N	N

Customers are required to send a letter or e-mail to their Customer Implementation Services specialist authorizing initiation of this service.

Technical Description

Processors that have multiple customers processing behind them have the option of having settlement at an ICA level rather than at a processor level. This service is beneficial for processors that do not want to take the financial responsibility of settlement for their down stream customers.

MDS settlement reports and the raw data file are sent at a processor level but the GCMS net settlement amount is sent at an individual ICA level. This service is only available for Customers that participate in GCMS Clearing. Each individual customer needs to be set up in GCMS for clearing with a valid ICA.

Each customer will be set up with a unique routing and transit number. The ICA will be embedded in the format of the routing and transit number for settlement to occur.

Batch Impacts

MDS provides a SWCHD363 Daily Control report to the processor. This report will be broken down at a routing and transit number level. This is a summary level report providing data for all individual down stream routing and transit numbers. Individual ICAs are embedded in the routing and transit number. This report lists ISIS transaction information, and ISIS settlement information at an individual customer.

For further details regarding the SWCHD363 Daily Control report, please refer to the [MDS Settlement and Reports](#) manual.

Data Element Impacts

There are no new data elements with the implementation of MLS. For settlement to occur correctly at a customer/ICA level, it is important for the right Routing and Transit number to be present in DE 32 in the online acquiring message from the processor.

[Table 6.2](#) outlines the potential customer impacts. For further details please contact your local MasterCard representative.

Table 6.2—Potential Customer Impact

Area of Impact	Changes (Y/N)	Comments
Reports	Y	SWCHD363 report and the T112 file. MLS Processors will get a SWCHD363 report which will provide transaction summary break up at an ICA level. The T112 GCMS file will be created for each individual downstream ICA. This file will contain net settlement amount for that ICA.
NICS Forms	Y	YES – IDF and the PIQ – Indicate the routing and transit number and settlement type of 8 on the PDF.
Known lead times	Y	30 days from the time testing is completed and all paperwork is received.
Prerequisites	Y	All ICA paperwork needs to be completed before downstream customers can be implemented. Testing with the new settlement type needs to be completed.
Potential Customer Considerations	Y	Changes to the routing and transit number and new settlement report called the SWCHD363.

Area of Impact	Changes (Y/N)	Comments
Files Types	N	None
Hardware	N	None
Potential procedural changes	Y	Customers may need to enhance their back office systems to perform reconciliation for settlement for MLS

Potential Customer Impact

This section outlines a list of possible impacts that should be considered by the customer. It should not be considered as a complete list of changes that may be necessary for your environment.

Online message

Member Level Settlement (MLS) does not require the use of any new data elements. In the online message the most crucial is the use of the correct Routing and transit number in DE 32.

If an existing live processor plans to implement MLS then all the existing routing and transit numbers will have to be reconfigured to meet the MLS requirements.

MLS routing and transit numbers are configured the following way:

0000ICAX—Where ICA is the 6-digit valid ICA and X is the check digit. The similar type of routing and transit number configuration is used for both acquiring and issuing. Processors must know their individual customer's routing and transit number to apply it correctly to the online message and to process the settlement reports.

Reconciliation

Processors that implement MLS must be able to reconcile with the SWCHD363 Daily Control report. This report will be broken down at an institution level (routing and transit number). Processors may use the data from this report to settle with their down stream customers. Even though MDS will provide the processor with the reports and bulk files, settlement will occur at an ICA level. This product enables the processor to process transactions but financially settle at an individual customer level. MDS will not provide any settlement report to the individual downstream ICA for reconciliation purposes. It is the responsibility of the processor to provide the information to the downstream ICAs.

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MLS/ISIS

Processors implementing MLS can also participate in ISIS agreements. ISIS flags will be set up at the Institution and Routing number level. Settlement of ISIS transactions will occur at the Customer level (Routing and Transit) not at the processor level. ISIS transactions will be reported at a summary level at the settlement ICA level rather than at a processor level. The SWCHD363 Daily Control report contains ISIS and non-ISIS transactions.

For further details regarding the SWCHD363 report, refer to the [MDS Settlement and Reports](#) manual.

Testing Requirements

In preparation for migrating to production, minimum requirements must be performed during the testing phase.

Table 6.3 contains a list of items that should be considered when planning for this service.

Table 6.3—Service Testing Considerations

Preparing for Service Implementation	Comments
Estimate Costs	Standard testing costs will apply to MLS testing.
Legal paperwork	All customers must have a valid ICA and settlement accounts.
Establish a schedule	Online testing must be scheduled at least 5 business days in advance, after simulator testing is complete and trace files are approved.
Simulator Testing	Ensure correct version of the MasterCard Debit Simulator.

Debit Forms:

Participating customers must provide the following Debit forms to their Customer Implementation Services specialist. These forms are required for online testing and for implementation purposes.

Table 6.4 outlines the Debit forms required.

Table 6.4—Required Debit Forms

Debit Form	Required (Y/N)	Comments
Processor Information Questionnaire (PIQ)	Y	
Institution Routing and Transit (IRT)	Y	For Issuing customers only
Institution Definition Form (IDF)	Y	
Issuer Functionality Form (IFF)	Y	For Issuing customers only
Acquirer Functionality Form (AFF)	Y	For acquiring customers only
Stand-In Parameter Profile	N	

Table 6.5 contains a list of testing requirements that are necessary before implementing this service.

Table 6.5—Testing Requirements

Testing Items	Comments
Simulator Testing	Complete and accurate trace files must be submitted at least 5 business days before online testing is scheduled to begin. The Customer Implementation Services specialist must approve results of the simulator testing.
Forms	Debit test forms (PIQ, IDF, IRT, IFF2 and key exchange forms) are required 10 business days in advance.
Schedule Testing	Online testing must be scheduled at least 5 business days in advance, after simulator testing is complete and trace files are approved.
Online Testing	Online testing will be performed with a Customer Implementation Services test analyst or specialist. Standard testing costs will apply to Debit MLS testing.
Online Message	No change in online message
Settlement	All customer/processors are required to download and process the batch reports in the T767 and T768 Debit test files. A written confirmation will be required stating successful reconciliation with the Debit files and the GCMS T120 file.
Scripts	The online transactions following transactions from Debit MLS test scripts will be used to test this service with the MasterCard Debit Simulator and online with the MasterCard Debit Test Facility.
Expected Results	The appropriate results must be generated as defined in the test scripts. A combination of approved and denied transactions must be performed for this project. The customer must be able to reconcile all transactions with their internal system, (for online testing only).
Testing complete	The Customer Implementation Services specialist will provide a completion letter to the customer when the project is complete and ready for production implementation. The Customer Implementation Services specialist will contact the customer to schedule a production implementation date.

Implementation

The Customer Implementation Services specialist and the customer will schedule a production implementation date at least 10 business days in advance for new customers entering an existing ISIS agreement.

For new ISIS agreements, implementation date can only be scheduled after the receipt of all legal documentation by MasterCard Treasury department. The lead time on a new ISIS settlement currency implementation is 30 calendar days.

After implementation of this service, the Customer Implementation Services specialist will monitor the production performance for 30 days.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

- *[GCMS Reference Manual](#)*
- *[MasterCard Debit Financial Simulator](#)*
- *[MDS Online Specifications](#)*
- *[MDS Settlement and Reports](#)*

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Payment Transactions

This chapter documents the implementation of Payment Transactions for customers and processor host systems.

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Overview

With the explosive growth of electronic commerce, MasterCard® Debit Switch (MDS) now provides payment transactions that support the payment service provider industry fulfilling the consumer-to-consumer, consumer-to-business, and business-to-business transfer of funds. Payment service providers serve as the payment intermediary between the buyer and seller, as the broker of e-payments and are responsible for ensuring the effective transfer of funds.

The MDS Payment Transactions project supports non-face-to-face payment methods. Following are examples of non-face-to-face payment methods:

- Tax Refunds
- Payments resulting from Internet auction
- Money transfer services facilitated by an intermediary
- Money transfers between two cardholders (person-to-person)

Payment Transactions

When the transfer of funds occur between a seller and a buyer, two transactions normally are required:

- “From” transactions
- “To” transactions

“From” Transactions

The “From” transaction (also known as “Load” transaction) is not initiated by the issuer but by the intermediary and goes from the buyer/buyer’s issuer to the third-party service intermediary. The “From” transaction enables the buyer to use a debit or credit card to transfer funds to an account established by the intermediary, PayPal for example. The “From” transaction is currently permitted by MasterCard rules.

“To” Transactions

The “To” transaction is initiated by the intermediary to transfer funds to the seller/seller’s issuer. The intermediary typically notifies the seller by e-mail to advise the seller that a funds transfer is pending. In the current environment, sellers can elect to receive the payment as a paper check, the payment can be applied to the seller’s intermediary account, or the funds can be transferred to a checking account by an Automated Clearing House (ACH) credit. eMoneyMail also currently supports a payment applied as a credit to a Visa credit card.

A payment transaction credits the issuer while debiting the acquirer.

Potential Customer Impact

[Table 7.1](#) indicates the products that may be impacted by payment transactions and the entities that participate in payment transactions.

Table 7.1—Product Impact

Product Impact	Acquirer	Issuer
Cirrus	N/A	Y
Maestro	N/A	Y
Debit MasterCard	N/A	Y

[Table 7.2](#) lists possible impacts that the issuer should consider. The following list may not be a complete list of the changes necessary for the individual issuer environment to use payment transactions:

Table 7.2—Potential Customer Impact

Area of Impact	Changes (Y/N)	Comments
Reports	Y	Payment Transaction activity will appear on the following reports: <ul style="list-style-type: none">• Daily Control Report (SWCHD363)• Transaction Interchange Month-to-Date (SWCHM03)
NICS™	N	None

Area of Impact	Changes (Y/N)	Comments
Known lead times	Y	Support for this service is not mandatory. Implementation of this service will be a minimum of five weeks.
Prerequisites	Y	U.S. Only
Potential customer considerations	Y	The customer's system must have the ability to process transactions that will be a credit for the cardholder account.
File types	N	None
Hardware	N	None
Potential procedural changes	Y	The customer must have the ability to incorporate the new 28xxxx processing codes.

Technical Specifications

Payment transactions include the use of DE 3 (Processing Code). DE 3 contains three subfields that identify the transaction is a payment transaction and identifies the "From" and "To" account types. Only valid combinations of DE 3 subelements are allowed.

DE 3 Processing Code

DE 3 (Processing Code) describes the effect of a transaction on the customer account and the type of accounts affected. Following are the attributes of DE 3:

Attributes	
Length of Length Field:	N/A
Data Representation:	n-6
Data Field:	Contents of subfields 1-3
Subfields:	3
Justification:	See "Subfields"

Subfield 1—Cardholder Transaction Type Code

Subfield 1 (Cardholder Transaction Type Code) describes the specific transaction type.

Attributes	
Data Representation:	n-2
Data Field:	Contents of positions 1-2
Justification:	N/A

Values	
Cardholder Account Debits	
00	Purchase
01	Withdrawal
02	Debit Adjustment (debit MasterCard only)
17	Cash Disbursement (can be sent to 0100 issuers)
20	Refund/correction
21	Deposit
23	Check Deposit Guarantee (debit MasterCard only)
28	Payment Transaction
30	Balance Inquiry
40	Account Transfer (U.S. to U.S. only)
50	Bill Payment
90	Electronic Commerce (Cardholder Certificate Request)

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Subfield 2—Cardholder “From Account” Type Code

Subfield 2 (Cardholder “From Account” Type Code) describes the cardholder account type affected for cardholder account debits and inquiries and the “from account” type for cardholder account transfer transactions.

Attributes	
Data Representation:	n-2
Data Field:	Contents of positions 3–4
Justification:	N/A
Values	
Cardholder “From Account” Type Code	
00	Default Account (account not specified or not applicable)
10	Savings Account
20	Checking Account
30	Credit Card Account

Subfield 3—Cardholder “To Account” Type Code

Subfield 3 (Cardholder “To Account” Type Code) describes the cardholder account type affected for cardholder account credits and the “to account” type for cardholder account transfer transactions.

Attributes	
Data Representation:	n-2
Data Field:	Contents of positions 5–6
Justification:	N/A
Values	
Cardholder “To Account” Type Code	
00	Default Account (account not specified or not applicable)
10	Savings Account
20	Checking Account
30	Credit Card Account

Payment Transaction Processing Codes

DE 3 Processing Code must contain a valid combination of subfield 1, subfield 2, and subfield 3. These processing codes apply to Cirrus, Maestro, and Debit MasterCard. [Table 7.3](#) lists the valid combinations for payment transaction processing codes:

Table 7.3—Payment transaction processing codes

Processing Code	Account Description
280000	Payment to No Account Specified (NAS)
280010	Payment to Savings Account
280020	Payment to Checking
280030	Payment to Credit Account

Payment Transaction Application Notes

Following are specific application notes associated with payment transactions:

For Debit MasterCard requests, DE 48 contains the TCC code P that supports payment transactions. Cirrus and Maestro does not contain the TCC in DE 48 in subsequent messages.

- Payment transactions have the following two Merchant Category Codes (MCC) assigned to it:
 - 6532 = Payment Transaction Provider–Member Financial Institution–Payment Transaction
 - 6533 = Payment Transaction Provider–Merchant–Payment transaction
- The acquirer will be responsible for authenticating the cardholder; therefore, payment transactions may not contain DE 52 (PIN data).
- Payment transactions may not contain full, unaltered DE 35 (Track 2 data) because the physical card is not used in the transaction.
- Payment transactions will be logged and settled per the normal MDS processing flows as a credit to the issuer and a debit to the acquirer.
- In an attempt to manage risk, acquirers are not allowed to submit same-day reversals using an Acquirer Reversal Advice/0420 message for payment transactions. For acquirers who submit a same-day reversal using an Acquirer Reversal Advice/0420 message, the MDS will respond with the reason code 12 (Invalid Transaction).

- For Debit MasterCard transactions AVS, CVC1, and CVC2 is not supported for Payment Transactions.
- MasterCard Debit Payment interchange and fees will be processed as they are today. The interchange amount will be paid by the acquirer to the issuer.

Testing Requirements

Customers are required to send a letter or email to their Customer Implementation Services specialist authorizing initiation of this service.

Issuers must complete Integration and Acceptance testing with the MDS for this value-added product. All standard requirements for time frames, telecommunications test time, MIP software (if necessary), and database requirements apply.

MasterCard has created specific test scripts for Payment Transactions. There are scripts that can be tailored to address the issuers processing environment.

For Acceptance testing issuers:

- Must test for acceptance of the 80-byte or 250-byte Batch Data File, if not already supported.
- Must test their ability to accept Financial Transaction Advice/0220 message store-and-forward (SAF) interleaving, if not already supported.
- Issuers may elect to update the Exception File using the File Update Request/0302 message.

In preparation for migrating to production, minimum testing requirements must be met during the testing phase.

Table 7.4 contains a list of testing requirements that are necessary before implementing this service.

Table 7.4—Testing Requirements

Testing Items	Comments
Simulator Testing	Simulator testing is required for this service. Complete and accurate trace files must be submitted at least seven business days before online testing is scheduled to begin. The Customer Implementation Services specialist must approve the results of the simulator testing.
Forms	An Institution Routing Form (IRT) form must be submitted for each BIN that will support this service.
Schedule Testing	Online testing must be scheduled at least five business days in advance, after simulator testing is complete, and after trace files are approved. A minimum of one session will be required for this project. This allows the completion of current day transactions, and review of reports.
Scripts	The Payment Transaction test scripts will be used to test this service offline with the MasterCard Debit Financial Simulator and online with the MasterCard Debit Test Facility.
Reports	Payments transactions will appear on the SWCHD363, Daily Control and SWCHM03, Transaction Interchange Month-to-Date reports.
Expected Results	The appropriate results must be generated as defined in the test scripts. A combination of approved and denied transactions must be used for this project. The customer must be able to reconcile all transactions with their internal system, (for online testing only).
Testing complete	The Customer Implementation Services specialist will provide a completion letter to the customer when the project is complete and ready for production implementation. The Customer Implementation Services specialists will contact the customer to schedule a production implementation date.

Implementation

The Customer Implementation Services specialist and the customer will schedule a production implementation date at least 10 business days in advance.

After implementation of this service, the Customer Implementation Services specialist will monitor the production performance for 30 days.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

- [*MasterCard Debit Financial Simulator*](#)
- [*MDS Online Specifications*](#)
- [*MDS Programs and Services*](#)
- [*MDS Settlement and Reports*](#)

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8

MasterCard Debit Switch Stand-In Processing

This chapter documents the Stand-In processing for issuers who are connected to the MasterCard Debit Switch.

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Overview

The MasterCard Debit Switch (MDS) has the ability to provide Stand-In processing for issuers connected to the MDS. Issuers using Stand-In processing will be able to provide account access to their cardholders when their system is unavailable.

The MDS provides Stand-In processing when the issuer's host processor is unavailable or has timed out. The MDS provides this service 24 hours a day, 365 days a year. MDS Stand-In processing supports Maestro and Cirrus transactions.

All U.S. region issuers must support Stand-In processing for all Maestro purchase transactions. Participation in the Stand-In service is mandatory at the transaction level for those issuers in the U.S. region who support Maestro purchase transactions. Additionally, U.S. region issuers must support a ten second timeout value.

Automated Teller Machine (ATM) and purchase transactions processed using Financial Transaction Request/0200 messages are eligible for MDS Stand-In processing. This service is strongly recommended for ATM transactions in addition to Maestro purchase transactions.

Potential Customer Impact

Stand-In processing can assist the issuer in meeting the mandated debit issuer performance standards. A failure to meet these standards could result in sanctions. The MDS can provide authorizations based on issuer-defined parameters for transactions that would otherwise have been declined when the issuer is unavailable or times out.

MasterCard Debit Switch Stand-In Processing

Potential Customer Impact

MDS Stand-In processing guarantees cardholders satisfaction at the Point-of-Interaction (POI). If the issuer's authorization system is unavailable, cardholders are able to receive service. Issuer-provided parameters, counts, and amounts will be the basis for authorizations. Personal identification number (PIN) verification, if selected can be performed to provide the final layer of security. The service will decrease the impact on cardholders during the following situations:

- Scheduled maintenance
- System outages
- Government mandated shut-downs
- Breakdown on in-country communications
- Authorization center not operational

MasterCard has developed additional reports and enhanced existing reports to provide statistics on improved performance and to allow issuers to track the number of approved transactions that otherwise would have been denied.

Online Message

MDS Stand-In processing supports Maestro and Cirrus transactions processed using the MDS ISO 8583 formats.

- Issuers must support store-and-forward (SAF) interleaving. The MDS interleaves maintenance and transaction level Stand-In completions with normal online authorization request. This occurs once the processor has reestablished communications with the MDS. Receipt of maintenance and transaction level Stand-In processed items sent as online interleaved Financial Transaction Advice/0220 messages are optional at the BIN level.
- Stand-In processing declines balance inquiry requests with DE 39 (Response Code), value 91 (Destination processor [CPS or INF] not available).
- Stand-In processing supports transfers, if supported; however, transfers do not affect the Velocity File daily maximums for counts and amount.
- Stand-In processing supports preauthorization transactions for Maestro. The Velocity File is adjusted accordingly upon receipt of the pre-authorization completion.

- Issuers may update the Negative Card Facility and VIP Card Facility by sending File Update Request/0302 messages if supported.
- PIN verification is available but optional to issuers that encode the PIN offset on the magnetic stripe of the card.
- Timer value will be set at 10 seconds.

Batch

Issuers participating in MDS Stand-In processing must support the 80-byte or the 250-byte Batch Data File.

Reconciliation

MasterCard encourages issuers to develop a program to convert the Batch Data File records for posting to the cardholder's account when SAF is not available (for example, during disaster recovery or emergency Stand-In processing).

Technical Description

Stand-In Processing Functionality

Stand-In processing may be invoked through several means. Depending upon selected processing parameters, the MDS will begin Stand-In processing under the following circumstances:

- MDS does not receive a response within the prescribed time limit of 10 seconds for a purchase transaction and 15 seconds for an ATM transaction.
- Processor transmits a Network Management Request/0800 message indicating that the MDS should be Stand-In processing. This service will cease upon receipt of a Network Management Request/0800 message indicating that the processor is back online.

If the issuer is not logged off, the MDS will continue to send the Network Management Request/0800 message to the issuer during Stand-In processing to determine the issuer's availability to receive online authorization requests. If the issuer is logged off, the MDS will Stand-In without sending the Network Management Request/0800 message.

Except in cases of prolonged outages, when communications resume (the issuer responds to the Network Management/0800 message), the MDS will forward Stand-In transactions as Financial Transaction Advice/0220 messages interleaved with the online authorization request messages. Issuers that experience prolonged outages will receive their transactions in their Batch Data File.

If the issuer does not respond to the MDS within the allotted time frame of 10 seconds for purchase transactions or 15 seconds for ATM transactions, the MDS will provide an authorization based upon the options selected by the processor and the parameters defined in the prefix table and exception file (VIP account limits and negative accounts).

The receipt of online Stand-In messages (from SAF) by the issuer is optional at the prefix level. However, all transactions will be included in the Auto-reconciliation File.

If an issuer elects to have the MDS perform PIN validation during Stand-In processing, the processor must forward PIN validation keys to the MDS. The “MDS Stand-In Processing: PIN Processing Profile and Key Mailer” form should be completed and forwarded as indicated in the form procedures.

Stand-In Levels

The MDS will perform Stand-In processing according to the options selected by processors. One or more of the following three Stand-In options below may be selected:

- **Transaction**—If the issuer processor system does not respond within the allotted timeframe, the MDS will perform Stand-In processing based on the option selected by the processor. Once communications have returned, the MDS will forward Stand-In transactions from SAF as Financial Transaction Request/0200 messages interleaved with online transactions.
- **Maintenance**—Upon receipt of a Network Management Request/0800 maintenance sign-off from the processor, the MDS would begin Stand-In processing. When the MDS receives the next Network Management Request/0800 message, the MDS will immediately discontinue Stand-In processing. All transactions for which the MDS performed Stand-In processing will be sent to the issuer as Financial Transaction Advice/0220 messages interleaved with online transactions.

- **Disaster Recovery**—In the event of a disaster, the processor must notify the MDS Network Monitoring department stating “a down disaster condition exists”. With approval from the appropriate MDS personnel, the MDS will begin Stand-In processing for the prefixes with Stand-In parameters defined. Stand-In processing would continue until communications are resumed with the issuer processor system (IPS). Transactions would then be forwarded to the issuer processor in “postable” auto reconciliation records. SAF will not be available.
- **Emergency**—As a courtesy, in case of an emergency (for example, if a processor's data center is damaged), the MDS will enable Stand-In processing immediately for processors who have not selected any of the options listed above and has not had any prior Stand-In testing. The processor must notify the MDS Network Monitoring department stating “a down disaster condition exists.” With approval from the appropriate MDS personnel the MDS will begin Stand-In processing. The emergency parameter will allow the MDS to Stand-In based on the following system defaults:
 - No PIN checking will be performed
 - Limits will be set in USD currency
 - Online store-and-forward not available
 - Usage counts allowed will be three ATM and three POS transactions
 - No card capture will be performed
 - No expiration date checking
 - No Account Specified (NAS) will default to checking (DDA)
 - Amount limits will be set to USD 100 per transaction not to exceed a total of USD 300

Stand-In Parameters

Stand-In parameters may be set at the following levels:

- **Processor Level**—Stand-In currency amounts and velocity counts can be set at a default processor level for both ATM and purchase transactions. The default daily limit and usage amounts would apply to all prefixes associated with the processor. The minimum requirements for purchase transactions are:
 - Purchase Daily Limit: USD 250
 - Purchase Daily Usage: 3 transactions
- **Prefix Level**—Stand-In currency amounts and velocity counts can be set at a default processor level for both ATM and purchase transactions. The minimum requirements for purchase transactions are:
 - Purchase Daily Limit: USD 250
 - Purchase Daily Usage: 3 transactions
- **Mixed Level**—Processors may choose to have Stand-In currency amounts and velocity counts set at a default processor level for some prefixes, and at the prefix level for other prefixes. These parameters can be configured for both ATM and purchase transactions. The minimum requirements for purchase transactions are:
 - Purchase Daily Limit: USD 250
 - Purchase Daily Usage: 3 transactions
- Issuers may set limits as an aggregate amount, or usage and dollar amounts.
- **Other parameter options are:**
 - Expiration date checking
 - Card capture
 - Account default (checking, savings, credit)
 - Store-and-forward (SAF) online receipt
 - Wish to receive SAF denials online
 - Number of allowable PIN tries before a “PIN tries exceeded” message is generated
- PIN verification is optional

Velocity File

The MDS uses the Velocity File to keep track of transaction types and usage amounts for each calendar day. The Velocity file will contain a count of all transactions approved by Stand-In processing, with the exception of transfers. This file will track usage amounts on a daily basis. Counts will be reset at 00:00 (Midnight) Eastern time.

POS pre-authorization will update the counts and amounts fields in the Velocity file. Upon receipt of the POS pre-authorization completion, the Velocity file will be adjusted according. If the system does not receive a completion, the Velocity file will not be adjusted.

The following information applies to issuers using the Velocity file:

- Issuers can access the Velocity file by using NICS. For additional information, refer to the [NICS Users' Guide](#).
- Issuers can view Stand-In processing activity at the account level by accessing the Velocity file lookup menu.
- Issuers can perform Read (F2) and Read Next (F6) functions by entering the desired PAN.
- Issuers have read-only access to the cardholder activity.

Exception File

This file contains both negative card and VIP card records. Issuers can access this file to set dollar limits for individual VIP accounts. These limits will be in local currency as defined by Stand-In limit currency code and implied decimal fields. Using NICS, issuers can access the Exception file from one of two screens:

- VIP Card Facility
- Negative Card Facility

Issuers may submit the initial entries to the Exception file on tape (only submit by tape one time). Issuers should make the initial entries using the File Update Request/0302 message. Subsequent entries to the file must be made using NICS or the File Update Request/0302 message. Tape entries to the Exception file will not be allowed after the initial file load. Issuers may add, inquire, delete, and modify Exception records using the File Update Request/0302 message).

The tape may be either reel or cartridge; cartridge is preferred. MasterCard will not return the tape/reel to issuers.

Issuers who elect to submit the initial entries to the Exception file should send the cartridge by courier to:

MasterCard International Incorporated
2200 MasterCard Boulevard
O'Fallon, MO 63368-7263
Attention: Stand-In Processing Project Manager

VIP Card Facility

The VIP Card Facility is a database requester on the MDS NICS platform that allows the issuer to establish higher withdrawal limits and usage counts for the individual VIP accounts. In addition:

- Authorized users have add, delete, update, read, and read next capabilities.
- Currency limits are set in local currency.
- Numeric currency code designated on the Stand-In limits screen of the BIN file.
- Limit currency code determines the local currency.
- VIP accounts have a default purge date of six months from the time the VIP record is added to the file.
- Issuers can access the VIP file using NICS. For additional information, refer to the *NICS Users' Guide*.
- Issuers can view Stand-In processing activity at the account level.
- Issuers may add, inquire, delete, and modify VIP records using the File Update Request/0302 message.

Negative Card Facility

The Negative Card Record screen contains all account numbers with a status of lost, stolen, counterfeit, fraud, pick-up, and unauthorized and includes VIP accounts. Authorized issuers have add, delete, read, update, and read next access.

Issuers can access the Negative File using NICS™. For additional information, refer to the *NICS Users' Guide*.

PIN Validation

If the MDS is to perform PIN validation during Stand-In processing, the issuer must provide PIN validation parameters and the PIN validation key(s). The MDS supports the following PIN validation methods:

- DES/IBM: for both natural PINs and issuer-select PINs
- ABA: for Issuer-select PINs

The following guidelines apply:

- MDS performs PIN validation based on the offset encoded on Track 2
- MDS does not support PIN validation from offsets submitted on a tape file
- MDS cannot support PIN validation for issuers who allow their cardholders to change their PINs and Track 2 data is not rewritten

The issuer must courier the production PIN validation key component(s) encrypted under their production communication key as well as the check value(s) for the clear key(s).

Do not send the PIN validation key components in the clear key.

The issuer enters the PIN validation keys for each prefix as encrypted values. The MDS system will decrypt the component under the processor's communication key and re-encrypt it under the MDS master file key. The PIN validation key components will appear, encrypted, on the sixth screen of each prefix contained in the FIT file on NICS™.

If the issuer behind a processor performs their own PIN validation, the issuer must provide the PIN validation key(s) to the processor to be encrypted under the processor's communication key.

Stand-In Processing Reports

The MDS generates reports when an issuer adds or deletes an entry in the VIP or Hot card file. Reports also are generated when Stand-In processing is invoked at the MDS.

Following is the list of MDS Stand-In reports:

- Daily Stand-In Transaction Audit Report (SWCHD149)
- Daily Exception Audit Report (SWCHD53)
- Daily Exception File Report (SWCHD147)
- Daily Processing Summary (SWCHD61)
- Month-to-Date Processing Summary Report (SWCHM06)

For report information, refer to the [*MDS Settlement and Reports*](#) manual.

Testing

Issuers must complete Integration and Acceptance testing with the MDS for this value-added product. All standard requirements for time frames, telecommunications test time, MIP software (if necessary), and database requirements apply.

MasterCard has created specific test scripts for Stand-In-In processing. There are generic scripts that can be tailored to address the issuer's processing environment.

In preparation for migrating to production, minimum testing requirements must be met during the testing phase.

The following table contains a list of testing requirements that are necessary before implementing this service. For participating issuers:

Table 8.1—Testing Requirements

Testing Items	Comments
Simulator Testing	Not applicable.
Forms	<p>To indicate BINs for Stand-In processing, issuers must complete the Institution Routing Table Form.</p> <p>If the MDS is to perform PIN validation during Stand-In, issuers must complete the “MDS Stand-In Processing: PIN Processing Profile and Key Mailer” form.</p> <p>To establish or change Stand-In parameters, issuers must complete the MDS Stand-In Processing Parameter Setup Form.</p>
Schedule Testing	Online testing must be scheduled at least ten business days in advance.
Testing Costs	Standard testing costs will apply to Stand-In processing testing.
Online Message	<p>Online Acceptance testing will be performed with a CIS test analyst or consultant. Acceptance testing issuers:</p> <ul style="list-style-type: none"> • Must test for acceptance of the 80-byte or 250-byte batch data file, if not already supported • Must test their ability to accept Financial Transaction/0220 message SAF interleaving, if not already supported • May elect to update the Exception file using MDS NICS database facility or by sending a File Update Message/0302 message
Settlement	The issuer should verify that the stand advices post to the customer account files. The issuer also should balance to the MDS reconciliation reports.
Test Scripts	MasterCard has created specific test scripts for Stand-In processing. There are generic scripts that can be tailored to address the issuer’s processing environment.
Reports	The issuer should review the Stand-In reports defined under the “Stand-In Reports” subsection of this document.
Expected Results	<p>Issuers must confirm their ability to:</p> <ul style="list-style-type: none"> • Process the 80-byte or 250-byte Batch Data File • Accept Financial Transaction/0220 message SAF interleaving • Update the Exception File if using the online File Update Request/0302 message.

MasterCard Debit Switch Stand-In Processing Implementation

Testing Items	Comments
Testing complete	The Customer Implementation Services specialist will provide a completion letter to the customer when the project is complete and ready for production implementation. The Customer Implementation Services specialist will contact the customer to schedule a production implementation date.
Number of Test Session	At least one test session is required for this service.

Members are required to send a letter, e-mail, or Banknet Service Request form to Customer Implementation Services authorizing initiation of this project.

The Customer Implementation Services consultant will provide a completion letter to the member when the project is complete and ready for production implementation.

Issuers who elect to submit the initial entries to the Exception File should send the cartridge by courier to:

MasterCard International Incorporated
2200 MasterCard Boulevard
O'Fallon, MO 63368-7263
Attention: Stand-In Processing Project Manager

Implementation

A Customer Implementation Services specialist and the issuer will schedule a production implementation date.

A Customer Implementation Services specialist will monitor the production performance for 30 days after migration to production.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

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- [*GCMS Reference Manual*](#)
- [*MDS Online Specifications*](#)
- [*MasterCard Debit Financial Simulator*](#)
- [*MDS Settlement and Reports*](#)

9

ATM Deposit Sharing

This chapter documents the ATM Deposit Sharing service for Processors who are connected to the MasterCard Debit Switch.

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Overview

Many member financial institutions that accept deposits at their ATMs accept them only from their own cardholders. With the implementation of the MasterCard Debit Switch (MDS) ATM Deposit Sharing enhancement, Cirrus and Maestro members in the U.S. region may choose to accept and to process deposits submitted at another members' ATMs within the same state and across states to the extent permitted by banking regulations.

Potential Customer Impact

ATM deposit transactions are allowed if both the issuer and acquirer involved in the transaction are signed up with MasterCard.

By allowing deposits to be made at Cirrus ATMs, members can offer a wider range of services to their customers. Members must comply with the ATM deposit sharing rules contained in the [Cirrus Worldwide Operating Rules](#) manual.

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Acquirer

An acquirer may choose to participate in the shared deposit service offered by MasterCard. However, if an acquirer deploys ATMs that participate in any other shared deposit service, those ATMs must also participate in the shared deposit service offered by MasterCard.

An acquirer may make only his terminals available for participation in the MasterCard Shared Deposit Service. However, an acquirer that elects to participate in the MasterCard Shared Deposit Service as an issuer must designate its BINs and terminals that participate in other shared deposit service(s) for participation in the MasterCard Shared Deposit Service.

Issuer

If an issuer elects to take part in the shared deposit service offered by MasterCard, then that issuer must designate its BINs and terminals that participate in any other shared deposit service for participation in the MasterCard Shared Deposit Service. Issuers may activate deposits on any or all of their bank identification numbers (BINs).

Batch

Members participating in MDS ATM Deposit Sharing service must support the 250-byte Batch Data File and the new 80-byte FIT Data File.

The new 80-byte FIT Data File contains the associated state code in the 'State Code' field. Acquirers can use this field to determine if the issuer is located in a state that allows deposits to be completed in the acquirer's state.

Reconciliation

Processors who implement ATM Deposit Sharing must be able to reconcile with the SWCHD363, Daily Control report, SWCHD412 Daily Interchange report, and SWCHD53 Exception Audit reports.

Technical Description

The section describes the following:

- Deposit Transaction Processing
- NICS Exception Item Processing
- Member Reports

Deposit Transaction Processing

MasterCard has added a new transaction code of 21 for processing deposits. This code is valid for the following messages:

- Financial Transaction Request/0200
- Financial Transaction Request Response/0210
- Financial Transaction Advice/0220
- Financial Transaction Advice Response/0230
- Acquirer Reversal Advice/0420
- Issuer Reversal Advice/0422
- Acquirer Reversal Advice Response/0430
- Issuer Reversal Advice Response/0432

To ensure that all participants in a deposit transaction are eligible to participate, MasterCard will provide the following edits:

- If either the issuer or acquirer involved in a deposit transaction does not support ATM Deposit Sharing, MasterCard will reject the transaction with an ISO response code of '12' (Invalid Transaction).
- MasterCard will reject transactions that do not contain a personal identification number (PIN) or that do not specify a checking or savings account.

NICS Exception Item Processing

MasterCard permits acquirers to process adjustments because of deposit errors or returned items. Adjustments for deposited items have a value of 490 in Data Element (DE) 60 (Advice Reason Code), Subelement 1. To support deposit errors, the following six advice detail codes (subelement 2) for adjustment transactions:

- 24–Empty Deposit Envelope
- 25–Error in Addition
- 26–Error in Settlement
- 27–Customer Keyed Wrong Amount
- 28–Non-cash Item Deposited (documentation via MasterCom required)
- 29–Foreign/Counterfeit Currency Deposited

To support returned items, the following advice detail code (subelement 2) is used:

- 20–Returned Item (documentation via MasterCom is required)

MasterCard does not permit chargebacks on original transactions. Issuers may process a chargeback on the acquirer adjustment if applicable. For these chargebacks, issuers should use a value of 489 in DE 60, subelement 1 and a value of 30 (Cardholder Disputed Amount) in subelement 2.

The NICS adjustment screen contains an 'Additional Data' field for comments to allow acquirers to provide additional information pertaining to the adjustment or chargeback. The Exception Audit Report (SWCHD53) also provides additional data.

Member Reports

The MDS modified the following reports to support ATM Shared Deposits:

- Daily Exception Audit Report (SWCHD53)—This report contains the standard detail information for exception items on deposits.
- Daily Transaction Audit Report: 2 lines (SWCHD57)—The format of the report remains the same but the report displays the deposit processing code of '21XXX' for deposit transactions
- Daily Transaction Audit Report: 1 line (SWCHD108)—The format of the report remains the same but the report displays the deposit processing code of '21XXX' for deposit transactions
- Daily Control Report (SWCHD363)—This report identifies totals for deposits to savings accounts as 'Deposit to SAV' and totals for deposits to demand deposit (checking) accounts as 'Deposits to DDA'. This report includes a grand total line for deposits.
- Monthly Control Report (SWCHM363)—This report identifies totals for deposits to savings accounts as 'Deposit to SAV' and totals for deposits to demand deposit (checking) accounts as 'Deposits to DDA'. This report includes a grand total line for deposits.
- Daily Interchange Report (SWCHD412)—This report includes interchange calculated on savings and checking deposit transactions.
- Monthly Interchange Report (SWCHM412)—This report includes interchange calculated on savings and checking deposit transactions.

Testing

To participate in the ATM Sharing Deposit service, members must successfully complete testing. All standard requirements for time frames, telecommunications test time, MIP software (if necessary), and database requirements apply.

MasterCard has created specific test scripts for ATM Deposit Sharing.

[Table 9.1](#) contains a list of testing requirements that are necessary before implementing this service.

Table 9.1—Testing Requirements

Testing Items	Comments
Simulator Testing	Simulator testing is required. Simulator trace files must be approved by a CIS test analyst or consultant before scheduling online testing.
Forms	To indicate BINs for ATM Deposit Sharing, issuers must complete the Institution Routing Table Form. To indicate acquirers for ATM Deposit Sharing, acquirers must complete the Institution Definition Form.
Schedule Testing	Online testing must be scheduled at least ten business days in advance.
Testing Costs	Standard testing costs will apply to ATM Deposit Sharing testing.
Online Message	Online Acceptance testing will be performed with a CIS test analyst or consultant. The following online messages are tested using the new transaction code of 21 for processing deposits: <ul style="list-style-type: none"> • Financial Transaction Request/0200 • Financial Transaction Request Response/0210 • Financial Transaction Advice/0220 • Financial Transaction Advice Response/0230 • Acquirer Reversal Advice/0420 • Issuer Reversal Advice/0422 • Acquirer Reversal Advice Response/0430 • Issuer Reversal Advice Response/0432
Settlement	Issuers and acquirers should balance to the MDS reconciliation reports.

ATM Deposit Sharing

Testing

Testing Items	Comments
Test Scripts	MasterCard has created specific test scripts for ATM Deposit Sharing.
Reports	The issuer should review the reports detailing ATM Deposit Sharing transactions defined under the “Member Reports” subsection of this document.
Expected Results	<p>Issuers and acquirers must confirm their ability to process the new transaction code of 21 for deposit transactions for the following messages:</p> <ul style="list-style-type: none">• Financial Transaction Request/0200• Financial Transaction Request Response/0210• Financial Transaction Advice/0220• Financial Transaction Advice Response/0230• Acquirer Reversal Advice/0420• Issuer Reversal Advice/0422• Acquirer Reversal Advice Response/0430• Issuer Reversal Advice Response/0432
Expected Results	<p>Issuers and acquirers must confirm their ability to process the following new advice detail codes for deposit adjustment transactions:</p> <ul style="list-style-type: none">• 24–Returned Item (documentation via MasterCom required)• 24–Empty Deposit Envelope• 25–Error in Addition• 26–Error in Settlement• 27–Customer Keyed Wrong Amount• 28–Non-cash Item Deposited (documentation via MasterCom required)• 29–Foreign/Counterfeit Currency Deposited• 30–Cardholder Disputed Amount
Testing Complete	The Customer Implementation Services specialist will provide a completion letter to the member when the project is complete and ready for production implementation. The Customer Implementation Services specialist will contact the customer to schedule a production implementation date.
Number of Test Session	At least two test sessions are required for the ATM Deposit Sharing service.

Members are required to send a letter, e-mail, or Banknet Service Request form to Customer Implementation Services authorizing initiation of this project.

The Customer Implementation Services specialist will provide a completion letter to the member when the project is complete and ready for production implementation.

Implementation

A Customer Implementation Services specialist and the processor will coordinate a production implementation date.

A Customer Implementation Services specialist will monitor the production performance for 30 days after migration to production.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

- [*MDS Online Specifications*](#)
- [*MasterCard Debit Financial Simulator*](#)
- [*MDS Settlement and Reports*](#)
- [*MDS Programs and Services*](#)
- [*NICS Users' Guide*](#)
- [*Cirrus Worldwide Operating Rules*](#)
- [*Chargeback Guide*](#)

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10

Cross Border Acquiring

This chapter documents the cross border acquiring for Processors who are connected to the MasterCard Debit Switch.

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Overview

A cross-border transaction refers to any transaction on a MasterCard branded credit or debit card processed through GCMS or MDS in which the cardholder country code differs from the country code of the merchant. New values will be inserted in Batch Data file, online financial messages and NICS™ to support this enhancement.



Note

For details on cross border acquiring, refer to the [MDS Online Specifications manual](#).

Potential Customer Impact

The following sections describe:

- Cross Border Acquiring
- Online Impact
- Batch Impact
- Technical Description

Cross Border Acquiring

The scope of Cross Border Acquiring is to determine cross border assessments and rebates. In order for a transaction to qualify for cross border, the country in the Reg E data (DE 43) will need to be different from the bin country (in the FIT record). If equal, then transaction does not qualify for cross border. Once a transaction is qualified for cross border, transaction currency in DE 49 will be compared to the currency of the merchant's country to determine if currency conversion took place. The logic is if these values are equal then currency conversion did not take place and if not equal, then currency conversion took place.

New values will be inserted in Batch Data file and online financial messages. For online messages, DE 126 position 14 will have the cross border flag and position 15 will contain the currency indicator flag. This enhancement will impact the customers currently receiving DE 126 and the customers who want to receive this data element in the future. For batch, impact is only for 250 byte batch files.

To receive cross border and currency indicators in DE 126 of the online messages, issuers, acquirers, and processors must test with MasterCard. Testing is optional for processors already receiving DE 126. Batch testing is optional for processors already receiving 250-byte batch file.

Table 10.1 indicates the products that may be impacted by Cross Border Acquiring.

Table 10.1—Product Impact

Product Impact	Acquirer	Issuer
Cirrus	Yes	Yes
Maestro	Yes	Yes
Debit MasterCard	No	Yes
MasterCard	No	Yes

Table 10.2 lists possible impacts that the members should consider. The following list may not be a complete listing of the changes necessary for the individual processor environment to use for cross border acquiring:

Table 10.2—Potential Customer Impact

Area of Impact	Changes (Y/N)	Comments
Online	Yes	Online messages (see Online Impact section of this document)
Batch	Yes	250 byte batch file (see Batch Impact section of this document)
NICS™	Yes	Yes

Online Impact

Data Element Impact

The following section describes the online data element impacts for cross border acquiring.

Data Element 126

Data element 126 positions 14 and 15 contain the following new values that are required for cross border acquiring. [Table 10.3](#) contains all of the valid values for DE 126 sub-field 14 and 15.

Table 10.3—DE 126, Position 14 and 15 changes

Subfield	Position	Attribute	Value
Cross Border Indicator	14	ans-1	Y or N
Cross Border Currency Indicator	15	ans-1	X, Y, or N

Refer to the [MDS Online Specifications](#) manual for further details regarding DE 126.

Batch Impact

[Table 10.4](#) shows that 250 byte batch files will be impacted by this enhancement. The 250 batch file contains the Cross Border Indicator and Currency Indicator respectively in the following records:

- Positions 217 and 218 in the Financial (FREC)/Non-Financial (NREC) record
- Positions 241 and 242 in the Financial/Non-Financial (EREC) record

Table 10.4—Batch Impact

Description	Position	ISO DE #	Attribute	Values
<i>Financial (FREC)/Non-Financial (NREC) record</i>				
Cross Border Indicator	217	126 (position 14)	1a	Y or N
Cross Border Currency Indicator	218	126 (position 15)	1a	X, Y, or N
<i>Financial/Non-Financial (EREC) record</i>				
Cross Border Indicator	241	126 (position 14)	1a	Y or N
Cross Border Currency Indicator	242	126 (position 15)	1a	X, Y, or N

Refer to the [MDS Settlement and Reports](#) manual for further details regarding the 250 byte batch files.

Technical Description

Once MDS determines both the cross border and the currency indicator flags in an online request message, it will send the cross border indicator, in DE 126, subfield 02, to the issuer in the Financial Transaction Request/0200 message and the Financial Transaction Advice/0220. It will send the cross border indicator, in DE 126, subfield 02, to the acquirer in the Financial Transaction Request Response/0210. It will also send the cross border indicator in the batch data file to both issuers and acquirers in the FREC / NREC records. MCBS will assess the cross border fees and rebates.

Testing

To receive cross border and currency indicators in DE 126 of the online messages, issuers, acquirers, and processors must test with MasterCard. Testing is optional for processors already receiving DE 126. Batch testing is required for issuers, acquirers, and processors for 250-batch file. Testing is optional for processors already receiving 250-byte batch file. All standard requirements for time frames, telecommunications test time, MIP software (if necessary), and database requirements apply.

[Table 10.5](#) contains a list of testing requirements that are necessary before implementing this service.

Table 10.5—Testing Requirements

Testing Items	Comments
Simulator Testing	Simulator testing is required. Simulator trace files must be approved by a Customer Implementation Services test analyst or consultant before scheduling online testing.
Forms	None
Schedule Testing	Online testing must be scheduled at least ten business days in advance.
Testing Costs	Standard testing costs will apply to Cross Border Acquiring

Testing Items	Comments
Online Message	<p>Online Acceptance testing will be performed with a Customer Implementation Services test analyst or consultant. The following online messages are tested for Cross-Border Acquiring:</p> <ul style="list-style-type: none"> • Financial Transaction Request/0200 • Financial Transaction Request Response/0210 • Financial Transaction Advice/0220 • Financial Transaction Advice Response/0230 • Acquirer Reversal Advice/0420 • Issuer Reversal Advice/0422 • Acquirer Reversal Advice Response/0430 • Issuer Reversal Advice Response/0432
Settlement	Issuers and acquirers should balance to the MCBS cross border billing events.
Test Scripts	MasterCard has created specific test scripts for Cross Border Acquiring
Reports	Acquirers and issuers should review the reports detailing Cross Border Acquiring activity.
Expected Results	Issuers and acquirers must confirm their ability to process Data Element 126 in online transactions for all online messages:
Testing Complete	The Customer Implementation Services specialist will provide a completion letter to the member when the project is complete and ready for production implementation. The Customer Implementation Services specialist will contact the customer to schedule a production implementation date.
Number of Test Session	At least one test session is required for cross border acquiring.

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Members are required to send a letter, e-mail, or Banknet Service Request form to Customer Implementation Services authorizing initiation of this project.

The Customer Implementation Services specialist will provide a completion letter to the member when the project is complete and ready for production implementation.

Implementation

A Customer Implementation Services specialist and the processor will coordinate a production implementation date.

A Customer Implementation Services specialist will monitor the production performance for 30 days after migration to production.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

- [*MDS Online Specifications*](#)
- [*MasterCard Debit Financial Simulator*](#)
- [*MDS Settlement and Reports*](#)

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11

Debit MasterCard Intracurrency

This chapter documents the implementation of Debit MasterCard ISIS for customers and processor host systems.

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Overview

This chapter outlines the implementation procedures for debit MasterCard ISIS. MasterCard Debit Switch (MDS) has made changes to their internal processing code that will allow customers to issue debit MasterCard internationally and settle ISIS.

[Table 11.1](#) indicates the products and roles for acquirers and issuers that may participate in this service.

Table 11.1—Product Impact

Product Impacted	Acquirer	Issuer
MasterCard	NA	Y
Cirrus	N/A	N/A
Maestro	N/A	N/A
Debit MasterCard	N/A	Y



Note

For ISIS related transactions to MasterCard acquirer and non-PIN-based transactions for MasterCard issuer, refer to the [Customer Interface Specifications](#) manual.

Customers are required to send a letter or email to their Customer Implementation Services specialist authorizing initiation of this service.

Potential Customer Impact

[Table 11.2](#) contains a list of possible impacts that should be considered by the customer. It should not be considered a complete list of changes that may be necessary for your environment.

Customers/processors participating in debit ISIS must ensure that their host is capable of handling a value of 2 in sub element 3 of DE 63 (in the Financial Transaction Advice/0220 messages online). In addition, customers must ensure that they can accept the same values of DE 49 and DE 50 for all ISIS branded transactions.

Debit MasterCard Intracurrency

Potential Customer Impact

Customers must enhance their reconciliation systems to process the balance, and balance to the SWCHD363 Daily Control report to the net settlement amount in the GCMS records in the T112 file.



Note

Please note that the MDS does not provide settlement amounts in online messages. Settlement amounts are provided in the batch files.

Table 11.2—Potential Customer Impact

Area of Impact	Changes (Y/N)	Comments
Reports	Y	SWCHD363 Daily Control report
NICS™ forms	Y	YES – Necessary forms available on MasterCard OnLine® on the eService page under Business Forms.
Known lead times	Y	For a new country entering an ISIS agreement, the minimum lead time to implement is 30 days from the time all signed legal and treasury paperwork is received.
Prerequisite	Y	All requirements must be fulfilled with legal and Treasury. All testing should be completed successfully.
Potential Customer Consideration	Y	
File Types	N	T112, T458, T461, T462, T464 and T470.
Hardware	N	None
Potential procedural changes	Y	Customers may need to enhance their back office systems to perform reconciliation for settlement for ISIS and non ISIS transactions.

Customer/processors participating in debit ISIS are required to maintain an account in the ISIS settlement bank in the local settlement currency of ISIS.

Movement of funds for all ISIS transactions will occur via the local currency account established in the settlement bank.

All ISIS exception item processing can be done via NICS™ or online exception item processing.

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For more information on online exception item processing, refer to [Chapter 1](#) of this manual.

Technical Description

The MasterCard ISIS functionality grants its customers the freedom to choose their own settlement currency and settlement rates. Debit ISIS is designed to support multiple ISIS settlement currencies within a country. It does not allow inter country settlement at this time. Debit ISIS is only applicable to products bearing the MasterCard brand.

MasterCard customers (issuers and acquirers) within a country need to select a local settlement bank where all participating customers and/or processors will need to have a local account. In addition they would need to determine the settlement rates and settlement currency. The interchange rate can be selected in U.S. dollars and the MDS will do the conversion to the local currency of the ISIS agreement.

Once the above criteria have been fulfilled, MasterCard Debit Switch will include the settlement rates in the system. All participating customers would need to have a valid ICA set up in GCMS for settlement to occur.

Debit MasterCard activity for an issuer is settled between the issuer and acquirer during the MasterCard clearing and settlement process. The issuer's settlement amount is funded by the issuer's processor.

The processor settles with their issuer outside of the MasterCard system.

MasterCard sends Financial Transaction Advice/0220 Force post messages for each individual presentment message to the issuer reflecting the exact transaction settlement amount.

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Debit ISIS Reports (Batch)

To assist our customers with reconciliation of ISIS transactions, MasterCard provides a SWCHD363 Daily Control report for all our debit customers. This report provides a summary of all ISIS transactions settled under a processor. This report is provided daily and consists of financial information pertaining to the settlement day.

For downstream customers underneath a processor, the SWCHD363 report is broken down by settlement ICAs.

Refer to the [MDS Settlement and Reports](#) manual for more information about the SWCHD363 report

Online Impact

The following sections describe:

- Online Transaction Flows
- Clearing/Settlement Flows
- Exception Item Processing

Online Transaction Flow

The transaction will be acquired as an 0100 at a POS terminal without a pin. The transaction will be routed to MDS via Banknet. As the issuer is connected to the MDS, it will translate the 0100 pre authorization message to a 0200 pre authorization message and send it to the issuer for approval.



Note

At this stage there is no settlement or clearing, this is just a pre-authorization message.

The issuer will respond back with a Financial Transaction Request Response/0210 and MDS will then convert the message to a 0110 and send it back to the acquirer via Banknet. For an ISIS transaction, there will be no branding of the transaction as ISIS on the initial pre-authorization message. This message type will look just like a non-ISIS (International) transaction.

Clearing/Settlement Flow

Once the acquirer sends their clearing records (GCMS First Presentment /1240 messages), GCMS will process the records and settle with the issuer behind the debit processor. GCMS will send the 1240 messages to MDS and MDS who will create a force post message (0220) for each individual presentment message submitted by the acquirer.



Note

No GCMS Fee Collection/1740 messages will be sent.

The presentment will be branded ISIS in the clearing format (1240 message). MDS will then brand the 0220 message as ISIS by noting DE 63 third position as a 2. DE 49 and DE 50 will have the same currency value.

The 0220 message should be treated as a clearing message and is the indication that an issuer will get from MDS to clear the pre authorization and settle to the cardholder.

Issuers can get 0220 messages for all six clearing cycles depending on whether a presentment is presented from the acquirer for each cycle or not.

Exception Item Processing

All exception item processing will have to be processed via NICS™ or online. Refer to the Online Exception Item Processing chapter in this manual.

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Data Elements Impact

There is impact on the following data elements.

Requirements for Data Element 49

The currency code, Transaction (DE 49) is the local currency of the source location of the transaction. The MDS uses it to specify the currency used in Amount, Transaction (DE 4).

Requirements for Data Element 50

The currency code, Settlement (DE 50) is the currency code determining the settlement currency. For all ISIS branded transactions, settlement currency in DE 50 is equal to the transaction currency in DE 49.

Requirements for Data Element 63, Sub-element 2

For all ISIS branded transactions, position 3 of DE 63 will have a value of 2. The value is added by the MasterCard Debit Switch. Participating issuers and acquirers are required to accept a value of 2 in position 3 in the online messages.

For additional information, and for DE 63 format values, refer to the [MDS Online Specifications](#) manual.

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Testing Requirements

In preparation for migrating to production, minimum requirements must be performed during the testing phase.

ISIS settlement rates need to be approved by the participating customers and the MasterCard Treasury department before testing can be initiated.

Customers will be required to perform offline and online testing.

Online testing is mandated for all ISIS projects. Customers/processors will need to submit Debit test forms 10 business days prior to the test date. The Debit test forms will include PIQ, IDF, IRT, Key exchange form and IFF2 form.

Table 11.3 contains a list of items that should be considered when planning for this service.

Table 11.3—Service Testing Considerations

Preparing for Service Implementation	Comments
Estimate Costs	Standard testing costs will apply to Debit ISIS testing.
Establish Schedule	Online testing must be scheduled at least five business days in advance, after simulator testing is complete and trace files are approved.
Simulator Testing	Ensure correct version of the MasterCard Credit Simulator.

Table 11.4 contains a list of testing requirements that are necessary prior to implementing this service.

Table 11.4—Testing Requirements

Testing Items	Comments
Simulator Testing	Complete and accurate trace files must be submitted at least seven business days before online testing is scheduled to begin. The Customer Implementation Services specialist must approve results of the simulator testing.
Forms	Debit test forms (PIQ, IDF, IRT, IFF2 and key exchange forms) are required 10 business days in advance.
Schedule Testing	Online testing must be scheduled at least five business days in advance, after simulator testing is complete and trace files are approved.
Online Testing	Online testing will be performed with a Customer Implementation Services test analyst or specialist. Standard testing costs will apply to Debit ISIS testing.
Online Message	For all ISIS branded transactions, DE 63 position 3 will have a value of 2 and DE 49 and DE 50 will have similar currency values.
Settlement	All customer/processors are required to download and process the batch reports in the Debit test files. A written confirmation will be required stating successful reconciliation with the Debit files.

Testing Items	Comments
Scripts	The online transactions following transactions from Debit ISIS test scripts will be used to test this service with the MasterCard Credit Simulator and online with the MasterCard Debit Test Facility.
Expected Results	The appropriate results must be generated as defined in the test scripts. A combination of approved and denied transactions must be performed for this project. The customer must be able to reconcile all transactions with their internal system, (for online testing only).
Testing Complete	The Customer Implementation Services specialist will provide a completion letter to the customer when the project is complete and ready for production implementation. The Customer Implementation Services specialist will contact the customer to schedule a production implementation date.

Implementation

The Customer Implementation Services specialist and the customer will schedule a production implementation date at least 15 business days in advance. After implementation of this service, the Customer Implementation Services specialist will monitor the production performance for 30 days.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

- [MDS Online Specification Manual](#)
- [MasterCard Debit Financial Simulator](#)
- [MDS Settlement and Reports Manual](#)

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12

Partial Approval Processing

This chapter describes procedures for acquirers and issuers to implement, support and process a partial approval transaction.

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Overview

The partial approval feature will enable the issuer to indicate approval of a portion of the transaction amount submitted by the acquirer in the financial transaction request. In cases where the transaction amount is greater than the remaining balance on an account, this service will enable the card issuer to respond with a lower “approved” amount in the financial response message. This service will enable merchants and cardholders to successfully complete a higher percentage of purchases and to reduce the time spent at checkout when the cardholder uses a card with an available balance that is less than the transaction amount.

Acquirers will be able to indicate in the Financial Transaction Request/0200 request that the merchant terminal supports partial approvals. Upon receipt of the partial approval response, the terminal will prompt the participating merchant to initiate a split tender operation to procure the remainder of the transaction amount in another form of payment from the cardholder.

Partial approvals will not be allowed on purchase with cash back, point-of-sale (POS) balance inquiry, AVS, all ATM, or electronic certificate request transactions. Stand-In processing will not support partial approvals.

Support of partial approvals is optional for both acquirers and issuers.



Note

For detail on Partial Approval, please refer to the [MDS Online Specifications](#) manual and [MDS Programs and Services](#) manual.

Potential Customer Impact

[Table 12.1](#) indicates the products that may be impacted by the Partial Approval Processing enhancement.

Table 12.1—Product Impact

Product Impact	Acquirer	Issuer
Cirrus	N	N
Maestro	Y	Y
Debit MasterCard	N	Y

Table 12.2 lists possible impacts that the members should consider. The following list may not be a complete list of the changes necessary for the individual processor environment to use Partial Approval Processing.

Table 12.2—Potential Customer Impact

Area of Impact	Changes (Y/N)	Comments
Online	Y	Online messages (Refer to the Online Impact section of this chapter)
Batch	Y	250 byte batch file (Refer to the <i>MDS Settlement and Reports</i> manual for more information on the 250-byte batch data file)

Member Impact

Support of partial approvals is optional for both acquirers and issuers. Acquirers and Issuers that support partial approvals will be affected as follows:

Acquirer impact

Acquirers that support partial approvals will be affected as follows:

- For merchant terminals that support the receipt of partial approval responses and split-tender processing, acquirers should provide the Financial Transaction Request/0200 message containing DE 48, sub element 61, subfield 1, value 1 and subfields 2-5, value zero.
- For merchant terminals that do not support the receipt of partial approval responses, acquirers do not need to provide DE 48, sub element 61 in Financial Transaction Request/0200 messages.
- Acquirers that support the receipt of partial approval responses must be prepared to receive the new response code 10 in DE 39, the partial approval amount in DE 4 (also DE 5 and DE 6, if applicable to the transaction), and the original amount in DE 54 in Authorization Request Response/0210 messages.

Issuer impact

Issuers that support partial approvals will be affected as follows:

- Issuers that want to support partial approvals must modify their systems to provide DE 39 with the new response code 10, the partial approval amount in DE 6 in the issuer's cardholder billing currency, and the issuer's cardholder billing currency code in DE 51 of the Authorization Request Response/0210 message.
- Issuers must respond with a partial approval only when they receive a Financial Transaction Request/0200 message containing DE 48, sub element 61, subfield 1, value 1 (Merchant terminal supports receipt of partial approvals).

Technical Description

The following sections describe the technical impact to acquirers and issuers.

Online

New Partial Approval Response Code in DE 39 (Response Code)

A new response code value of 10 in DE 39 (Response Code) indicates Partial Approval transactions.

Financial Transaction Request/0200 and Financial Transaction Request Response/0210 messages

The Financial Transaction Request/0200 message will contain:

Data Element	Value/Comments
DE 48, Additional Data—Private Use, with sub element 61, POS Data, Extended Condition Codes	This data element and sub element will allow the acquirer to indicate whether the merchant terminal supports a specific program or service.
Sub element 61, subfield 1, Partial Approval Terminal Support Indicator	Indicates whether the merchant terminal supports the receipt of a partial approval response.
Sub element 61, subfields 2-5	Reserved for future use.

Partial Approval Processing

Technical Description

If...	Then...
The merchant terminal supports the receipt of partial approval responses,	The acquirer must provide the Financial Transaction Request/0200 message containing DE 48, sub element 61, subfield 1, value 1 (Merchant terminal supports receipt of partial approvals) and subfields 2–5, value zero.
The issuer receives a Financial Transaction Request/0200 message containing DE 48, sub element 61, subfield 1, value 1,	The issuer has the option to: <ul style="list-style-type: none">• Approve the entire transaction amount,• Decline the entire transaction amount, or• Respond with a partial approval. The issuer can determine whether the financial transaction request is eligible to receive a partial approval response based on the account balance and any additional processing fees required to complete the transaction.

When responding with a partial approval in a Financial Transaction Request Response/0210 message, **the issuer must provide:**

Data Element	Values/Comments
DE 6, Amount Cardholder Billing	Must contain the partial approval amount. The partial approval amount must be less than the original requested amount present in DE 6 in the Financial Transaction Request/0200 message.
DE 38, Authorization ID Response	A transaction response identification code assigned by the authorizing institution (such as, the issuer).
DE 39, Response Code	Must contain a value of 10 (Partial Approval)
DE 51, Currency Code, Cardholder Billing	Will contain the issuer's cardholder billing currency code. This will be the currency of the amount in DE 6.

In the Financial Transaction Request Response/0210 message, **the MDS will send the acquirer:**

Data Element	Values/Comments
DE 4, Amount, Transaction	Contains the partial approval amount in the acquirer's transaction currency
DE 5, Amount Settlement	If applicable, contains the partially approved amount in the acquirer's settlement currency.
DE 38, Authorization ID Response	A transaction response identification code assigned by the authorizing institution (such as, the issuer).
DE 39, Response Code	Contains a value of 10 (Partial Approval).

Data Element	Values/Comments
DE 54, Additional Amounts	Contains an occurrence of the original requested amount of the transaction in the acquirer's transaction currency. The original requested amount is identified by DE 54, subfield 2 (Amount Type), value 57 (Original Amount).

Currency Conversion for Partial Approvals

The MDS will perform currency conversion using the current calculation methods.

Financial Transaction Advice/0220 message

When a Maestro issuer provides a partial approval response to a financial transaction request message and Currency Conversion Assessment was applied to the original request message, the MDS will recalculate the settlement amount and the Currency Conversion Assessment amounts based on the partial approval amount. The MDS will send this revised information to the issuer in a Financial Transaction Advice (System-initiated)/0220 message.



Note

If the Currency Conversion Assessment is recalculated and the Currency Conversion Assessment amount is zero, then the Financial Transaction Advice (System-initiated)/0220 message is not sent.

In a Financial Transaction Advice/0220 message that contains partial approval related information, **the issuer will receive:**

Data Element	Values/Comments
DE 4, Amount, Transaction	Will contain the new partial approval amount.
DE 5, Amount, Settlement	If present, will contain the new partial approval amount.
DE 6, Amount, Cardholder Billing	Will contain the new partial approval amount.
DE 60, Advice Reason Code	Will contain the value 2700000 to indicate an adjustment to the original settlement amount in the Financial Transaction Request/0200 message.
DE 95, Replacement Amounts	This data element is composed of four fixed-length subfields. Each subfield is encoded as alphanumeric, right justified with leading zeros.

Data Element	Values/Comments
Subfields	
Subfield 1	Will contain the partial approval DE 4 amount
Subfield 2	Will contain the partial approval DE 5 amount
Subfield 3	Will contain the partial approval DE 6 amount
Subfield 4	Will contain zeros.
DE 111, Amount, Currency Conversion Assessment	Will contain the new currency conversion assessment amount.

System Initiated Reversal Advice/0420

If the MDS generates and sends a Reversal Advice/0420 message to the issuer after the issuer has responded with the Financial Transaction Request Response/0210 message that contains DE 39, value 10, **the MDS will include, and the issuer will receive**, the following data elements:

Data Element	Values/Comments
DE 4, Amount, Transaction	Contains the original requested amount in the acquirer's transaction currency.
DE 5, Amount, Settlement	Contains the original requested amount in DE 5 (if applicable) in the issuer's settlement currency.
DE 6, Amount, Cardholder Billing	Contains the partial approval amount (if applicable) in the issuer's cardholder billing currency. Contains the original amount if: <ul style="list-style-type: none">• the issuer is late in returning the Financial Transaction Request Response/0210 message to the MDS system.• the issuer returns the Financial Transaction Request Response/0210 message to the MDS system and it contains a format error.
DE 39, Response Code	Contains a value of 10 (Partial Approval). Contains a value of "00" if the issuer is late in returning the Financial Transaction Request Response/0210 message to the MDS system.

Data Element	Values/Comments
DE 54, Additional Amounts	Contains the original amount (Amount Type), value 57 (Original Amount) in the issuer's cardholder billing currency. Will not be present if: <ul style="list-style-type: none">the issuer is late in returning the Financial Transaction Request Response/0210 message to the MDS system.the issuer returns the Financial Transaction Request Response/0210 message to the MDS system and it contains a format error

Acquirer-generated Reversal Advice/0420 message

In some cases, the cardholder or merchant may elect not to complete the transaction after receiving the partial approval response from the issuer. The MDS supports full acquirer-generated reversal messages to allow the merchant to cancel the partial approval.

In addition to all other applicable data elements for the Acquirer Reversal Advice/0420 message, **the acquirer will** submit the following data elements:

Data Element	Values/Comments
DE 4, Amount, Transaction	Contains the partial approval amount that was present in the Financial Transaction Request Response/0210 message to the acquirer. The acquirer should not send the original amount present in DE 4 of the Financial Transaction Request/0200 message.
DE 5, Amount, Settlement	Contains the partial approval amount (if it was present in the Financial Transaction Request Response/0210 message) in the settlement currency.
DE 39, Response Code	Contains a value of 10 (Partial Approval).

The MDS will add DE 6 (if applicable) to the Reversal Advice/0420 message that is sent to the issuer.

Batch

Partial Approval Processing changes will apply to the 250-byte Batch Data File (BDF). Refer to the [MDS Settlements and Reports](#) manual for descriptions of the Batch Data File.

Reports

The following reports will display a partial approval response code 10 (DE 39):

Report ID	Report Name
SWCHD53	Exception Audit Report
SWCHD55	Detailed Suspect Items Report
SWCHD57	Transaction Audit Report
SWCHD61	Daily Processing Summary Report
SWCHD108	Transaction Audit Report
SWCHD118	Retrieval Request/Fulfillment Report
SWCHD143	Maestro POS Daily Processing Summary Report
SWCHD144	Maestro POS Transaction Audit Report
SWCHM06	Month-to-Date Processing Summary Report
SWCHM07	Month-to-Month Denial Summary Report

Testing

Testing is required for issuers and acquirer that wish to participate in the Partial Approval service.

Testing Costs

Standard testing costs will apply to Online and Exception Item Processing implementation testing.

Scheduling

Online testing must be scheduled at least 10 days in advance, after simulator testing is complete and trace files are approved.

Test Scripts

Testing scripts for both online and off line can be found at the testing scripts section of this document.

Number of Test Sessions

A minimum of two test sessions will be required for this project.

Testing Requirements

In preparation for migrating to production, minimum requirements must be performed during the testing phase. Customers will be required to perform offline and online testing.

Customers/processors will need to submit Debit test forms 10 business days prior to the test date. Contact your Customer Implementation Services specialist for information about what forms are needed to implement Partial Approval Processing. Forms can be obtained through MasterCard OnLine, Business Forms.

[Table 12.3](#) contains a list of items that should be considered when planning for this service.

Table 12.3—Service Testing Considerations

Preparing for Service Implementation	Comments
Estimate Costs	Standard testing costs will apply to partial approval processing.
Establish Schedule	Online testing must be scheduled at least five business days in advance, after simulator testing is complete and trace files are approved.
Simulator Testing	Ensure correct version of the MasterCard Debit Simulator

To participate in the Partial Approval Processing, members must successfully complete testing. All standard requirements for time frames, telecommunications test time, MIP software (if necessary), and database requirements apply.

Table 12.4—Testing Requirements

Testing Items	Comments
Simulator Testing	Simulator testing is required. Simulator trace files must be approved by a Customer Implementation Service specialist before scheduling online testing.
Forms	To indicate BINs for Partial Approval, issuers must complete the Institution Routing Table Form. To indicate acquirers for Partial Approval, acquirers must complete the Institution Definition Form.
Schedule Testing	Online testing must be scheduled at least ten business days in advance.
Testing Costs	Standard testing costs will apply to Partial Approval Processing.
Expected Results	The appropriate results must be generated as defined in the test scripts. A combination of approved and denied transactions must be performed for this project. The customer must be able to reconcile all test transactions with their internal system.
Simulator Testing	Complete and accurate trace files must be submitted at least seven business days before online testing is scheduled to begin. The Customer Implementation Services specialist must approve results of the simulator testing before online testing is scheduled.
Forms	Debit test forms (PIQ, IDF, IRT, IFF2, AFF and key exchange forms) are required 10 business days in advance.
Schedule Testing	Online testing must be scheduled at least five business days in advance, after simulator testing is complete and trace files are approved
Online Testing	Online testing will be performed with a Customer Implementation Services test specialist. Standard testing costs will apply to Partial Approval Processing testing
Online Message	Online Acceptance testing will be performed with a Customer Implementation test specialist. The appropriate results must be generated as defined in the test scripts. A combination of approved and denied transactions must be performed for this project. The customer must be able to reconcile all test transactions with their internal system.

Testing Items	Comments
Settlement	All customer/processors are required to download and process the batch reports in the Debit test files. A written confirmation will be required stating successful reconciliation with the Debit files.
Reports	The issuer should review the reports detailing Partial Approval Processing defined under the “Member Reports” subsection of this document.
Scripts	The online transactions following transactions from test scripts will be used to test this service with the MasterCard Debit Simulator and online with the MasterCard Debit Test Facility.
Number of Testing Sessions	At least two test sessions are required for the Partial Approval Processing service.
Testing Complete	The Customer Implementation Services specialist will provide a completion letter to the member when the project is complete and ready for production implementation. The Customer Implementation Services specialist will contact the customer to schedule a production implementation date.

Members are required to send a letter, e-mail, or Banknet Service Request form to Customer Implementation Services authorizing initiation of this project.

Implementation

A Customer Implementation Services specialist and the processor will coordinate a production implementation date.

A Customer Implementation Services specialist will monitor the production performance for 30 days after migration to production.

Relevant Documentation

The following documents and resources provide information related to the subjects discussed in this chapter. Refer to the [List of Manuals](#) in the Member Publications product on MasterCard OnLine® for descriptions of these documents.

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- *[MDS Online Specifications](#)*
- *[MasterCard Debit Financial Simulator](#)*
- *[MDS Settlement and Reports](#)*
- *[MDS Programs and Services](#)*
- *[NICS Users' Guide](#)*
- *[Cirrus Worldwide Operating Rules](#)*
- *[Maestro Global Rules](#)*
- *[Chargeback Guide](#)*

A

Test Scripts

This chapter contains the test scripts for the products discussed in this manual.

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Online Exception Item Processing

Cirrus Acquirer Online Testing–Day One

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Result	Comments
OE001	0200 Originator Member	1V12A	010000 NAS	30.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE002	0200 Originator Member	1V13A	010000 NAS	40.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE003	0200 Originator Member	1V62A	010000 NAS	50.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE004	0200 Originator Member	1V62A	010000 NAS	60.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE005	0200 Originator Member	1V13A	010000 NAS	20.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE006	0200 Originator Member	1D1A	010000 NAS	70.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE007	0200 Originator Member	1MC1A	010000 NAS	10.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE008	0200 Originator Member	1V15A	010000 NAS	120.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE009	0200 Originator Member	1V38A	010000 NAS	90.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE010	0200 Originator Member	1V12A	010000 NAS	110.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011

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End of Script

Cirrus Acquirer Online Testing–Day Two–Chargebacks

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE021	0420 Originator MasterCard	1V12A	010000 NAS	30.00	DE 39 = 00	Chargeback Duplicate Transaction (POS and ATM) DE 60 = 489 0073 Replacement Amount = 00.00
OE022	0420 Originator MasterCard	1V13A	010000 NAS	40.00	DE 39 = 00	Chargeback Cardholder Dispute (ATM only) DE 60 = 489 0017 Replacement Amount = 20.00
OE023	0420 Originator MasterCard	1V62A	010000 NAS	50.00	DE 39 = 00	Chargeback Cardholder Dispute (ATM only) DE 60 = 489 0017 Replacement Amount = 00.00
OE024	0420 Originator MasterCard	1V62A	010000 NAS	60.00	DE 39 = 00	Chargeback Duplicate Transaction (POS and ATM) DE 60 = 489 0073 Replacement Amount = 00.00
OE025	0420 Originator MasterCard	1V13A	010000 NAS	20.00	DE 39 = 00	Chargeback Cardholder Dispute (ATM only) DE 60 = 489 0017 Replacement Amount = 00.00
OE026	0420 Originator MasterCard	1D1A	010000 NAS	70.00	DE 39 = 00	Chargeback Cardholder Dispute (ATM only) DE 60 = 489 0017 Replacement Amount = 00.00
OE027	0420 Originator MasterCard	1MC1A	010000 NAS	10.00	DE 39 = 00	Chargeback Duplicate Transaction (POS and ATM) DE 60 = 489 0073 Replacement Amount = 10.00
OE028	0420 Originator MasterCard	1V15A	010000 NAS	120.00	DE 39 = 00	Chargeback Cardholder Dispute (ATM only) DE 60 = 489 0017 Replacement Amount = 00.00

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Cirrus Acquirer Online Testing–Day Three–Representments

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE031	0420 Originator Member	1V12A	010000 NAS	30.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE032	0420 Originator Member	1V13A	010000 NAS	40.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 20.00
OE033	0420 Originator Member	1V62A	010000 NAS	50.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE034	0420 Originator Member	1V62A	010000 NAS	60.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE035	0420 Originator Member	1V13A	010000 NAS	20.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE036	0420 Originator Member	1D1A	010000 NAS	70.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00

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End of Script

Cirrus Issuer Online Testing–Day One

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Result	Comments
OE001	0200 Originator MasterCard	Member Provided	010000 NAS	30.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE002	0200 Originator MasterCard	Member Provided	010000 NAS	40.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE003	0200 Originator MasterCard	Member Provided	010000 NAS	50.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE004	0200 Originator MasterCard	Member Provided	010000 NAS	60.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE005	0200 Originator MasterCard	Member Provided	010000 NAS	20.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE006	0200 Originator MasterCard	Member Provided	010000 NAS	70.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE007	0200 Originator MasterCard	Member Provided	010000 NAS	10.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE008	0200 Originator MasterCard	Member Provided	010000 NAS	120.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE009	0200 Originator MasterCard	Member Provided	010000 NAS	90.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011
OE010	0200 Originator MasterCard	Member Provided	010000 NAS	110.00	DE 39 = 00	ATM withdrawal from NAS MCC = 6011

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Cirrus Issuer Online Testing–Day Two–Chargebacks

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE021	0422 Originator Member	Member Provided	010000 NAS	30.00	DE 39 = 00	Chargeback Disputed Amount (POS only) DE 60 = 489 0071 Replacement Amount = 00.00
OE022	0422 Originator Member	Member Provided	010000 NAS	40.00	DE 39 = 00	Chargeback Adjustment DE 60 = 489 0072 Replacement Amount = 20.00
OE023	0422 Originator Member	Member Provided	010000 NAS	50.00	DE 39 = 00	Chargeback Duplicate Transaction (POS and ATM) DE 60 = 489 0073 Replacement Amount = 00.00
OE024	0422 Originator Member	Member Provided	010000 NAS	60.00	DE 39 = 00	Chargeback Missing or Illegible Signature (POS only) DE 60 = 489 0074 Replacement Amount = 00.00
OE025	0422 Originator Member	Member Provided	010000 NAS	20.00	DE 39 = 00	Chargeback Credit not Received (POS only) DE 60 = 489 0075 Replacement Amount = 00.00
OE026	0422 Originator Member	Member Provided	010000 NAS	70.00	DE 39 = 00	Chargeback Disputed Amount (POS only) DE 60 = 489 0071 Replacement Amount = 00.00
OE027	0422 Originator Member	Member Provided	010000 NAS	10.00	DE 39 = 00	Chargeback Credit Posted as Debit (POS only) DE 60 = 489 0072 Replacement Amount = 10.00
OE028	0422 Originator Member	Member Provided	010000 NAS	120.00	DE 39 = 00	Chargeback Duplicate Transaction (POS and ATM) DE 60 = 489 0073 Replacement Amount = 00.00

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End of Script

Cirrus Issuer Online Testing–Day Three–Representments

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE031	0422 Originator MasterCard	Member Provided	010000 NAS	60.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE032	0422 Originator MasterCard	Member Provided	010000 NAS	50.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 20.00
OE033	0422 Originator MasterCard	Member Provided	010000 NAS	170.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE034	0422 Originator MasterCard	Member Provided	010000 NAS	40.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE035	0422 Originator MasterCard	Member Provided	010000 NAS	110.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE036	0422 Originator MasterCard	Member Provided	010000 NAS	90.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00

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End of Script

Maestro Acquirer Online Testing–Day One

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE001	0200 Originator Member	1V12A	000000 NAS	30.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE002	0200 Originator Member	1V13A	000000 NAS	40.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE003	0200 Originator Member	1V62A	000000 NAS	50.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE004	0200 Originator Member	1V62A	000000 NAS	60.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE005	0200 Originator Member	1V13A	000000 NAS	20.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE006	0200 Originator Member	1D1A	000000 NAS	70.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE007	0200 Originator Member	1MC1A	000000 NAS	10.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE008	0200 Originator Member	1V15A	000000 NAS	120.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE009	0200 Originator Member	1V38A	000000 NAS	90.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE010	0200 Originator Member	1V12A	000000 NAS	110.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode

End of Script

Maestro Acquirer Online Testing–Day Two–Chargebacks

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE021	0420 Originator MasterCard	1V12A	010000 NAS	30.00	DE 39 = 00	Chargeback Disputed Amount (POS only) DE 60 = 489 0071 Replacement Amount = 00.00
OE022	0420 Originator MasterCard	1V13A	010000 NAS	40.00	DE 39 = 00	Chargeback Credit Posted as Debit (POS only) DE 60 = 489 0072 Replacement Amount = 20.00
OE023	0420 Originator MasterCard	1V62A	010000 NAS	50.00	DE 39 = 00	Chargeback Duplicate Transaction (POS and ATM) DE 60 = 489 0073 Replacement Amount = 00.00
OE024	0420 Originator MasterCard	1V62A	010000 NAS	60.00	DE 39 = 00	Chargeback Missing or Illegible Signature (POS only) DE 60 = 489 0074 Replacement Amount = 00.00
OE025	0420 Originator MasterCard	1V13A	010000 NAS	20.00	DE 39 = 00	Chargeback Credit not Received (POS only) DE 60 = 489 0075 Replacement Amount = 00.00
OE026	0420 Originator MasterCard	1D1A	010000 NAS	70.00	DE 39 = 00	Chargeback Disputed Amount (POS only) DE 60 = 489 0071 Replacement Amount = 00.00
OE027	0420 Originator MasterCard	1MC1A	010000 NAS	10.00	DE 39 = 00	Chargeback Credit Posted as Debit (POS only) DE 60 = 489 0072 Replacement Amount = 10.00
OE028	0422 Originator MasterCard	1V15A	010000 NAS	120.00	DE 39 = 00	Chargeback Duplicate (POS only) DE 60 = 489 0073 Replacement Amount = 00.00
OE029	0420 Originator MasterCard	1V38A	010000 NAS	90.00	DE 39 = 00	Chargeback Missing or Illegible Signature (POS only) DE 60 = 489 0074 Replacement Amount = 20.00

End of Script

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Maestro Acquirer Online Testing–Day Three–Representments

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE031	0420 Originator Member	1V12A	010000 NAS	30.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE032	0420 Originator Member	1V13A	010000 NAS	40.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 20.00
OE033	0420 Originator Member	1V62A	010000 NAS	50.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE034	0420 Originator Member	1V62A	010000 NAS	60.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE035	0420 Originator Member	1V13A	010000 NAS	20.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE036	0420 Originator Member	1D1A	010000 NAS	70.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00

End of Script

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Maestro Issuer Online Testing–Day One

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE001	0200 Originator MasterCard	Member Provided	000000 NAS	30.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE002	0200 Originator MasterCard	Member Provided	000000 NAS	40.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE003	0200 Originator MasterCard	Member Provided	000000 NAS	50.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE004	0220 Originator MasterCard	Member Provided	000000 NAS	60.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE005	0200 Originator MasterCard	Member Provided	000000 NAS	20.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE006	0200 Originator MasterCard	Member Provided	000000 NAS	70.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE007	0200 Originator MasterCard	Member Provided	000000 NAS	10.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE008	0200 Originator MasterCard	Member Provided	000000 NAS	120.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE009	0200 Originator MasterCard	Member Provided	000000 NAS	90.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
OE010	0200 Originator MasterCard	Member Provided	000000 NAS	110.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode

End of Script

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Maestro Issuer Online Testing–Day Two–Chargebacks

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE021	0422 Originator Member	Member Provided	000000 NAS	30.00	DE 39 = 00	Chargeback Disputed Amount (POS only) DE 60 = 489 0071 Replacement Amount = 00.00
OE022	0422 Originator Member	Member Provided	000000 NAS	40.00	DE 39 = 00	Chargeback Credit Posted as Debit (POS only) DE 60 = 489 0072 Replacement Amount = 20.00
OE023	0422 Originator Member	Member Provided	000000 NAS	50.00	DE 39 = 00	Chargeback Duplicate Transaction (POS and ATM) DE 60 = 489 0073 Replacement Amount = 00.00
OE024	0422 Originator Member	Member Provided	000000 NAS	60.00	DE 39 = 00	Chargeback Missing or illegible Signature (POS only) DE 60 = 489 0074 Replacement Amount = 00.00
OE025	0422 Originator Member	Member Provided	000000 NAS	20.00	DE 39 = 00	Chargeback Credit Not Received (POS only) DE 60 = 489 0075 Replacement Amount = 00.00
OE026	0422 Originator Member	Member Provided	000000 NAS	70.00	DE 39 = 00	Chargeback Disputed Amount (POS only) DE 60 = 489 0071 Replacement Amount = 00.00
OE027	0422 Originator Member	Member Provided	000000 NAS	10.00	DE 39 = 00	Chargeback Credit Posted as Debit (POS only) DE 60 = 489 0072 Replacement Amount = 10.00
OE028	0422 Originator Member	Member Provided	000000 NAS	120.00	DE 39 = 00	Chargeback Duplicate Transaction (POS and ATM) DE 60 = 489 0073 Replacement Amount = 00.00
OE029	0422 Originator Member	Member Provided	000000 NAS	90.00	DE 39 = 00	Chargeback Missing or illegible Signature (POS only) DE 60 = 489 0074 Replacement Amount = 20.00

End of Script

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Maestro Issuer Online Testing–Day Three–Representments

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE031	0422 Originator MasterCard	Member Provided	010000 NAS	30.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE032	0422 Originator MasterCard	Member Provided	010000 NAS	40.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 20.00
OE033	0422 Originator MasterCard	Member Provided	010000 NAS	50.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE034	0422 Originator MasterCard	Member Provided	010000 NAS	60.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE035	0422 Originator MasterCard	Member Provided	010000 NAS	20.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00
OE036	0422 Originator MasterCard	Member Provided	010000 NAS	70.00	DE 39 = 00	Representment DE 60 = 491 0013 Subelement 3 Advice Detail Text Replacement Amount = 00.00

End of Script

Debit MasterCard Issuer Online Testing–Day One

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE001	0200 Originator MasterCard	Member Provided	000000 NAS	26.99	DE 39 = 00	Purchase from NAS TCC DE 48 = R MCC IN DE 18 = 0742 POS ENTRY MODE DE 22 = 902
OE002	0200 Originator MasterCard	Member Provided	000000 NAS	45.67	DE 39 = 00	Purchase from NAS TCC DE 48 = R MCC IN DE 18 = 0742 POS ENTRY MODE DE 22 = 902
OE003	0200 Originator MasterCard	Member Provided	000000 NAS	285.99	DE 39 = 00	Purchase from NAS TCC DE 48 = X MCC IN DE 18 = 3000 POS ENTRY MODE DE 22 = 022
OE004	0200 Originator MasterCard	Member Provided	000000 NAS	199.99	DE 39 = 00	Purchase from NAS TCC DE 48 = A MCC IN DE 18 = 3351 POS ENTRY MODE DE 22 = 022
OE005	0200 Originator MasterCard	Member Provided	000000 NAS	145.75	DE 39 = 00	Purchase from NAS TCC DE 48 = H MCC IN DE 18 = 3501 POS ENTRY MODE DE 22 = 902
OE006	0200 Originator MasterCard	Member Provided	000000 NAS	67.50	DE 39 = 00	Purchase from NAS TCC DE 48 = H MCC IN DE 18 = 3501 POS ENTRY MODE DE 22 = 022
OE007	0200 Originator MasterCard	Member Provided	000000 NAS	85.18	DE 39 = 00	Purchase from NAS TCC DE 48 = F MCC IN DE 18 = 5813 POS ENTRY MODE DE 22 = 022
OE008	0200 Originator MasterCard	Member Provided	000000 NAS	99.99	DE 39 = 00	Purchase from NAS TCC DE 48 = T MCC IN DE 18 = 5960 POS ENTRY MODE DE 22 = 902

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Test Scripts

Online Exception Item Processing

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE009	0200 Originator MasterCard	Member Provided	000000 NAS	30.00	DE 39 = 00	Purchase from NAS TCC DE 48 = T MCC IN DE 18 = 5960 POS ENTRY MODE DE 22 = 902
OE010	0200 Originator MasterCard	Member Provided	000000 NAS	27.39	DE 39 = 00	Purchase from NAS TCC DE 48 = T MCC IN DE 18 = 5960 POS ENTRY MODE DE 22 = 902

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End of Script

Debit MasterCard Issuer Online Testing–Day Two–Completions

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE021	0220	Member Provided	010000 NAS	26.99	DE 39 = 00	Pre-Auth Completion Completion Amount 26.99
OE022	0220	Member Provided	010000 NAS	45.67	DE 39 = 00	Pre-Auth Completion Completion Amount 45.67
OE023	0220	Member Provided	010000 NAS	285.99	DE 39 = 00	Pre-Auth Completion Completion Amount 285.99
OE024	0220	Member Provided	010000 NAS	199.99	DE 39 = 00	Pre-Auth Completion Completion Amount 199.99
OE025	0220	Member Provided	010000 NAS	145.75	DE 39 = 00	Pre-Auth Completion Completion Amount 145.75
OE026	0220	Member Provided	010000 NAS	67.50	DE 39 = 00	Pre-Auth Completion Completion Amount 67.50
OE027	0220	Member Provided	010000 NAS	85.18	DE 39 = 00	Pre-Auth Completion Completion Amount 85.18
OE028	0220	Member Provided	010000 NAS	99.99	DE 39 = 00	Pre-Auth Completion Completion Amount 99.99

End of Script

Debit MasterCard Issuer Online Testing–Day Three– Chargebacks

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE021	0422 Originator Member	Member Provided	010000 NAS	26.99	DE 39 = 00	Chargeback Requested/required authorization not obtained (Debit MasterCard only) DE 60 = 489 0008 Replacement Amount = 00.00
OE022	0422 Originator Member	Member Provided	010000 NAS	45.67	DE 39 = 00	Chargeback Account Number not on File (Debit MasterCard only) DE 60 = 489 0012 Replacement Amount = 20.00
OE023	0422 Originator Member	Member Provided	010000 NAS	285.99	DE 39 = 00	Chargeback Transaction Amount Differs (Debit MasterCard only) DE 60 = 489 0031 Replacement Amount = 00.00
OE024	0422 Originator Member	Member Provided	010000 NAS	199.99	DE 39 = 00	Chargeback Duplicate Processing (Debit MasterCard only) DE 60 = 489 0034 Replacement Amount = 00.00
OE025	0422 Originator Member	Member Provided	010000 NAS	145.75	DE 39 = 00	Chargeback Card Not Valid or Expired (Debit MasterCard only) DE 60 = 489 0035 Replacement Amount = 00.00
OE026	0422 Originator Member	Member Provided	010000 NAS	67.50	DE 39 = 00	Chargeback No Cardholder Authorization (Debit MasterCard only) DE 60 = 489 0037 Replacement Amount = 00.00
OE027	0422 Originator Member	Member Provided	010000 NAS	85.18	DE 39 = 00	Chargeback Fraudulent processing of transaction (Debit MasterCard only) DE 60 = 489 0040 Replacement Amount = 10.00

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Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
OE028	0422 Originator Member	Member Provided	010000 NAS	99.99	DE 39 = 00	Chargeback Correct transaction currency code not provided (Debit MasterCard only) DE 60 = 489 0046 Replacement Amount = 00.00

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End of Script

250-byte Batch Data File

Cirrus Acquirer

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
BD001	0200	1V12A	011000	10.00	DE 39 = 00	Withdrawal from Saving MCC = 6011
BD002	0200	1V14A	012000	20.00	DE 39 = 00	Withdrawal from Checking MCC = 6011
BD003	0200	1V14A	013000	30.00	DE 39 = 00	Withdrawal from Credit MCC = 6011
BD004	0200	1CAPA	011000	40.00	DE 39 = 04	Withdrawal from NAS Capture Card MCC = 6011
BD005	0200	1INVCA	012000	50.00	DE 39 = 14	Withdrawal from Checking Invalid Card MCC = 6011
BD006	0200	1EXPA	011000	60.00	DE 39 = 54	Withdrawal from Savings Expired Card MCC = 6011
BD007	0200	1V12A	012000	70.00	DE 39 = 00	Withdrawal from Checking Invalid PIN MCC = 6011
BD008	0200	1V14A	012000	80.00	DE 39 = 00	Withdrawal from Checking MCC = 6011
BD008	0420	1V14A	012000	80.00	DE 39 = 00	Full Reversal—POI Timeout DE 60 = 4500019 Replacement amount = 00.00
BD009	0200	1INVCA	012000	90.00	DE 39 = 00	Withdrawal from Checking MCC = 6011
BD010	0200	1V14A	010000	100.00	DE 39 = 00	Withdrawal from NAS MCC = 6011

End of Script

Cirrus Issuer

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
BD001	0200	Valid 1	011000	10.00	DE 39 = 00	Withdrawal from Saving MCC = 6011
BD002	0200	Valid 2	012000	20.00	DE 39 = 00	Withdrawal from Checking MCC = 6011
BD003	0200	Valid 3	013000	30.00	DE 39 = 00	Withdrawal from Credit MCC = 6011
BD004	0200	Capture Card	011000	40.00	DE 39 = 04	Withdrawal from NAS Capture Card MCC = 6011
BD005	0200	Invalid Card	012000	50.00	DE 39 = 14	Withdrawal from Checking Invalid Card MCC = 6011
BD006	0200	Expired Card	011000	60.00	DE 39 = 54	Withdrawal from Savings Expired Card MCC = 6011
BD007	0200	Valid 1	012000	70.00	DE 39 = 00	Withdrawal from Checking Invalid PIN MCC = 6011
BD008	0200	Valid 2	012000	80.00	DE 39 = 00	Withdrawal from Checking MCC = 6011
BD008	0420	Valid 2	012000	80.00	DE 39 = 00	Full Reversal—POI Timeout DE 60 = 4500019 Replacement amount = 00.00
BD009	0200	Valid 3	012000	90.00	DE 39 = 00	Withdrawal from Checking MCC = 6011
BD010	0200	Valid 1	010000	100.00	DE 39 = 00	Withdrawal from NAS MCC = 6011

End of Script

Maestro Acquirer

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
BD001	0200	1V12A	001000 Savings	10.00	DE 39 = 00	Purchase from Savings Valid Merchant Category Code Valid Point of Service Entry Mode
BD002	0200	1V14A	002000 Checking	20.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
BD003	0200	1V14A	000000 NAS	30.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
BD004	0200	1CAPA	000000 NAS	40.00	DE 39 = 04	Purchase from NAS Capture Card Valid Merchant Category Code Valid Point of Service Entry Mode
BD005	0200	1INVCA	002000 Checking	50.00	DE 39 = 14	Purchase from Checking Invalid Card Valid Merchant Category Code Valid Point of Service Entry Mode
BD006	0200	1EXPA	001000 Savings	60.00	DE 39 = 54	Purchase from Savings Expired Card Valid Merchant Category Code Valid Point of Service Entry Mode
BD007	0200	1V12A	002000 Checking	70.00	DE 39 = 00	Purchase from Checking Invalid PIN Valid Merchant Category Code Valid Point of Service Entry Mode
BD008	0200	1V14A	002000 Checking	80.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
BD008	0420	1V14A	002000 Checking	80.00	DE 39 = 00	Full Reversal—POI Failure DE 60 = 4500018 Replacement amount = 00.00

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
BD009	0200	1V12A	002000 Checking	90.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
BD010	0200	1V14A	000000 NAS	100.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode

End of Script

Maestro Issuer

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
BD001	0200	Valid 1	001000 Savings	10.00	DE 39 = 00	Purchase from Savings Valid Merchant Category Code Valid Point of Service Entry Mode
BD002	0200	Valid 2	002000 Checking	20.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
BD003	0200	Valid 3	000000 NAS	30.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
BD004	0200	Capture Card	000000 NAS	40.00	DE 39 = 04	Purchase from NAS Capture Card Valid Merchant Category Code Valid Point of Service Entry Mode
BD005	0200	Invalid Card	002000 Checking	50.00	DE 39 = 14	Purchase from Checking Invalid Card Valid Merchant Category Code Valid Point of Service Entry Mode
BD006	0200	Expired Card	001000 Savings	60.00	DE 39 = 54	Purchase from Savings Expired Card Valid Merchant Category Code Valid Point of Service Entry Mode
BD007	0200	Valid 1	002000 Checking	70.00	DE 39 = 00	Purchase from Checking Invalid PIN Valid Merchant Category Code Valid Point of Service Entry Mode
BD008	0200	Valid 2	002000 Checking	80.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
BD008	0420	Valid 2	002000 Checking	80.00	DE 39 = 00	Full Reversal—POI Failure DE 60 = 4500018 Replacement amount = 00.00

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
BD009	0200	Valid 1	002000 Checking	90.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
BD010	0200	Valid 2	000000 NAS	100.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode

End of Script

Debit MasterCard Issuer

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
BD001	0200	Member Provided	000000 NAS	26.99	DE 39 = 00	Purchase from NAS TCC DE 48 = R MCC IN DE 18 = 0742 POS Entry Mode DE 22 = 902
BD002	0200	Member Provided	000000 NAS	45.67	DE 39 = 00	Purchase from NAS TCC DE 48 = R MCC IN DE 18 = 0742 POS Entry Mode DE 22 = 902
BD003	0200	Member Provided	000000 NAS	285.99	DE 39 = 00	Purchase from NAS TCC DE 48 = X MCC IN DE 18 = 3000 POS Entry Mode DE 22 = 022
BD004	0200	Member Provided	000000 NAS	199.99	DE 39 = 00	Purchase from NAS TCC DE 48 = A MCC IN DE 18 = 3351 POS Entry Mode DE 22 = 022
BD005	0200	Member Provided	000000 NAS	145.75	DE 39 = 00	Purchase from NAS TCC DE 48 = H MCC IN DE 18 = 3501 POS Entry Mode DE 22 = 902
BD006	0200	Member Provided	000000 NAS	67.50	DE 39 = 00	Purchase from NAS TCC DE 48 = H MCC IN DE 18 = 3501 POS Entry Mode DE 22 = 022
BD007	0200	Member Provided	000000 NAS	85.18	DE 39 = 00	Purchase from NAS TCC DE 48 = F MCC IN DE 18 = 5813 POS Entry Mode DE 22 = 022
BD008	0200	Member Provided	000000 NAS	99.99	DE 39 = 00	Purchase from NAS TCC DE 48 = T MCC IN DE 18 = 5960 POS Entry Mode DE 22 = 902

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
BD009	0200	Member Provided	000000 NAS	30.00	DE 39 = 00	Purchase from NAS TCC DE 48 = T MCC IN DE 18 = 5960 POS Entry Mode DE 22 = 902
BD010	0200	Member Provided	000000 NAS	27.39	DE 39 = 00	Purchase from NAS TCC DE 48 = T MCC IN DE 18 = 5960 POS Entry Mode DE 22 = 902

End of Script

MasterCard SecureCode Validation

Acquirer Test Scenarios and Cases

UCAF-POS Acquirer, Positive Response

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Test Objective	Expected Results
UCAF101	0200	Member provided	001000	Member	DE 22 SFI = 81 UCAF DE 48 subelement 42 = 42070103210 UCAF not supported by merchant	The 0 indicates the merchant site does not support UCAF. Therefore subelement 43 is not present in DE 48
UCAF102	0200	Member provided	000000	Member	DE 22 SFI = 81 UCAF DE 48 subelement 42 = 42070103212 subelement 43 = jNtsxQ123ABC456DEFsf	The 2 indicates the merchant site supports UCAF and did provide data. Therefore subelement 43 is present in DE 48
UCAF103	0200	Member provided	000000	Member	DE 22 SFI = 81 UCAF DE 48 subelement 42 = 42070103211	The 1 indicates the merchant site supports UCAF and did not provide data. Therefore subelement 43 is not present in DE 48

End of Script

UCAF-POS Acquirer, Negative Response

Test Case ID	MTI	Test Card ID	DE 3	Originator	Test Objective	Expected Results/Comments
UCAF201	0200	Member provided	002000	Member	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103214 subelement 43 = jNtsxQ123ABC456D EFsf	When subelement 43 is present in DE 48, the value in subelement 42 must be 2. The 4 is an invalid value and produces a format error.
	0210			MasterCard		DE 39 = 30 DE 44 = 048
UCAF202	0200	Member provided	002000	Member	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103212	The 2 indicates the merchant site supports UCAF and did populate data. Therefore, the subelement 43 must exist in DE 48. The missing subelement 43 produces a format error.
	0210			MasterCard		DE 39 = 30 DE 44 = 048

End of Script

Issuer Test Scenarios and Cases

UCAF-POS Issuer, Positive Response

Test Case ID	MTI	Test Card ID	DE 3	Originator	Test Objective	Expected Results/Comments
UCAF301	0200	Member provided	001000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103210	The 0 indicates the merchant site does not support UCAF. Therefore subelement 43 is not present in DE 48
UCAF302	0200	Member provided	000000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103212 subelement 43 = jNtsxQ123ABC456D EFsf	The 2 indicates the merchant site does support UCAF and did provide data. Therefore subelement 43 is present in DE 48
UCAF303	0200	Member provided	000000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103211	The 1 indicates the merchant site does support UCAF and did not provide data. Therefore subelement 43 is not present in DE 48
UCAF304	0200	Member provided	002000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103211	The 1 indicates the merchant site does support UCAF and did not provide data. Therefore subelement 43 is not present in DE 48
UCAF305	0200	Member provided	0010000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103212 subelement 43 = jG4320123ABC456rq +X0	The 2 indicates the merchant site does support UCAF and did provide data. Therefore subelement 43 is present in DE 48
UCAF306	0200	Member provided	001000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103211	The 1 indicates the merchant site does support UCAF and did not provide data. Therefore subelement 43 is not present in DE 48

Test Case ID	MTI	Test Card ID	DE 3	Originator	Test Objective	Expected Results/Comments
UCAF307	0200	Member provided	002000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103210	The 0 indicates the merchant site does not support UCAF. Therefore subelement 43 is not present in DE 48
UCAF308	0200	Member provided	000000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103212 subelement 43 = jstxy20123ABC456rq X0	The 2 indicates the merchant site supports UCAF and did provide data. Therefore subelement 43 is present in DE 48
UCAF309	0200	Member provided	001000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103212 subelement 43 = jwMN0123ABC456rq +X0	The 2 indicates the merchant site supports UCAF and did provide data. Therefore subelement 43 is present in DE 48

End of Script

UCAF-POS Issuer, Negative Response

Test Case ID	MTI	Test Card ID	DE 3	Originator	Test Objective	Expected Results/Comments
UCAF401	0200	Member provided	002000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103214 subelement 43 = jstxy20123ABC456rq X0	When subelement 43 is present in DE 48, the value in subelement 42 must be 2. The 4 is an invalid value and produces a format error.
UCAF402	0200	Member provided	002000	MasterCard	DE 22 SF1 = 81 UCAF DE 48 subelement 42 = 42070103212	The 2 indicates the merchant site supports UCAF and did populate data. Therefore, the subelement 43 must exist in DE 48. The missing subelement 43 produces a format error.

End of Script

Online File Update Processing

File Update Request/0302—MCC102

Test Case ID	MTI	Test Card ID	DE 91	DE 101	DE 120	Expected Results
OF021	0302	Card1	1 – add	MCC102	Entry Reason = P	DE 39 = 00
OF022	0302	Card2	1 – add	MCC102	Entry Reason = S	DE 39 = 00
OF023	0302	Card3	1 – add	MCC102	Entry Reason = L	DE 39 = 00
OF024	0302	Card4	1 – add	MCC102	Entry Reason = X	DE 39 = 00
OF025	0302	Card5	1 – add	MCC102	Entry Reason = F	DE 39 = 00
OF026	0302	Card6	1 – add	MCC102	Entry Reason = V VIP Limit = 000001000000 VIP Currency Code = local currency	DE 39 = 00
OF027	0302	Card1	2 – change	MCC102	Entry Reason = G	DE 39 = 00
OF028	0302	Card2	2 – change	MCC102	Entry Reason = P	DE 39 = 00
OF029	0302	Card3	2 – change	MCC102	Entry Reason = S	DE 39 = 00
OF030	0302	Card4	2 – change	MCC102	Entry Reason = L	DE 39 = 00

End of Script

File Update Request/0302—MCC103

Test Case ID	MTI	Test Card ID	DE 91	DE 101	DE 120	Expected Results
OF031	0302	Card1	1 – add	MCC103	Card Program = MCD Entry Reason = C All regions	DE 39 = 00
OF032	0302	Card2	1 – add	MCC103	Card Program = MCC Entry Reason = X Regions 1, A, and C	DE 39 = 00
OF033	0302	Card3	1 – add	MCC103	Card Program = MCD Entry Reason = X Regions B and D	DE 39 = 00
OF034	0302	Card4	1 – add	MCC103	Card Program = MCD Entry Reason = C Region 1	DE 39 = 00
OF035	0302	Card5	1 – add	MCC103	Card Program = MCC Entry Reason = X Regions A, B, and E	DE 39 = 00
OF036	0302	Card6	1 – add	MCC103	Card Program = MCD Entry Reason = X Regions C and E	DE 39 = 00
OF037	0302	Card1	2 – change	MCC103	Card Program = MCD Entry Reason = C Regions 1, A, and C	DE 39 = 00
OF038	0302	Card2	2 – change	MCC103	Card Program = MCC Entry Reason = X Regions B and D	DE 39 = 00
OF039	0302	Card3	2 – change	MCC103	Card Program = MCD Entry Reason = X Region 1	DE 39 = 00
OF040	0302	Card4	2 – change	MCC103	Card Program = MCD Entry Reason = C Regions A, B, and E	DE 39 = 00

Test Case ID	MTI	Test Card ID	DE 91	DE 101	DE 120	Expected Results
OF041	0302	Card5	2 – change	MCC103	Card Program = MCC Entry Reason = X Regions C and E	DE 39 = 00
OF042	0302	Card6	2 – change	MCC103	Card Program = MCD Entry Reason = X All Regions	DE 39 = 00
OF043	0302	Card1	5 – inquiry	MCC103		DE 39 = 00
OF044	0302	Card2	5 – inquiry	MCC103		DE 39 = 00

End of Script

File Update Request/0302—MCCNEG

Test Card ID	DE 91	DE 101	DE 120	Expected Results
Card1	1 – add	MCCNEG	Capture Code = Y Entry Reason = P	DE 39 = 00
Card2	1 – add	MCCNEG	Capture Code = Y Entry Reason = S	DE 39 = 00
Card3	1 – add	MCCNEG	Capture Code = Y Entry Reason = L	DE 39 = 00
Card4	1 – add	MCCNEG	Capture Code = N Entry Reason = X	DE 39 = 00
Card5	1 – add	MCCNEG	Capture Code = N Entry Reason = P	DE 39 = 00
Card6	1 – add	MCCNEG	Capture Code = N Entry Reason = U	DE 39 = 00
Card1	2 – change	MCCNEG	Capture Code = N Entry Reason = P	DE 39 = 00
Card2	2 – change	MCCNEG	Capture Code = N Entry Reason = S	DE 39 = 00
Card3	2 – change	MCCNEG	Capture Code = N Entry Reason = O	DE 39 = 00
Card4	2 – change	MCCNEG	Capture Code = Y Entry Reason = X	DE 39 = 00
Card5	2 – change	MCCNEG	Capture Code = Y Entry Reason = P	DE 39 = 00
Card6	2 – change	MCCNEG	Capture Code = Y Entry Reason = U	DE 39 = 00
Card1	5 – inquiry	MCCNEG		DE 39 = 00
Card2	5 – inquiry	MCCNEG		DE 39 = 00
Card3	5 – inquiry	MCCNEG		DE 39 = 00
Card4	5 – inquiry	MCCNEG		DE 39 = 00
Card5	5 – inquiry	MCCNEG		DE 39 = 00
Card6	5 – inquiry	MCCNEG		DE 39 = 00
Card1	3 – delete	MCCNEG		DE 39 = 00
Card2	3 – delete	MCCNEG		DE 39 = 00
Card3	3 – delete	MCCNEG		DE 39 = 00
Card4	3 – delete	MCCNEG		DE 39 = 00
Card5	3 – delete	MCCNEG		DE 39 = 00
Card6	3 – delete	MCCNEG		DE 39 = 00

End of Script

Debit ISIS

Cirrus Acquirer Testing

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
ISIS001	0200	1VEN	012000 Checking	320.00	DE 39 =00	Withdrawal from Checking MCC = 6011
ISIS002	0200	1VEN	010000 NAS	120.00	DE 39 =00	Withdrawal from NAS MCC = 6011
ISIS003	0200	1LOSTA	011000 Savings	400.00	DE 39 =00	Withdrawal from Savings MCC = 6011
ISIS004	0200	1VEN	012000 Checking	200.00	DE 39 =55	Withdrawal from Savings Invalid PIN MCC = 6011
ISIS005	0200	1VEN	011000 Savings	110.00	DE 39 =00	Withdrawal from Savings MCC = 6011
ISIS005	0420	1VEN	011000 Savings	110.00	DE 39 =00	Full reversal—POI failure DE 60 = 4500018 Replacement amount = 00.00
ISIS006	0200	1VEN	012000 Checking	200.00	DE 39 =00	Withdrawal from Checking MCC = 6011
ISIS007	0200	1VEN	011000 Savings	320.00	DE 39 =00	Withdrawal from Savings MCC = 6011
ISIS008	0200	1VEN	012000 Checking	500.00	DE 39 =00	Withdrawal from Checking MCC = 6011
ISIS009	0420	1VEN	012000 Checking	250.00	DE 39 =00	Partial Reversal – Partial Dispense DE 60 = 4510010 Replacement amount = 100.00
ISIS010	0200	1VEN	011000 Savings	150.00	DE 39 =00	Withdrawal from Savings MCC = 6011

End of Script

Cirrus Issuer Testing

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
ISIS001	0200	VALID 1	013000 Credit	100.00	DE 39 =00	Withdrawal from Credit MCC = 6011
ISIS002	0200	VALID 2	011000 Savings	250.00	DE 39 =00	Withdrawal from Savings MCC = 6011
ISIS003	0200	STOLEN	012000 Checking	120.00	DE 39 =00	Withdrawal from Checking MCC = 6011
ISIS004	0200	VALID 2	012000 Checking	200.00	DE 39 =55	Withdrawal from Checking (Invalid pin) MCC = 6011
ISIS005	0200	VALID 2	302000 Checking	0.00	DE 39 =00	Balance Inquiry from Checking MCC = 6011
ISIS006	0200	VALID 3	011000 Savings	350.00	DE 39 =00	Withdrawal from Savings MCC = 6011
ISIS007	0200	LOST	010000 NAS	150.00	DE 39 =00	Withdrawal from NAS MCC = 6011
ISIS008	0200	VALID 2	013000 Credit	400.00	DE 39 =00	Withdrawal from Credit MCC = 6011
ISIS009	0200	VALID 1	011000 Savings	90.00	DE 39 = 00	Withdrawal from Savings MCC = 6011
ISIS010	0200	VALID 1	011000 Savings	150.00	DE 39 = 00	FULL REVERSAL MCC = 6011
ISIS010	0420	VALID 1	011000 Savings	150.00	DE 39 = 00	FULL REVERSAL

End of Script

Maestro Acquirer Testing

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
ISIS001	0200	1VEN	002000 Checking	150.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS002	0200	1VEN	000000 NAS	120.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS003	0200	1VEN	001000 Savings	400.00	DE 39 = 00	Purchase from Savings Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS004	0200	1VEN	001000 Savings	200.00	DE 39 = 00	Purchase from Savings Invalid PIN Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS005	0200	1VEN	002000 Checking	310.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS005	0420	1VEN	002000 Checking	310.00	DE 39 = 00	Full reversal—POI failure DE 60 = 4500018 Replacement amount = 00.00
ISIS006	0200	1LOSTA	000000 NAS	100.00	DE 39 = 41	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS007	0200	1V12A	001000 Savings	250.00	DE 39 = 00	Pre Auth from Savings Valid Merchant Category Code Valid Point of Service Entry Mode

End of Script

Maestro Issuer

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
ISIS001	0200	VALID 1	001000 Savings	250.00	DE 39 = 00	Purchase from Savings Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS002	0200	VALID 2	001000 Savings	100.00	DE 39 = 00	Pre Auth from Savings Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS003	0200	VALID 2	002000 Checking	350.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS004	0200	LOST	002000 Checking	200.00	DE 39 = 41	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS005	0200	VALID 2	302000 Checking	0.00	DE 39 = 00	Balance Inquiry from a Checking Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS006	0200	VALID 2	000000 NAS	400.00	DE 39 = 00	Pre Auth from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS007	0200	STOLEN	001000 Savings	500.00	DE 39 = 04	Purchase from Savings Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS008	0200	VALID 2	002000 Checking	550.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS009	0200	VALID 2	000000 NAS	600.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
ISIS010	0200	VALID 2	002000 Checking	650.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode

End of Script

Member Level Settlement

Cirrus Acquirer

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
MLS001	0200	1V12A	012000 Checking	320.00	DE 39 =00	Withdrawal from Checking MCC = 6011
MLS002	0200	1V13A	010000 NAS	120.00	DE 39 =00	Withdrawal from NAS MCC = 6011
MLS003	0200	1LOSTA	011000 Savings	400.00	DE 39 =00	Withdrawal from Savings MCC = 6011
MLS004	0200	1V14A	012000 Checking	200.00	DE 39 =55	Withdrawal from Savings, Invalid PIN MCC = 6011
MLS005	0200	1V12A	011000 Savings	110.00	DE 39 =00	Withdrawal from Savings MCC = 6011
MLS005	0420	1V12A	011000 Savings	110.00	DE 39 =00	Full reversal—POI failure DE 60 = 4500018 Replacement amount = 00.00
MLS006	0200	1V12A	012000 Checking	200.00	DE 39 =00	Withdrawal from Checking MCC = 6011
MLS007	0200	1V13A	011000 Savings	320.00	DE 39 =00	Withdrawal from Savings MCC = 6011
MLS008	0200	1V14A	012000 Checking	500.00	DE 39 =00	Withdrawal from Checking MCC = 6011
MLS009	0420	1V12A	012000 Checking	250.00	DE 39 =00	Partial Reversal – Partial Dispense DE 60 = 4510010 Replacement amount = 100.00
MLS010	0200	1V12A	011000 Savings	150.00	DE 39 =00	Withdrawal from Savings MCC = 6011

End of Script

Cirrus Issuer

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
MLS001	0200	Valid 1	013000 Credit	100.00	DE 39 =00	Withdrawal from Credit MCC = 6011
MLS002	0200	Valid 2	011000 Savings	250.00	DE 39 =00	Withdrawal from Savings MCC = 6011
MLS003	0200	Stolen	012000 Checking	120.00	DE 39 =04	Withdrawal from Checking MCC = 6011
MLS004	0200	Valid 2	012000 Checking	200.00	DE 39 =55	Withdrawal from Checking (Invalid PIN) MCC = 6011
MLS005	0200	Valid 2	302000 Checking	0.00	DE 39 =00	Balance Inquiry from Checking MCC = 6011
MLS006	0200	Valid 3	011000 Savings	350.00	DE 39 =00	Withdrawal from Savings MCC = 6011
MLS007	0200	Lost	010000 NAS	150.00	DE 39 =41	Withdrawal from NAS MCC = 6011
MLS008	0200	Valid 2	013000 Credit	400.00	DE 39 =00	Withdrawal from Credit MCC = 6011
MLS009	0200	Valid 1	011000 Savings	90.00	DE 39 = 00	Withdrawal from Savings MCC = 6011
MLS010	0200	Valid 1	011000 Savings	150.00	DE 39 = 00	FULL REVERSAL MCC = 6011
ISIS010	0420	Valid 1	011000 Savings	150.00	DE 39 = 00	FULL REVERSAL

End of Script

Maestro Acquirer

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
MLS001	0200	1V12A	002000 Checking	150.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
MLS002	0200	1V13A	000000 NAS	120.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
MLS003	0200	1V14A	001000 Savings	400.00	DE 39 = 00	Purchase from Savings Valid Merchant Category Code Valid Point of Service Entry Mode
MLS004	0200	1V12A	001000 Savings	200.00	DE 39 = 00	Purchase from Savings Invalid PIN Valid Merchant Category Code Valid Point of Service Entry Mode
MLS005	0200	1V13A	002000 Checking	310.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
MLS005	0420	1V14A	002000 Checking	310.00	DE 39 = 00	Full reversal—POI failure DE 60 = 4500018 Replacement amount = 00.00
MLS006	0200	1LOSTA	000000 NAS	100.00	DE 39 = 41	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
MLS007	0200	1V12A	001000 Savings	250.00	DE 39 = 00	Pre Auth from Savings Valid Merchant Category Code Valid Point of Service Entry Mode

End of Script

Maestro Issuer

Test Case ID	MTI	Test Card ID	DE 3	DE 4	Expected Results	Comments
MLS001	0200	Valid 1	001000 Savings	250.00	DE 39 = 00	Purchase from Savings Valid Merchant Category Code Valid Point of Service Entry Mode
MLS002	0200	Valid 2	001000 Savings	100.00	DE 39 = 00	Pre Auth from Savings Valid Merchant Category Code Valid Point of Service Entry Mode
MLS003	0200	Valid 3	002000 Checking	350.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
MLS004	0200	Lost	002000 Checking	200.00	DE 39 = 41	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
MLS005	0200	Valid 2	302000 Checking	0.00	DE 39 = 00	Balance Inquiry from a Checking Valid Merchant Category Code Valid Point of Service Entry Mode
MLS006	0200	Valid 3	000000 NAS	400.00	DE 39 = 00	Pre Auth from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
MLS007	0200	Stolen	001000 Savings	500.00	DE 39 = 04	Purchase from Savings Valid Merchant Category Code Valid Point of Service Entry Mode
MLS008	0200	Valid 2	002000 Checking	550.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode
MLS009	0200	Valid 2	000000 NAS	600.00	DE 39 = 00	Purchase from NAS Valid Merchant Category Code Valid Point of Service Entry Mode
MLS010	0200	Valid 2	002000 Checking	650.00	DE 39 = 00	Purchase from Checking Valid Merchant Category Code Valid Point of Service Entry Mode

End of Script

Payment Transactions

Cirrus Issuer

Test Case ID	MTI	Test Card ID	Acct Type DE 3	Amt. DE 4	Expected Result	Comments
PMT01	0200	Valid 1	280010 Saving	10.00	DE 39 = 00	Payment to Saving – MCC in DE 18 = 6533
PMT02	0200	Valid 2	280020 Checking	20.00	DE 39 = 00	Payment to Checking–MCC in DE 18 = 6532
PMT03	0200	Valid 3	280030 Credit	30.00	DE 39 = 00	Payment to Credit–MCC in DE 18 = 6532
PMT04	0200	Valid 1	280010 Saving	40.00	DE 39 = 00	Payment to NAS–MCC in DE 18 = 6533
PMT05	0200	Valid 2	280020 Saving	50.00	DE 39 = 14	Payment to Checking–MCC in DE 18 = 6533 Invalid Card
PMT06	0200	Valid 3	280010 Savings	60.00	DE 39 = 54	Payment to Savings–MCC in DE 18 = 6533 Expired Card
PMT07	0200	Valid 1	280020 Saving	70.00	DE 39 = 55	Payment to Checking–MCC in DE 18 = 6532 Invalid PIN MCC = 6281
PMT08	0200	Valid 2	280020 Checking	80.00	DE 39 = 00	Payment to checking–MCC in DE 18 = 6532
PMT08	0420	Valid 2	280020 Checking	80.00	DE 39 = 00	Full Reversal—POI Timeout–Advice reason code = 4500019 Replacement amount = 00.00
PMT09	0200	Valid 3	280020 Checking	90.00	DE 39 = 00	Payment to Checking–MCC in DE 18 = 6532
PMT10	0200	Valid 1	280000 NAS	100.00	DE 39 = 00	Payment to NAS–MCC in DE 18 = 6533

End of Script

Test Scripts
Payment Transactions

POS Issuer

Test Case ID	MTI	Test Card ID	Acct Type DE 3	Amt. DE 4	Expected Result	Comments
PMT01	0200	Valid 1	280010 Saving	20.00	DE 39 = 00	Payment to Saving–MCC in DE 18 = 6532
PMT02	0200	Valid 2	280020 Checking	30.00	DE 39 = 00	Payment to Checking–MCC in DE 18 = 6532
PMT03	0200	Valid 3	280030 Credit	40.00	DE 39 = 00	Payment to Credit–MCC in DE 18 = 6533
PMT04	0200	Valid 1	280020 Checking	50.00	DE 39 = 00	Payment to Checking–MCC in DE 18 = 6532
PMT05	0200	Valid 2	280000 NAS	60.00	DE 39 = 00	Payment to NAS–MCC in DE 18 = 6532
PMT06	0200	Valid 3	280010 Savings	70.00	DE 39 = 00	Payment to Savings–MCC in DE 18 = 6533
PMT07	0200	Valid 1	280030 Credit	80.00	DE 39 = 00	Payment to Credit–MCC in DE 18 = 6533
PMT08	0200	Valid 2	280020 Checking	90.00	DE 39 = 00	Payment to Checking–MCC in DE 18 = 6533
PMT08	0420	Valid 2	280020 Checking	90.00	DE 39 = 00	Full Reversal—POI Timeout –Advice Reason Code 4500019 Replacement amount = 00.00
PMT09	0200	Valid 3	280020 Checking	100.00	DE 39 = 00	Payment to Checking–MCC in DE 18 = 6533
PMT10	0200	Valid 1	280010 Savings	110.00	DE 39 = 00	Payment to Savings–MCC in DE 18 = 6532

End of Script

Debit MasterCard Issuer

Test Case ID	MTI	Test Card ID	Acct Type DE 3	Amt. DE 4	Expected Result	Comments
PMT01	0200	Valid 1	001000 Savings	10.00	DE 39 = 00	Payment to Savings—MCC in DE 18 = 6532; DE 48 TCC = P Valid Point-of-Service Entry Mode
PMT02	0200	Valid 2	002000 Checking	20.00	DE 39 = 00	Payment to Checking—MCC in DE 18 = 6532; DE 48 TCC = P Valid Point-of-Service Entry Mode
PMT03	0200	Valid 3	000000 NAS	30.00	DE 39 = 00	Payment to NAS—MCC in DE 18 = 6532; DE 48 TCC = P
PMT04	0200	Valid 1	000000 NAS	40.00	DE 39 = 00	Payment to NAS—MCC in DE 18 = 6532; DE 48 TCC = P Capture Card
PMT05	0200	Valid 2	002000 Checking	50.00	DE 39 = 00	Payment to Checking—MCC in DE 18 = 6532; DE 48 TCC = P
PMT06	0200	Valid 3	001000 Savings	60.00	DE 39 = 00	Payment to Savings—MCC in DE 18 = 6532; DE 48 TCC = P
PMT07	0200	Valid 1	002000 Checking	70.00	DE 39 = 00	Payment to Checking—MCC in DE 18 = 6533; DE48 TCC = P
PMT08	0200	Valid 2	002000 Checking	80.00	DE 39 = 00	Payment to Checking—MCC in DE 18 = 6533; DE 48 TCC = P
PMT08	0420	Valid 2	002000 Checking	80.00	DE 39 = 00	Full Reversal—POI Failure—Advice Reason Code 4500018 Replacement amount = 00.00
PMT09	0200	Valid 3	002000 Checking	90.00	DE 39 = 00	Payment to Checking—MCC in DE 18 = 6532; DE 48 TCC = P
PMT10	0200	Valid 1	000000 NAS	100.00	DE 39 = 00	Payment to NAS—MCC in DE 18 = 6533; DE 48 TCC = P

End of Script

Stand-In Processing Enhancements

Debit-Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	VALID Objective	Expected Results
STND501	0200	VALID 2	012000 Checking	80.00	MasterCard	ATM Withdrawal from Checking	MCC = 6011
	0210		012000 Checking	80.00	Member		Approved DE 39 = 00
STND502	0200	VALID 3	010000 NAS	40.00	MasterCard	ATM Withdrawal from No Account Specified	MCC = 6011
	0210		010000 NAS	40.00	Stand-In		Approved DE 39 = 00
STND503	0200	VALID 2	300000 NAS	00	MasterCard	ATM Balance Inquiry Denied in Stand-In processing	MCC = 6011
	0210		300000 NAS	00	Stand-In		Denied DE 39 = 91
STND504	0200	VALID 3	010000 NAS	20.00	MasterCard	ATM Withdrawal from No Account Specified	MCC = 6011
	0210		010000 NAS	20.00	Stand-In		Approved DE 39 = 00
STND504	0420	VALID 2	010000 NAS	20.00	MasterCard	Full Reversal-APS signed-out Zero dispensed	Advice reason code = 2010018 Replacement amount = 00.00
	0430		010000 NAS	20.00	Stand-In		Approved DE 39 = 00
STND505	0200	VALID 1	012000 Checking	30.00	MasterCard	ATM Withdrawal from Checking	MCC = 6011
	0210		012000 Checking	30.00	Stand-In		Approved DE 39 = 00

Test Scripts
Stand-In Processing Enhancements

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	VALID Objective	Expected Results
STND505	0420	VALID 1	012000 Checking	30.00	MasterCard	Reversal–APS timed-out Over dispensed	Advice reason code = 2020018 Replacement amount = 50.00
	0430		012000 Checking	30.00	Stand-In		Approved DE 39 = 00
STND506	0200	VALID 3	011000 Savings	20.00	MasterCard	ATM Withdrawal from Checking	MCC = 6011
	0210		011000 Savings	20.00	Stand-In		Approved DE 39 = 00
STND506	0420	VALID 3	011000 Savings	20.00	MasterCard	Full Reversal–APS unavailable Zero dispensed	Advice reason code = 2030018 Replacement amount = 00.00
	0430		011000 Savings	20.00	Stand-In		Approved DE 39 = 00
STND507	0200	VALID 2	010000 NAS	80.00	MasterCard	ATM Withdrawal from No Account Specified	MCC = 6011
	0210		010000 NAS	80.00	Member		Denied DE 39 = 80 Stand-In Invoked
STND508	0200	VALID 3	012000 Checking	100.00	MasterCard	ATM Withdrawal from Checking	MCC = 6011
	0210		012000 Checking	100.00	Member		Denied DE 39 = 91 Stand-In Invoked
STND509	0200	VALID 4	000000 NAS	20.00	MasterCard	Purchase from No Account Specified	MCC = 5999
	0210		000000 NAS	20.00	Member		Approved DE 39 = 00
STND510	0200	VALID 5	000000 NAS	60.00	MasterCard	Purchase from No Account Specified	MCC = 5999
	0210		000000 NAS	60.00	Stand-In		Approved DE 39 = 00
STND511	0200	VALID 6	002000 Checking	80.00	MasterCard	Purchase from Checking	MCC = 5999
	0210		002000 Checking	80.00	Stand-In		Approved DE 39 = 00

Test Scripts

Stand-In Processing Enhancements

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	VALID Objective	Expected Results
STND512	0200	VALID 5	002000 Checking	10.00	MasterCard	Purchase from Checking	MCC = 5999
	0210		002000 Checking	10.00	Stand-In		Approved DE 39 = 00
STND513	0200	VALID 4	001000 Savings	100.00	MasterCard	Pre-Authorization Purchase from Savings	MCC = 5999
	0210		001000 Savings	100.00	Stand-In		Approved DE 39 = 00
STND513	0220	VALID 4	001000 Savings	100.00	MasterCard	Full Pre- Authorization Completion–APS signed-out	Advice reason code = 201 Full Completion
	0230		001000 Savings	100.00	Stand-In		Approved DE 39 = 00
STND514	0200	VALID 5	002000 Checking	140.00	MasterCard	Pre-Authorization Purchase from Checking	MCC = 5999
	0210		002000 Checking	140.00	Stand-In		Approved DE 39 = 00
STND514	0220	VALID 5	002000 Checking	140.00	MasterCard	Partial Pre- Authorization Completion–APS signed-out	Advice reason code = 2010010 Replacement amount = 120.00
	0230		002000 Checking	140.00	Stand-In		Approved DE 39 = 00
STND515	0200	VALID 1	002000 Checking	60.00	MasterCard	Purchase from Checking	MCC = 5999
	0210		002000 Checking	60.00	Stand-In		Approved DE 39 = 00
STND515	0420	VALID 1	002000 Checking	60.00	MasterCard	Full Reversal–APS signed-out Zero dispensed	Advice reason code = 2010018 Replacement amount = 00.00
	0430		002000 Checking	60.00	Stand-In		Approved DE 39 = 00

Test Scripts

Stand-In Processing Enhancements

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	VALID Objective	Expected Results
STND516	0200	VALID 2	002000 Checking	30.00	MasterCard	Pre-Authorization Purchase from Checking	MCC = 5999
	0210		002000 Checking	30.00	Stand-In		Approved DE 39 = 00
STND516	0220	VALID 2	002000 Checking	30.00	MasterCard	Full Pre-Authorization Completion–APS timed-out	Advice reason code = 202 Full Completion
	0230		002000 Checking	30.00	Stand-In		Approved DE 39 = 00
STND517	0200	VALID 3	001000 Saving	50.00	MasterCard	Pre-Authorization Purchase from Savings	MCC = 5999
	0210		001000 Savings	50.00	Stand-In		Approved DE 39 = 00
STND517	0220	VALID 3	001000 Savings	50.00	MasterCard	Partial Pre-Authorization Completion–APS timed-out	Advice reason code = 2020018 Replacement amount = 30.00
	0230		001000 Savings	50.00	Stand-In		Approved DE 39 = 00
STND518	0200	VALID 1	000000 NAS	70.00	MasterCard	Purchase from No Account Specified	MCC = 5999
	0210		000000 NAS	70.00	Stand-In		Approved DE 39 = 00
STND518	0420	VALID 1	000000 NAS	70.00	MasterCard	Full Reversal–APS timed-out Over dispensed	Advice reason code = 2020018 Replacement amount = 80.00
	0430		000000 NAS	70.00	Stand-In		Approved DE 39 = 00
STND519	0200	VALID 3	002000 Checking	90.00	MasterCard	Pre-Authorization Purchase from Checking	MCC = 5999
	0210		002000 Checking	90.00	Stand-In		Approved DE 39 = 00

Test Scripts

Stand-In Processing Enhancements

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	VALID Objective	Expected Results
STND519	0220	VALID 3	002000 Checking	90.00	MasterCard	Full Pre-Authorization Completion–APS unavailable	Advice reason code = 203 Full Completion
	0230		002000 Checking	90.00	Stand-In		Approved DE 39 = 00
STND520	0200	VALID 1	001000 Savings	20.00	MasterCard	Pre-Authorization Purchase from Savings	MCC = 5999
	0210		001000 Savings	20.00	Stand-In		Approved DE 39 = 00
STND520	0220	VALID 1	001000 Savings	20.00	MasterCard	Partial Pre-Authorization Completion–APS unavailable	Advice reason code = 2030010 Replacement amount = 10.00
	0230		001000 Savings	20.00	Stand-In		Approved DE 39 = 00
STND521	0200	VALID 2	001000 Savings	40.00	MasterCard	Purchase from Savings	MCC = 5999
	0210		001000 Savings	40.00	Stand-In		Approved DE 39 = 00
STND521	0420	VALID 2	001000 Savings	40.00	MasterCard	Full Reversal–APS unavailable Zero dispensed	Advice reason code = 2030018 Replacement amount = 00.00
	0430		001000 Savings	40.00	Stand-In		Approved DE 39 = 00
STND522	0200	VALID 2	002000 Checking	00.00	MasterCard	Balance Inquiry– Denied in Stand-In processing	MCC = 5999
	0210		002000 Checking	00.00	Stand-In		Denied DE 39 = 91
STND523	0800	N/A	N/A	N/A	Member	Sign-on message	DE 70 = 061
	0810	N/A	N/A	N/A	MasterCard		Approved DE 39 = 00

Test Scripts
Stand-In Processing Enhancements

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	VALID Objective	Expected Results
STND524	0200	VALID 2	002000 Checking	90.00	MasterCard	Purchase from Checking	MCC = 5999 Issuer is online
	0210		002000 Checking	90.00	Member		Approved DE 39 = 00
STND525	0200	VALID 6	001000 Savings	100.00	MasterCard	Purchase from Savings	MCC = 5999 Issuer is online
	0210		001000 Savings	100.00	Member		Denied DE 39 = 80 Stand-In invoked
STND526	0200	VALID 4	001000 Savings	75.00	MasterCard	Purchase from Savings	MCC = 5999—Issuer is online
	0210		001000 Savings	75.00	Member		Denied DE 39 = 91 Stand-In invoked
STND527	0220	VALID 2	012000 Checking	80.00	MasterCard	Force Post Transaction for STND501	DE 38 = Switch Serial Number Issuer is online
	0230		012000 Checking	80.00	Member		Approved DE 39 = 00
STND528	0220	VALID 3	010000 NAS	40.00	MasterCard	Force Post Transaction for STND502	DE 38 = Switch Serial Number Issuer is online
	0230		010000 NAS	40.00	Member		Approved DE 39 = 00
STND529	0220	VALID 2	300000 NAS	00.00	MasterCard	Denied Transaction for STND503—Only if member receive denials online	DE 38 = Switch Serial Number Issuer is online
	0230		300000 NAS	00.00	Member		Approved DE 39 = 00
STND530	0220	VALID 3	010000 NAS	20.00	MasterCard	Force Post Transaction for STND504	DE 38 = Switch Serial Number Issuer is online
	0230		010000 NAS	20.00	Member		Approved DE 39 = 00

Test Scripts

Stand-In Processing Enhancements

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	VALID Objective	Expected Results
STND531	0220	VALID 1	012000 Checking	30.00	MasterCard	Force Post Transaction for STND505	DE 38 = Switch Serial Number Issuer is online
	0230		012000 Checking	30.00	Member		Approved DE 39 = 00
STND532	0220	VALID 3	011000 Savings	20.00	MasterCard	Force Post Transaction for STND506	DE 38 = Switch Serial Number Issuer is online
	0230		011000 Savings	20.00	Member		Approved DE 39 = 00
STND533	0220	VALID 2	010000 NAS	80.00	MasterCard	Force Post Transaction for STND507	DE 38 = Switch Serial Number Issuer is online
	0230		010000 NAS	80.00	Member		Approved DE 39 = 00
STND534	0220	VALID 3	012000 Checking	100.00	MasterCard	Force Post Transaction for STND508	DE 38 = Switch Serial Number Issuer is online
	0230		012000 Checking	100.00	Member		Approved DE 39 = 00
STND535	0220	VALID 4	000000 NAS	20.00	MasterCard	Force Post Transaction for STND509	DE 38 = Switch Serial Number Issuer is online
	0230		000000 NAS	20.00	Member		Approved DE 39 = 00
STND536	0220	VALID 5	000000 NAS	25.00	MasterCard	Force Post Transaction for STND510	DE 38 = Switch Serial Number Issuer is online
	0230		000000 NAS	25.00	Stand-In		Approved DE 39 = 00
STND537	0220	VALID 6	002000 Checking	80.00	MasterCard	Force Post Transaction for STND511	DE 38 = Switch Serial Number Issuer is online
	0230		002000 Checking	80.00	Member		Approved DE 39 = 00

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	VALID Objective	Expected Results
STND538	0220	VALID 5	002000 Checking	10.00	MasterCard	Force Post Transaction for STND512	DE 38 = Switch Serial Number Issuer is online
	0230		002000 Checking	10.00	Member		Approved DE 39 = 00
STND539	0220	VALID 4	001000 Savings	100.00	MasterCard	Force Post Transaction for STND513	DE 38 = Switch Serial Number Issuer is online
	0230		001000 Savings	100.00	Member		Approved DE 39 = 00
STND540	0220	VALID 5	002000 Checking	140.00	MasterCard	Force Post Transaction for STND514	DE 38 = Switch Serial Number Issuer is online
	0230		002000 Checking	140.00	Member		Approved DE 39 = 00
STND541	0220	VALID 1	002000 Checking	60.00	MasterCard	Force Post Transaction for STND515	DE 38 = Switch Serial Number Issuer is online
	0230		002000 Checking	60.00	Member		Approved DE 39 = 00
STND542	0220	VALID 2	002000 Checking	30.00	MasterCard	Force Post Transaction for STND516	DE 38 = Switch Serial Number Issuer is online
	0230		002000 checking	30.00	Member		Approved DE 39 = 00
STND543	0220	VALID 3	001000 Savings	50.00	MasterCard	Force Post Transaction for STND517	DE 38 = Switch Serial Number Issuer is online
	0230		001000 Savings	50.00	Member		Approved DE 39 = 00
STND544	0220	VALID 1	000000 NAS	70.00	MasterCard	Force Post Transaction for STND518	DE 38 = Switch Serial Number Issuer is online
	0230		000000 NAS	70.00	Member		Approved DE 39 = 00

Test Scripts

Stand-In Processing Enhancements

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	VALID Objective	Expected Results
STND545	0220	VALID 3	002000 Checking	90.00	MasterCard	Force Post Transaction for STND519	DE 38 = Switch Serial Number Issuer is online
	0230		002000 Checking	90.00	Member		Approved DE 39 = 00
STND546	0220	VALID 1	001000 Savings	20.00	MasterCard	Force Post Transaction for STND520	DE 38 = Switch Serial Number Issuer is online
	0230		001000 Savings	20.00	Member		Approved DE 39 = 00
STND547	0220	VALID 2	00100 Savings	40.00	MasterCard	Force Post Transaction for STND521	DE 38 = Switch Serial Number Issuer is online
	0230		001000 Savings	40.00	Member		Approved DE 39 = 00
STND548	0220	VALID 2	002000 Checking	00.00	MasterCard	Denied Transaction for STND522–Only if member receive denials online	DE 38 = Switch Serial Number Issuer is online
	0230		002000 Checking	00.00	Member		Approved DE 39 = 00
STND549	0220	VALID 2	002000 Checking	90.00	MasterCard	Force Post Transaction for STND524	DE 38 = Switch Serial Number Issuer is online
	0230		002000 Checking	90.00	Member		Approved DE 39 = 00
STND550	0220	VALID 6	001000 Savings	100.00	MasterCard	Force Post Transaction for STND525	DE 38 = Switch Serial Number Issuer is online
	0230		001000 Savings	100.00	Member		Approved DE 39 = 00
STND551	0220	VALID 4	001000 Savings	75.00	MasterCard	Force Post Transaction for STND526	DE 38 = Switch Serial Number Issuer is online
	0230		001000 Savings	75.00	Member		Approved DE 39 = 00

End of Script

ATM Deposit Sharing

Issuer—Day 1

ATM Deposit Sharing – Issuer—Day 1

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST1	0200	Member provided	011000	\$25.00	MasterCard	ATM Withdrawal from Savings	
	0210				Member		Approved, DE 39 = 00
TST2	0200	Member provided	012000	\$35.00	MasterCard	ATM Withdrawal from Checking	
	0210				Member		Approved, DE 39 = 00
TST3	0200	Member provided	210010	\$45.67	MasterCard	ATM Deposit to Savings	
	0210				Member		Approved, DE 39 = 00
TST4	0200	Member provided	210020	\$55.00	MasterCard	ATM Deposit to Checking	
	0210				Member		Approved, DE 39 = 00
TST5	0200	Member provided	210020	\$65.17	MasterCard	ATM Deposit to Checking	
	0210				Member		Approved, DE 39 = 00
TST6	0422	Member provided	210020	\$65.17	MasterCard	Full Reversal of ATM Deposit to Checking	
	0432				Member		Approved, DE 39 = 00
TST7	0200	Member provided	210010	\$80.00	MasterCard	ATM Deposit to Savings	
	0210				Member		Approved, DE 39 = 00

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ATM Deposit Sharing

ATM Deposit Sharing – Issuer—Day 1

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST8	0422	Member provided	210010	\$80.00	MasterCard	Full Reversal of ATM Deposit to Savings	
	0432				Member		Approved, DE 39 = 00
TST9	0200	Member provided	210020	\$125.00	MasterCard	ATM Deposit to Checking	
	0210				Member		Approved, DE 39 = 00
TST10	0422	Member provided	210020	\$125.00	MasterCard	Full Reversal of ATM Deposit to Checking	
	0432				Member		Approved, DE 39 = 00
TST11	0220	Member provided	210020	\$125.00	MasterCard	Second Completion of ATM Deposit to Checking	
	0230				Member		Approved, DE 39 = 00
TST12	0200	Member provided	210010	\$65.00	MasterCard	ATM Deposit to Savings	Enter Invalid PIN
	0210				Member		Denied Invalid PIN, DE 39 = 55
TST13	0200	Member provided	210010	\$145.27	MasterCard	ATM Deposit to Savings	
	0210				Member		Approved, DE 39 = 00
TST14	0200	Member provided	210010	\$25.20	MasterCard	ATM Deposit to Savings	
	0210				Member		Approved, DE 39 = 00

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ATM Deposit Sharing – Issuer—Day 1

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST15	0200	Member provided	210020	\$335.00	MasterCard	ATM Deposit to Checking	
	0210				Member		Approved, DE 39 = 00
TST16	0200	Member provided	210010	\$167.23	MasterCard	ATM Deposit to Savings	
	0210				Member		Approved, DE 39 = 00
TST17	0200	Member provided	210020	\$575.00	MasterCard	ATM Deposit to Checking	
	0210				Member		Approved, DE 39 = 00
TST18	0200	Member provided	210020	\$100.17	MasterCard	ATM Deposit to Checking	
	0210				Member		Approved, DE 39 = 00
TST19	0200	Member provided	210020	\$96.70	MasterCard	ATM Deposit to Checking	
	0210				Member		Approved, DE 39 = 00
TST20	0200	Member provided	210010	\$80.00	MasterCard	ATM Deposit to Savings	
	0210				Member		Approved, DE 39 = 00
TST21	0200	Member provided	210010	\$280.00	MasterCard	ATM Deposit to Savings	
	0210				Member		Approved, DE 39 = 00

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ATM Deposit Sharing

ATM Deposit Sharing – Issuer—Day 1

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST22	0200	Member provided	210020	\$125.00	MasterCard	ATM Deposit to Checking	
	0210				Member		Approved, DE 39 = 00
TST23	0200	Member provided	210020	\$100.00	MasterCard	ATM Deposit to Checking	
	0210				Member		Approved, DE 39 = 00
TST24	0200	Member provided	210020	\$125.00	MasterCard	ATM Deposit to Checking	
	210				Member		Approved, DE 39 = 00

ATM Deposit Sharing—Issuer—Day 2

ATM Deposit Sharing – Issuer—Day 2

Item No.	MTI	Card Name	Acct Type	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST26	0422	Member provided			MasterCard	Empty Deposit Envelope Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 24
	0432				Member		Approved, DE 39 = 00
TST27	0422	Member provided			MasterCard	Error in Addition Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 25
	0432				Member		Approved, DE 39 = 00
TST28	0422	Member provided			MasterCard	Error in Settlement Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 26
	0432				Member		Approved, DE 39 = 00
TST29	0422	Member provided			MasterCard	Customer Keyed Wrong Amount Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 27
	0432				Member		Approved, DE 39 = 00
TST30	0422	Member provided			MasterCard	Non-Cash Item Deposited Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 28
	0432				Member		Approved, DE 39 = 00

Test Scripts

ATM Deposit Sharing

ATM Deposit Sharing – Issuer—Day 2

Item No.	MTI	Card Name	Acct Type	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST31	0422	Member provided			MasterCard	Foreign/Counterfeit Currency Deposited Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 29
	0432				Member		Approved, DE 39 = 00
TST32	0422	Member provided			MasterCard	Returned Item Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 20
	0432				Member		Approved, DE 39 = 00
							MasterCard does not permit Chargebacks on original transactions. Issuers may process a chargeback on the acquirer adjustment if applicable

ATM Deposit Sharing—Issuer—Day 3

ATM Deposit Sharing – Issuer—Day 3

Item No.	MTI	Card Name	Acct Type	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST33	0422	Member provided			MasterCard	Cardholder Disputed Amount	DE 60, subelement 1 = 489 Advice Detail Code = 30
	0432				Member		Approved, DE 39 = 00

End of Script

ATM Deposit Sharing—Acquirer—Day 1

ATM Deposit Sharing—Acquirer—Day 1

Item No.	MTI	Card Name	Acct Type	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST1	0200	1V12A	011000	\$20.00	Member	ATM Withdrawal from Savings	
	0210				MasterCard		Approved, DE 39 = 00
TST2	0200	1V12A	012000	\$35.00	Member	ATM Withdrawal from Checking	
	0210				MasterCard		Approved, DE 39 = 00
TST3	0200	1V12A	210010	\$64.00	Member	ATM Deposit to Savings	
	0210				MasterCard		Approved, DE 39 = 00
TST4	0200	1V12A	210020	\$85.00	Member	ATM Deposit to Checking	
	0210				MasterCard		Approved, DE 39 = 00
TST5	0200	1V12A	210020	\$75.61	Member	ATM Deposit to Checking	
	0210				MasterCard		Approved, DE 39 = 00
TST6	0422	1V12A	210020	\$75.61	Member	Full Reversal of ATM Deposit to Checking	
	0432				MasterCard		Approved, DE 39 = 00
TST7	0200	1V12A	210010	\$50.00	Member	ATM Deposit to Savings	
	0210				MasterCard		Approved, DE 39 = 00

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ATM Deposit Sharing—Acquirer—Day 1

Item No.	MTI	Card Name	Acct Type	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST8	0422	1V12A	210010	\$50.00	Member	Full Reversal of ATM Deposit to Savings	
	0432				MasterCard		Approved, DE 39 = 00
TST9	0200	1V12A	210020	\$212.00	Member	ATM Deposit to Checking	
	0210				MasterCard		Approved, DE 39 = 00
TST10	0420	1V12A	210020	\$212.00	Member	Full Reversal of ATM Deposit to Checking	
	0430				MasterCard		Approved, DE 39 = 00
TST11	0220	1V12A	210020	\$212.00	Member	Second Completion of ATM Deposit to Checking	
	0230				MasterCard		Approved, DE 39 = 00
TST12	0200	1V12A	210010	\$56.00	Member	ATM Deposit to Savings	Enter Invalid PIN
	0210				MasterCard		Denied Invalid PIN, DE 39 = 55
TST13	0200	1V12A	210010	\$127.19	Member	ATM Deposit to Savings	
	0210				MasterCard		Approved, DE 39 = 00
TST14	0200	1V12A	210010	\$225.25	Member	ATM Deposit to Savings	
	0210				MasterCard		Approved, DE 39 = 00

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Test Scripts

ATM Deposit Sharing

ATM Deposit Sharing—Acquirer—Day 1

Item No.	MTI	Card Name	Acct Type	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST15	0200	1V13A	210020	\$375.00	Member	ATM Deposit to Checking	
	0210				MasterCard		Approved, DE 39 = 00
TST16	0200	1V13A	210010	\$97.82	Member	ATM Deposit to Savings	
	0210				MasterCard		Approved, DE 39 = 00
TST17	0200	1V13A	210020	\$75.00	Member	ATM Deposit to Checking	
	0210				MasterCard		Approved, DE 39 = 00
TST18	0200	1V13A	210020	\$100.00	Member	ATM Deposit to Checking	
	0210				MasterCard		Approved, DE 39 = 00
TST19	0200	1V13A	210020	\$90.70	Member	ATM Deposit to Checking	
	0210				MasterCard		Approved, DE 39 = 00
TST20	0200	1V13A	210010	\$30.00	Member	ATM Deposit to Savings	
	0210				MasterCard		Approved, DE 39 = 00
TST21	0200	1V13A	210010	\$200.80	Member	ATM Deposit to Savings	
	0210				MasterCard		Approved, DE 39 = 00
TST22	0200	1V13A	210020	\$25.00	Member	ATM Deposit to Checking	
	0210				MasterCard		Approved, DE 39 = 00

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ATM Deposit Sharing—Acquirer—Day 1

Item No.	MTI	Card Name	Acct Type	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST23	0200	1V13A	210020	\$100.00	Member	ATM Deposit to Checking	
	0210				MasterCard		Approved, DE 39 = 00
TST24	0200	1V13A	210020	\$125.00	Member	ATM Deposit to Checking	
	210				MasterCard		Approved, DE 39 = 00

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ATM Deposit Sharing–Acquirer—Day 2

ATM Deposit Sharing–Acquirer—Day 2

Item No.	MTI	Card Name	Acct Type	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST26	0420	MasterCard provided			MasterCard	Empty Deposit Envelope Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 24
	0430				Member		Approved, DE 39 = 00
TST27	0420	MasterCard provided			MasterCard	Error in Addition Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 25
	0430				Member		Approved, DE 39 = 00
TST28	0420	MasterCard provided			MasterCard	Error in Settlement Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 26
	0430				Member		Approved, DE 39 = 00
TST29	0420	MasterCard provided			MasterCard	Customer Keyed Wrong Amount Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 27
	0430				Member		Approved, DE 39 = 00
TST30	0420	MasterCard provided			MasterCard	Non-Cash Item Deposited Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 28
	0430				Member		Approved, DE 39 = 00

ATM Deposit Sharing—Acquirer—Day 2

Item No.	MTI	Card Name	Acct Type	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST31	0420	MasterCard provided			MasterCard	Foreign/ Counterfeit Currency Deposited Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 29
	0430				Member		Approved, DE 39 = 00
TST32	0420	MasterCard provided			MasterCard	Returned Item Adjustment	DE 60, subelement 1 = 490 Advice Detail Code = 20
	0430				Member		Approved, DE 39 = 00
							MasterCard does not permit Chargebacks on original transactions. Issuers may process a chargeback on the acquirer adjustment if applicable.

ATM Deposit Sharing—Acquirer—Day 3

ATM Deposit Sharing—Acquirer—Day 3

Item No.	MTI	Card Name	Acct Type	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
TST33	0420	MasterCard provided			MasterCard	Cardholder Disputed Amount	DE 60, subelement 1 = 489 Advice Detail Code = 30
	0430				Member		Approved, DE 39 = 00
	0430				Member		Approved, DE 39 = 00

End of Script

Cross Border Acquiring

Cirrus Acquirer (For DE 43 merchant country code non-USD)

Cross Border Acquiring—Cirrus Acquirer (For DE 43 merchant country code non-USD)							
Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA001	0800	N/A	N/A	N/A	Member	Sign On Request with DE 70 = 061. Valid values in DE 2 & DE 33	
	0810	N/A	N/A	N/A	MasterCard		Sign On Successful, DE 39 = 00
CBA002	0800	N/A	N/A	N/A	Member	Member originated echo test with DE 70 = 270.	
	0810	N/A	N/A	N/A	MasterCard		Successful echo test, DE 39 = 00
CBA003	0800	N/A	N/A	N/A	MasterCard	Dynamic Key Exchange. DE 70 = 161. Working key sent in DE 48 DE 126 Present	
	0810	N/A	N/A	N/A	Member		Key exchange successful, DE 39 = 00. Working key returned in DE 48
	0820	N/A	N/A	N/A	MasterCard	Acknowledgement of key exchange response.	
	0200	1V12A	010000 NAS	80.00	Member	ATM Withdrawal from NAS	MCC = 6011
	0210		0100000 NAS	80.00	MasterCard		Approved, DE 39 = 00. DE 126 present

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Test Scripts

Cross Border Acquiring

Cross Border Acquiring—Cirrus Acquirer (For DE 43 merchant country code non-USD)

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA005	0200	1V62A	010000 NAS	30.00	Member	ATM Withdrawal from NAS MPurchase from Checking	MCC = 6011
	0210		010000 NAS	30.00	MasterCard		Approved, DE39 = 00. DE 126 Present
CBA006	0420	1V62A	010000 NAS	30.00	Member	Full Reversal	MCC = 6011 and DE 126 present
	0430		010000 NAS	30.00	MasterCard		Approved, DE39 = 00. DE 126 Present
CBA007	0200	1V14A	012000 Checking	75.00	Member	ATM Withdrawal from Checking	MCC = 6011
	0210		012000 Checking	75.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA008	0420	1V14A	012000 Checking	75.00	Member	Full Reversal	MCC = 6011 DE 126 Present
	0430		012000 Checking	75.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA009	0220	1V14A	012000 Checking	75.00	Member	Second Completion	MCC = 6011 DE 126 Present
	0230		012000 Checking	75.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA010	0200	1LOWA	012000 Checking	30.00	Member	ATM Withdrawal from Checking	MCC = 6011
	0210		012000 Checking	30.00	MasterCard		Denied, DE 39 = 51. DE 126 Present

Cross Border Acquiring—Cirrus Acquirer (For DE 43 merchant country code non-USD)

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA011	0200	1V12A	012000 Checking	50.00	Member	ATM Withdrawal from Checking	MCC = 6011
	0210		012000 Checking	50.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA012	0420	1V12A	012000 Checking	30.00	Member	Partial Reversal	MCC = 6011 and DE 126 present
	0430		012000 Checking	30.00	MasterCard		Approved, DE 39 = 00. DE 126 Present

End of Script

Cirrus Acquirer (For DE 43 merchant country code USD)

Cross Border Acquiring—Cirrus Acquirer (For DE 43 merchant country code USD)

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA001	0800	N/A	N/A	N/A	Member	Sign On Request with DE 70 = 061. Valid values in DE 2 & DE 33	
	0810	N/A	N/A	N/A	MasterCard		Sign On Successful, DE 39 = 00
CBA002	0800	N/A	N/A	N/A	Member	Member originated echo test with DE 70 = 270.	
	0810	N/A	N/A	N/A	MasterCard		Successful echo test, DE 39 = 00
CBA003	0800	N/A	N/A	N/A	MasterCard	Dynamic Key Exchange. DE 70 = 161. Working key sent in DE 48 DE 126 present	
	0810	N/A	N/A	N/A	Member		Key exchange successful, DE 39 = 00. Working key returned in DE48
	0820	N/A	N/A	N/A	MasterCard	Acknowledgement of key exchange response.	
CBA004	0200	1V12A	010000 NAS	80.00	Member	ATM Withdrawal from NAS	MCC = 6011
	0210		0100000 NAS	80.00	MasterCard		Approved, DE 39 = 00. DE 126 is present
CBA005	0200	1VEN	010000 NAS	30.00	Member	ATM Withdrawal from NAS MPurchase from Checking	MCC = 6011
	0210		010000	30.00	MasterCard		Approved,

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Cross Border Acquiring—Cirrus Acquirer (For DE 43 merchant country code USD)

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
			NAS				DE 39 = 00. DE 126 Present
CBA006	0420	1VEN	010000 NAS	30.00	Member	Full Reversal	MCC = 6011 and DE 126 present
	0430		010000 NAS	30.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA007	0200	1VEN	012000 Checking	75.00	Member	ATM Withdrawal from Checking	MCC = 6011
	0210		012000 Checking	75.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA008	0420	1VEN	012000 Checking	75.00	Member	Full Reversal	MCC = 6011 DE 126 Present
	0430		012000 Checking	75.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA009	0220	1VEN	012000 Checking	75.00	Member	Second Completion	MCC = 6011 DE 126 Present
	0230		012000 Checking	75.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA011	0200	1VEN	012000 Checking	50.00	Member	ATM Withdrawal from Checking	MCC = 6011
	0210		012000 Checking	50.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA012	0420	1VEN	012000 Checking	30.00	Member	Partial Reversal	MCC = 6011 and DE 126 present
	0430		012000 Checking	30.00	MasterCard		Approved, DE 39 = 00. DE 126 Present

End of Script

Maestro Acquirer (For DE 43 merchant country code non USD)

Cross Border Acquiring—Maestro Acquirer (For DE 43 merchant country code non USD)							
Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA001	0800	N/A	N/A	N/A	Member	Sign On Request with DE 70 = 061. Valid values in DE 2 & DE 33	
	0810	N/A	N/A	N/A	MasterCard		Sign On Successful, DE 39 = 00
CBA002	0800	N/A	N/A	N/A	Member	Member originated echo test with DE 70 = 270.	
	0810	N/A	N/A	N/A	MasterCard		Successful echo test, DE 39 = 00
CBA003	0800	N/A	N/A	N/A	MasterCard	Dynamic Key Exchange. DE 70 = 161. Working key sent in DE 48 DE 126 present	
	0810	N/A	N/A	N/A	Member		Key exchange successful, DE 39 = 00. Working key returned in DE 48
	0820	N/A	N/A	N/A	MasterCard	Acknowledgement of key exchange response.	
	0820	N/A	N/A	N/A	MasterCard		
CBA004	0200	1V62A	002000 Checking	10.00	Member	Purchase from Checking	MCC = 5999
	0210		002000 Checking	10.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA005	0200	1V62A	001000 Saving	20.00	Member	Purchase from Savings	MCC = 5999 and DE 126 present
	0210		001000 Saving	20.00	MasterCard		Approved DE 39 = 00. DE 126 Present

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Cross Border Acquiring—Maestro Acquirer (For DE 43 merchant country code non USD)

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA006	0200	1V12A	000000 NAS	30.00	Member	Purchase from NAS	MCC = 5999
	0210		000000 NAS	30.00	MasterCard		Approved DE 39 = 00. DE 126 Present
CBA007	0420	1V12A	000000 NAS	30.00	Member	Full Reversal	MCC = 5999 and DE 126 present
	0430		000000 NAS	30.00	MasterCard		Approved DE 39 = 00. DE 126 Present
CBA008	0200	1V14A	002000 Checking	25.00	Member	Pre-auth from Checking	MCC = 5999
	0210		002000 Checking	25.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA009	0220	1V14A	002000 Checking	18.60	Member	Pre-auth Completion	MCC = 5999 DE 126 Present
	0230		002000 Checking	18.60	MasterCard		Approved DE 39 = 00. DE 126 Present
CBA010	0200	1PINA	000000 NAS	20.80	Member	Purchase from NAS	MCC = 5999
	0210		000000 NAS	20.80	MasterCard		Denied DE 39 = 55. DE 126 Present
CBA011	0200	1V62A	000000 NAS	80.00	Member	Purchase from NAS	MCC = 5999
	0210		000000 NAS	80.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA012	0420	1V62A	000000 NAS	60.00	Member	Partial Reversal Replacement Amount 60.00	Advice Reason Code 451 0010 and DE 126 present
	0430		000000 NAS	60.00	MasterCard		Approved DE 39 = 00. DE 126 Present

Test Scripts

Cross Border Acquiring

Cross Border Acquiring—Maestro Acquirer (For DE 43 merchant country code non USD)

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA013	0200	1V12A	001000 Saving	50.00	Member	Pre-auth from Savings	MCC = 5999
	0210		001000 Saving	50.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA014	0220	1V12A	001000 Saving	45.00	Member	Partial Pre-auth completion	Advice Reason Code 251 0010 and DE 126 present
	0230		001000 Saving	45.00	MasterCard		Approved DE 39 = 00. DE 126 Present

End of Script

Maestro Acquirer (For DE 43 merchant country code USD)

Cross Border Acquiring—Maestro Acquirer (For DE 43 merchant country code USD)

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA001	0800	N/A	N/A	N/A	Member	Sign On Request with DE 70 = 061. Valid values in DE 2 & DE 33	
	0810	N/A	N/A	N/A	MasterCard		Sign On Successful, DE 39 = 00
CBA002	0800	N/A	N/A	N/A	Member	Member originated echo test with DE 70 = 270.	
	0810	N/A	N/A	N/A	MasterCard		Successful echo test, DE 39 = 00
CBA003	0800	N/A	N/A	N/A	MasterCard	Dynamic Key Exchange. DE 70 = 161. Working key sent in DE 48 DE 126 present	
	0810	N/A	N/A	N/A	Member		Key exchange successful, DE 39 = 00. Working key returned in DE 48
	0820	N/A	N/A	N/A	MasterCard	Acknowledgement of key exchange response.	
CBA004	0200	1V12A	002000 Checking	10.00	Member	Purchase from Checking	MCC = 5999
	0210		002000 Checking	10.00	MasterCard		Approved, DE 39 = 00. DE 126 is Present
CBA005	0200	1VEN	001000 Saving	20.00	Member	Purchase from Savings	MCC = 5999 and DE 126 present
	0210		001000 Saving	20.00	MasterCard		Approved DE 39 = 00. DE 126 Present

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Test Scripts

Cross Border Acquiring

Cross Border Acquiring—Maestro Acquirer (For DE 43 merchant country code USD)

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA006	0200	1VEN	000000 NAS	30.00	Member	Purchase from NAS	MCC = 5999
	0210		000000 NAS	30.00	MasterCard		Approved DE 39 = 00. DE 126 Present.
CBA007	0420	1VEN	000000 NAS	30.00	Member	Full Reversal	MCC = 5999 and DE 126 present
	0430		000000 NAS	30.00	MasterCard		Approved DE 39 = 00. DE 126 Present
CBA008	0200	1VEN	002000 Checking	25.00	Member	Pre-auth from Checking	MCC = 5999
	0210		002000 Checking	25.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA009	0220	1VEN	002000 Checking	18.60	Member	Pre-auth Completion	MCC = 5999 DE 126 Present
	0230		002000 Checking	18.60	MasterCard		Approved DE 39 = 00. DE 126 Present
CBA011	0200	1VEN	000000 NAS	80.00	Member	Purchase from NAS	MCC = 5999
	0210		000000 NAS	80.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA012	0420	1VEN	000000 NAS	60.00	Member	Partial Reversal Replacement Amount 60.00	Advice Reason Code 451 0010 and DE 126 present
	0430		000000 NAS	60.00	MasterCard		Approved DE 39 = 00. DE 126 Present

Cross Border Acquiring—Maestro Acquirer (For DE 43 merchant country code USD)

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA013	0200	1VEN	001000 Saving	50.00	Member	Pre-auth from Savings	MCC = 5999
	0210		001000 Saving	50.00	MasterCard		Approved, DE 39 = 00. DE 126 Present
CBA014	0220	1V12A	001000 Saving	45.00	Member	Partial Pre-auth completion	Advice Reason Code 251 0010 and DE 126 present
	0230		001000 Saving	45.00	MasterCard		Approved DE 39 = 00. DE 126 is Present

End of Script

Cirrus Issuer

Cross Border Acquiring—Cirrus Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA001	0800	N/A	N/A	N/A	Member	Sign On Request with DE 70 = 061. Valid values in DE 2 and DE 33	
	0810	N/A	N/A	N/A	MasterCard		Sign On Successful, DE 39 = 00
CBA002	0800	N/A	N/A	N/A	Member	Member originated echo test with DE 70 = 270.	
	0810	N/A	N/A	N/A	MasterCard		Successful echo test, DE 39 = 00
CBA003	0800	N/A	N/A	N/A	MasterCard	Dynamic Key Exchange. DE 70 = 161. Working key sent in DE 48 DE 126 present	
	0810	N/A	N/A	N/A	Member		Key exchange successful, DE 39 = 00. Working key returned in DE 48
	0820	N/A	N/A	N/A	MasterCard	Acknowledgement of key exchange response.	
CBA004	0200		010000 NAS	80.00	MasterCard	ATM Withdrawal from NAS International Transaction	MCC = 6011 and DE 126 is present
	0210		0100000 NAS	80.00	Member		Approved, DE 39 = 00.

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Cross Border Acquiring—Cirrus Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA005	0200		010000 NAS	30.00	MasterCard	ATM Withdrawal from NAS International Transaction MPurchase from Checking	MCC = 6011 and DE 126 present
	0210		010000 NAS	30.00	Member		Approved, DE 39 = 00.
CBA006	0420		010000 NAS	30.00	MasterCard	Full Reversal	MCC = 6011 and DE 126 present
	0430		010000 NAS	30.00	Member		Approved, DE 39 = 00.
CBA007	0200		011000 Saving	75.00	MasterCard	ATM Withdrawal from Checking International Transaction	MCC = 6011 and DE 126 present
	0210		011000 Saving	75.00	Member		Approved, DE 39 = 00.
CBA008	0420		012000 Saving	75.00	MasterCard	Full Reversal	MCC = 6011 and DE 126 present
	0430		012000 Saving	75.00	Member		Approved, DE 39 = 00.
CBA009	0220		012000 Checking	75.00	MasterCard	Second Completion	MCC = 6011 and DE 126 present
	0230		012000 Checking	75.00	Member		Approved, DE 39 = 00.
CBA010	0200		012000 Checking	30.00	MasterCard	ATM Withdrawal from Checking International Transaction	MCC = 6011 and DE 126 present
	0210		012000 Checking	30.00	Member		Denied, DE 39 = 51.

Test Scripts

Cross Border Acquiring

Cross Border Acquiring—Cirrus Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA011	0200		012000 Checking	50.00	MasterCard	ATM Withdrawal from Checking International Transaction	MCC = 6011 and DE 126 present
	0210		012000 Checking	50.00	Member		Approved, DE 39 = 00.
CBA012	0420		012000 Checking	30.00	MasterCard	Partial Reversal	MCC = 6011 and DE 126 present
	0430		012000 Checking	30.00	Member		Approved, DE 39 = 00.
	0430		012000 Checking	30.00	Member		Approved, DE 39 = 00.

End of Script

Maestro Issuer

Cross Border Acquiring—Maestro Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA001	0800	N/A	N/A	N/A	Member	Sign On Request with DE 70 = 061. Valid values in DE 2 and DE 33	
	0810	N/A	N/A	N/A	MasterCard		Sign On Successful, DE 39 = 00
CBA002	0800	N/A	N/A	N/A	Member	Member originated echo test with DE 70 = 270.	
	0810	N/A	N/A	N/A	MasterCard		Successful echo test, DE 39 = 00
CBA003	0800	N/A	N/A	N/A	MasterCard	Dynamic Key Exchange. DE 70 = 161. Working key sent in DE 48 DE 126 present	
	0810	N/A	N/A	N/A	Member		Key exchange successful, DE 39 = 00. Working key returned in DE48
	0820	N/A	N/A	N/A	MasterCard	Acknowledgement of key exchange response.	
CBA004	0200		002000 Checking	10.00	MasterCard	Purchase from Checking – Issuer and Acquirer currencies are the same	MCC = 5999 – DE 126 is present
	0210		002000 Checking	10.00	Member		Approved, DE 39 = 00.

Test Scripts

Cross Border Acquiring

Cross Border Acquiring—Maestro Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA005	0200		001000 Saving	20.00	MasterCard	Purchase from Savings - Issuer and Acquirer currencies are different	MCC = 5999 and DE 126 is present
	0210		001000 Saving	20.00	Member		Approved DE 39 = 00.
CBA006	0200		000000 NAS	30.00	MasterCard	Purchase from NAS – Issuer and Acquirer currencies are different	MCC = 5999 and DE 126 present
	0210		000000 NAS	30.00	Member		Approved DE 39 = 00.
CBA007	0420		000000 NAS	30.00	MasterCard	Full Reversal	MCC = 5999 and DE 126 present
	0430		000000 NAS	30.00	Member		Approved DE 39 = 00.
CBA008	0200		002000 Checking	25.00	MasterCard	Pre-auth from Checking – Issuer and Acquirer currencies are different	MCC = 5999 and DE 126 present
	0210		002000 Checking	25.00	Member		Approved, DE 39 = 00.
CBA009	0220		002000 Checking	18.60	MasterCard	Pre-auth Completion	MCC = 5999 and DE 126 present
	0230		002000 Checking	18.60	Member		Approved DE 39 = 00.
CBA010	0200		000000 NAS	20.80	MasterCard	Purchase from NAS – Issuer and Acquirer currencies are different	MCC = 5999 and DE 126 present
	0210		000000 NAS	20.80	Member		Denied DE 39 = 55.

Cross Border Acquiring—Maestro Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
CBA011	0200		000000 NAS	80.00	MasterCard	Purchase from NAS - Issuer and Acquirer currencies are different	MCC = 5999 and DE 126 present
	0210		000000 NAS	80.00	Member		Approved, DE 39 = 00.
CBA012	0420		000000 NAS	60.00	MasterCard	Partial Reversal Replacement Amount 60.00	Advice Reason Code 451 0010 and DE126 present
	0430		000000 NAS	60.00	Member		Approved DE 39 = 00.
CBA013	0200		001000 Saving	50.00	MasterCard	Pre-auth from Savings - Issuer and Acquirer currencies are different	MCC = 5999 and DE 126 present
	0210		001000 Saving	50.00	Member		Approved, DE 39 = 00.
CBA014	0220		001000 Saving	45.00	MasterCard	Partial Pre-auth completion	Advice Reason Code 251 0010 and DE126 present
	0230		001000 Saving	45.00	Member		Approved DE 39 = 00.

End of Script

Debit MasterCard Issuer

Cross Border Acquiring—Debit MasterCard Issuer

Test Case ID	MTI	Test Card ID Name	Acct Type DE 3	Amt. DE 4	Expected Results	Comments
CBA001	0200	Member Provided	000000 NAS	25.99	DE 39 = 00	Purchase from NAS TCC DE 48 = R MCC in DE 18 = 0742 POS entry mode DE 22 = 902
	0220	MasterCard	000000 NAS	25.99	DE 39 = 00	Force Post*
CBA002	0200	MasterCard	000000 NAS	35.69	DE 39 = 00	Purchase from NAS TCC DE 48 = R MCC in DE 18 = 0742 POS entry mode DE 22 = 902
	0220	Member Provided	000000 NAS	35.69	DE 39 = 00	Force Post*
CBA003	0200	Member Provided	000000 NAS	130.99	DE 39 = 00	Purchase from NAS TCC DE 48 = X MCC in DE 18 = 3000 POS entry mode DE 22 = 022
	0220	MasterCard	000000 NAS	130.99	DE 39 = 00	Force Post*
CBA004	0200	Member Provided	000000 NAS	99.79	DE 39 = 00	Purchase from NAS TCC DE 48 = A MCC in DE 18 = 3351 POS entry mode DE 22 = 022
	0220	MasterCard	000000 NAS	99.79	DE 39 = 00	Force Post*
CBA005	0200	Member Provided	000000 NAS	159.50	DE 39 = 00	Purchase from NAS TCC DE 48 = H MCC in DE 18 = 3501 POS entry mode DE 22 = 902
	0220	MasterCard	000000 NAS	159.50	DE 39 = 00	Force Post*

Cross Border Acquiring—Debit MasterCard Issuer

Test Case ID	MTI	Test Card ID Name	Acct Type DE 3	Amt. DE 4	Expected Results	Comments
CBA006	0200	Member Provided	000000 NAS	68.95	DE 39 = 00	Purchase from NAS TCC DE 48 = H MCC in DE 18 = 3501 POS entry mode DE 22 = 022
	0220	MasterCard	000000 NAS	68.95	DE 39 = 00	Force Post*
CBA007	0200	Member Provided	000000 NAS	78.18	DE 39 = 00	Purchase from NAS TCC DE 48 = F MCC in DE 18 = 5813 POS entry mode DE 22 = 022
	0220	MasterCard	000000 NAS	78.18	DE 39 = 00	Force Post*
CBA008	0200	Member Provided	000000 NAS	89.99	DE 39 = 00	Purchase from NAS TCC DE 48 = T MCC in DE 14 = 5960 POS entry mode DE 22 = 902
	0220	MasterCard	000000 NAS	89.99	DE 39 = 00	Force Post*
CBA009	0200	Member Provided	000000 NAS	90.00	DE 39 = 00	Purchase from NAS TCC DE 48 = T MCC in DE 18 = 5960 POS entry mode DE 22 = 902
	0220	MasterCard	000000 NAS	90.00	DE 39 = 00	Force Post*
CBA010	0200	Member Provided	000000 NAS	35.49	DE 39 = 00	Purchase from NAS TCC DE 48 = T MCC in DE 14 = 5960 POS entry mode DE 22 = 902
	0220	MasterCard	000000 NAS	35.49	DE 39 = 00	Force Post*

* DE 126 will appear in Force Post messages.

End of Script

ISIS—Debit MasterCard Issuer

ISIS—Debit MasterCard Issuer Testing

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Valid Objective	Expected Results
ISIS501	0200	VALID 1	000000 NAS	100.00	MasterCard	Pre Auth from NAS	MCC = 5999
	0210		000000 NAS	100.00	Member	DE 63 = MD2 – Preauth	Approved DE 39 = 00
ISIS502	0200	VALID 2	000000 NAS	250.00	MasterCard	Pre Auth from NAS	MCC = 5999
	0210		000000 NAS	250.00	Member	DE 63 = MD2	Approved DE 39 = 00
ISIS503	0200	STOLEN	000000 NAS	120.00	MasterCard	Pre Auth from NAS	MCC = 5999
	0210		000000 NAS	120.00	Member	DE 63 = MD2	Denied DE 39 = 41
ISIS504	0200	VALID 2	000000 NAS	200.00	MasterCard	Pre Auth from NAS (Invalid pin)	MCC = 5999
	0210		000000 NAS	200.00	Member	DE 63 = MD2	Denied DE 39 = 55
ISIS505	0200	VALID 3	000000 NAS	350.00	MasterCard	Pre Auth from NAS	MCC = 5999
	0210		000000 NAS	350.00	Member	DE 63 = MD2	Approved DE 39 = 00
ISIS506	0200	LOST	000000 NAS	150.00	MasterCard	Pre Auth from NAS	MCC = 5999
	0210		000000 NAS	150.00	Member		Denied DE 39 = 43
ISIS507	0200	VALID 2	000000 NAS	400.00	MasterCard	Pre Auth from NAS	MCC = 5999
	0210		000000 NAS	40000	Member	DE 63 = MD2	Approved DE 39 = 00

End of Script

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Partial Approval

Maestro Acquirer Testing

Partial Approval – Maestro Acquirer							
Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
PA001	0800	N/A	N/A	N/A	Member	Sign On Request with DE 70 = 061 Valid values in DE 2 & DE 33	
	0810	N/A	N/A	N/A	MasterCard		Sign On Successful, DE 39 = 00
PA002	0800	N/A	N/A	N/A	MasterCard	DE 70 = 270	
	0810	N/A	N/A	N/A	Member		Successful echo test, DE 39 = 00
PA003	0800	N/A	N/A	N/A	MasterCard	Dynamic Key Exchange. DE 70 = 161 Working key sent in DE 48	
	0810	N/A	N/A	N/A	Member		Key exchange successful, DE 39 = 00 Working key returned in DE 48
	0820	N/A	N/A	N/A	MasterCard	Acknowledgement of key exchange response	
PA004	0200	1PAR1	002000 Checking	100.00 USD or Equal Amt.	Member		Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1 subfields 2–5, value zero
	0210		002000 Checking	50.00 USD or Equal Amt.	MasterCard		Approved, DE 39 = 10

Test Scripts

Partial Approval

Partial Approval – Maestro Acquirer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
PA005	0200	1PAR2	001000 Saving	70.00 USD or Equal Amt.	Member	Purchase from Savings	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero
	0210		001000 Saving	30.00 USD or Equal Amt.	MasterCard		Approved, DE 39 = 10
PA006	0200	1PAR3	000000 NAS	150.00 USD or Equal Amt.	Member	Purchase from NAS	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero
	0210		000000 NAS	60.00 USD or Equal Amt.	MasterCard		Approved, DE 39 = 10
PA007	0420	1PAR3	000000 NAS	60.00 USD or Equal Amt.	Member	Full Reversal - POI Failure	Advice Reason Code = 450 0018
	0430		000000 NAS	60.00 USD or Equal Amt.	MasterCard		Approved, DE 39 = 00
PA008	0200	1PAR4	002000 Checking	125.00 USD or Equal Amt.	Member	Pre-auth from Checking	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero
	0210		002000 Checking	75.00 USD or Equal Amt.	MasterCard		Approved, DE 39 = 10

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Partial Approval – Maestro Acquirer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
PA009	0220	1PAR4	002000 Checking	75.00 USD or Equal Amt.	Member	Pre-auth Completion	Valid Merchant Category Code Advice Reason Code 290
	0230		002000 Checking	75.00 USD or Equal Amt.	MasterCard		Approved, DE 39 = 00
PA010	0200	1PINA	000000 NAS	20.80 USD or Equal Amt.	Member	Purchase from NAS	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1 subfields 2–5, value zero
	0210		000000 NAS	20.80 USD or Equal Amt.	MasterCard		Denied DE 39 = 55 DE 126 Present
PA011	0200	1PAR5	000000 NAS	80.00 USD or Equal Amt.	Member	Purchase from NAS	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero
	0210		000000 NAS	50.00 USD or Equal Amt.	MasterCard		Approved, DE 39 = 10
PA012	0420	1PAR5	000000 NAS	50.00 USD or Equal Amt.	Member		Advice Reason Code = 450 0018
	0430		000000 NAS	50.00 USD or Equal Amt.	MasterCard		Approved DE 39 = 00

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Test Scripts

Partial Approval

Partial Approval – Maestro Acquirer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
PA013	0200	1PAR6	001000 Saving	50.00 USD or Equal Amt.	Member	Pre-auth from Savings	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero
	0210		000000 Saving	40.00 USD or Equal Amt.	MasterCard		Approved, DE 39 = 10
PA014	0220	1PAR6	001000 Savings	40.00 USD or Equal Amt.	Member	Partial Pre-auth completion	Advice Reason Code 290
	0230		001000 Saving	40.00 USD or Equal Amt.	MasterCard		Approved, DE 39 = 00

End of Script

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Maestro Issuer Testing

Partial Approval – Maestro Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
PA001	0800	N/A	N/A	N/A	Member	Sign On Request with DE 70 = 061 Valid values in DE 2 & DE 33	
	0810	N/A	N/A	N/A	MasterCard		Sign On Successful, DE 39 = 00
PA002	0800	N/A	N/A	N/A	MasterCard	DE 70 = 270	
	0810	N/A	N/A	N/A	Member		Successful echo test, DE 39 = 00
PA003	0800	N/A	N/A	N/A	MasterCard	Dynamic Key Exchange. DE 70 = 161 Working key sent in DE 48	
	0810	N/A	N/A	N/A	Member		Key exchange successful, DE 39 = 00 Working key returned in DE 48
	0820	N/A	N/A	N/A	MasterCard	Acknowledgement of key exchange response	
PA004	0200	Valid 1	002000 Checking	100.00 USD or Equal Amt.	MasterCard	Purchase from Checking	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1 subfields 2–5, value zero DE 111 present
	0210		002000 Checking	50.00 USD or Equal Amt.	Member		Approved, DE 39 = 10

Test Scripts

Partial Approval

Partial Approval – Maestro Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
	0220		002000 Checking	50.00 USD or Equal Amt	MasterCard	Financial Transaction Advice	Advice Reason Code 2700000
	0230		002000 Checking	50.00 USD or Equal Amt	Member	Financial Transaction Advice Response	Approved, DE 39 = 10
PA005	0200	Valid 2	001000 Saving	80.00 USD or Equal Amt.	MasterCard	Purchase from Savings	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero DE 111 is present
	0210		001000 Saving	50.00 USD or Equal Amt.	Member		Approved, DE 39 = 10
	0220		001000 Checking	50.00 USD or Equal Amt	MasterCard	Financial Transaction Advice	Advice Reason Code 2700000
	0230		001000 Checking	50.00 USD or Equal Amt	Member	Financial Transaction Advice Response	Approved, DE 39 = 10
PA006	0200	Valid 3	000000 NAS	150.00 USD or Equal Amt.	MasterCard	Purchase from NAS	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero DE 111 present
	0210		000000 NAS	50.00 USD or Equal Amt.	Member		Approved, DE 39 = 10

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Partial Approval – Maestro Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
	0220		000000 Checking	50.00 USD or Equal Amt	MasterCard	Financial Transaction Advice	Advice Reason Code 2700000
	0230		000000 Checking	50.00 USD or Equal Amt	Member	Financial Transaction Advice Response	Approved DE 39 = 10
PA007	0420	Valid 3	000000 NAS	50.00 USD or Equal Amt.	MasterCard	Full Reversal	Advice Reason Code = 450 0018
	0430		000000 NAS	50.00 USD or Equal Amt.	Member		Approved, DE 39 = 00
PA008	0200	Valid 1	002000 Checking	80.00 USD or Equal Amt.	MasterCard	Pre-auth from Checking	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero DE 11 present
	0210		002000 Checking	40.00 USD or Equal Amt.	Member		Approved, DE 39 = 10
	0220		002000 Checking	40.00 USD or Equal Amt.	MasterCard	Financial Transaction Advice	Advice Reason Code 2700000
	0230		002000 Checking		Member	Financial Transaction Advice Response	Approved DE 39 = 10

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Partial Approval

Partial Approval – Maestro Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
PA009	0220		002000 Checking	20.00 USD or Equal Amt.	MasterCard	Pre-auth Completion	Advice Reason Code 251 0010
	0230		002000 Checking	20.00 USD or Equal Amt.	Member		Approved, DE 39 = 00
PA010	0200		000000 NAS	20.80 USD or Equal Amt.	MasterCard	Purchase from NAS – Invalid PIN	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1 subfields 2–5, value zero DE 111 present
	0210		000000 NAS	20.80 USD or Equal Amt.	Member		Denied DE 39 = 55
PA011	0200	Valid 3	000000 NAS	80.00 USD or Equal Amt.	MasterCard	Purchase from NAS in Mexico	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero DE 111 present
	0210		000000 NAS	50.00 USD or Equal Amt.	Member		Approved, DE 39 = 10
	0220		000000 NAS	50.00 USD or Equal Amt.	MasterCard	Financial Transaction Advice	Advice Reason Code 2700000
	0230		000000 NAS	50.00 USD or Equal Amt.	Member	Financial Transaction Advice Response	Approved, DE 39 = 10

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Partial Approval – Maestro Issuer

Item No.	MTI	Card Name	Acct Type DE 3	Amt. DE 4	Originator	Test Objective	Expected Results/Comments
PA013	0200	Valid 2	001000 Saving	50.00 USD or Equal Amt.	MasterCard	Pre-auth from Savings	Valid Merchant Category Code DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero DE 111 present
	0210		001000 Saving	30.00 USD or Equal Amt.	Member		Approved, DE 39 = 10
	0220		001000	30.00 USD or Equal Amt.	MasterCard	Financial Transaction Advice	Advice Reason Code 2700000
	0230		001000	30.00 USD or Equal Amt.	Member	Financial Transaction Advice Response	Approved, DE 39 = 10
PA014	0220		001000 Savings	30.00 USD or Equal Amt.	MasterCard	Pre-auth completion	Advice Reason Code 290
	0230		001000 Saving	30.00 USD or Equal Amt.	Member		Approved, DE 39 = 00

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End of Script

Partial Approval–Debit MasterCard Issuer Testing

Partial Approval–Debit MasterCard Issuer

Test Case ID	MTI	Test Card ID	Acct Type	Amt DE 4	Expected Result	Comments
PA001	0200	Member Provided	000000 NAS	100.00 USD or Equal Amt.		Purchase from NAS TCC DE 48 = R DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero MCC in DE 18 = 0742 POS entry mode DE 22 - 902
	0210	Member Provided	000000 NAS	50.00 USD or Equal Amt.	DE 39 = 10	
PA002	0200	Member Provided	000000 NAS	130.99 USD or Equal Amt.		Purchase from NAS TCC DE 48 = X DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero MCC in DE 18 = 3000 POS entry mode DE 22 - 022
	0210	Member Provided	000000 NAS	75.00 USD or Equal Amt.	DE 39 = 10	
PA003	0200	Member Provided	000000 NAS	99.79 USD or Equal Amt.		Purchase from NAS TCC DE 48 = A DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero MCC in DE 18 = 3351 POS entry mode DE 22 - 022
	0210	Member Provided	000000 NAS	50.00 USD or Equal Amt.	DE 39 = 10	

Partial Approval–Debit MasterCard Issuer

Test Case ID	MTI	Test Card ID	Acct Type	Amt DE 4	Expected Result	Comments
PA004	0200	Member Provided	000000 NAS	159.50 USD or Equal Amt.		Purchase from NAS TCC DE 48 = H DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero MCC in DE 18 = 3501 POS entry mode DE 22 - 902
	0210	Member Provided	000000 NAS	75.00 USD or Equal Amt.	DE 39 = 10	
PA005	0200	Member Provided	000000 NAS	68.95 USD or Equal Amt.		Purchase from NAS TCC DE 48 = H DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero MCC in DE 18 = 3501 POS entry mode DE 22 - 022
	0210	Member Provided	000000 NAS	50.00 USD or Equal Amt.	DE 39 = 10	
PA006	0200	Member Provided	000000 NAS	78.18 USD or Equal Amt.		Purchase from NAS TCC DE 48 = F DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero MCC in DE 18 = 5813 POS entry mode DE 22 - 022
	0210	Member Provided	000000 NAS	55.00 USD or Equal Amt.	DE 39 = 10	

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Test Scripts

Partial Approval

Partial Approval–Debit MasterCard Issuer

Test Case ID	MTI	Test Card ID	Acct Type	Amt DE 4	Expected Result	Comments
PA007	0200	Member Provided	000000 NAS	89.99 USD or Equal Amt.		Purchase from NAS TCC DE 48 = T DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero MCC in DE 18 = 5960 POS entry mode DE 22 - 902
	0210	Member Provided	000000 NAS	60.00 USD or Equal Amt.	DE 39 = 10	
PA008	0200	Member Provided	000000 NAS	90.00 USD or Equal Amt.		Purchase from NAS TCC DE 48 = T DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero MCC in DE 18 = 5960 POS entry mode DE 22 - 902
	0210	Member Provided	000000 NAS	40.00 USD or Equal Amt.	DE 39 = 10	
PA009	0200	Member Provided	000000 NAS	35.49 USD or Equal Amt.		Purchase from NAS TCC DE 48 = T DE 48, subelement 61, subfield 1, value 1, subfields 2–5, value zero MCC in DE 18 = 5960 POS entry mode DE 22 - 902
	0210	Member Provided	000000 NAS	25.00 USD or Equal Amt.	DE 39 = 10	

End of Script

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