



# AN 7102 Introducing Mastercard Transaction Link Identifier

**Type:**

Switching release announcement

**Audience:**

Acquirer  
Issuer  
Processor  
Network enablement partner

**Region:**

Global

**Brand:**

Mastercard®  
Debit Mastercard®  
Maestro®  
Cirrus®  
Visa®  
American Express®  
Plus®  
Accel®  
Private Label™

**Release:**

23.Q4

**Action indicator:**

Network mandate: acquirer, issuer  
Testing recommended: acquirer, issuer

**System:**

Authorization  
Clearing  
Single Message System

**Published:**

6 June 2023

**Effective:**

13 October 2023  
7 November 2023

## Executive overview

Mastercard is introducing a new transaction identifier called Transaction Link Identifier (TLID). This transaction identifier generated by Mastercard is designed to help promote an improved and consistent linking of life cycle activity occurring after the original transaction and other related transactions. These enhancements are being announced early to provide customers ample time to determine the impact on their own operations.

## Effective date details

Date	Details
13 October 2023	Dual Message System (Clearing) and Single Message System
7 November 2023	Dual Message System (Authorization)

## Customer benefit

TLID is specifically designed to help provide a consistent transaction identification methodology that is simple and sustainable for the future.

Benefits for customers include:

- Globally unique transaction identification
- Consistency and alignment across all acceptance brands and message specifications, regardless of the platform on which they originated
- Improved quality and simplification of operational research processes through:
  - Reducing the need to use personally identifiable information (PII) and Primary Account Number (PAN) data when researching a historical transaction data
  - Matching and linking of all messages across the entire lifecycle of a transaction
- Simplified technical implementation and consistent usage in message specifications

## What Mastercard is doing

Mastercard is introducing a new Data Element (DE) 105 (Multi-Use Transaction Identification Data), subelement 001 (Transaction Link ID [TLID]) that is designed to carry a new Mastercard-generated identifier which will be used identically across the Authorization, Clearing and Single Message System platforms and all message specifications. The TLID is designed with the future in mind, to help ensure globally unique

transaction identification and providing a means to track a transaction across multiple stages through time. Its purpose is to link all related messages together using a single transaction-level identifier that is simple to use and sustainable for the future, without risk of duplication or discrepancies.

## Background

Proper transaction identification is a key factor in managing risk and ensuring efficient, cost-effective operations. In addition, transaction lifecycle matching is important for tracking, matching, collecting, and enriching both required and supporting data necessary to manage a transaction throughout its entire lifecycle.

Both Mastercard and its customers observe challenges caused by complex transaction identification and matching. As transaction volume continues to grow, Mastercard wants to ensure that the transaction identifiers meet the needs of the future.

## Version history

Each customer must determine the impact on its operations.

Date	Description of change
6 June 2023	Added Other media to Related documentation
7 March 2023	Corrected announcement number in title from AN 5045 to AN 7102 Introducing Mastercard Transaction Link Identifier.
21 February 2023	Initial publication date

## Customer impact

This section provides high-level information about customer impact. Refer to the Enhancements section for more details.

### Network mandate: acquirer, issuer

Issuers globally must be able to recognize and receive DE 105, subelement 001 in messages received from the network. In addition, Mastercard recommends that issuers echo back or return DE 105, subelement 001 in response messages.

Acquirers globally must be able to receive DE 105, subelement 001 in response messages from the network. In addition, Mastercard recommends that acquirers send the TLID in DE 105, subelement 001 in all subsequent lifecycle events related to an original authorization or financial request message.

### Testing recommended: acquirer, issuer

Mastercard recommends testing for acquirers and issuers to support this release announcement.

### Implementation Alert

The enhancements and customer impact described in this Release Announcement will be effective with Release 23.Q4. The intent of this announcement is to provide customers advance notice about forthcoming network changes and to allow customers additional time to conduct impact analysis on their own systems.

To provide backward compatibility and minimize customer impact, for a period of time the TLID is considered supplementary and will be available to customers in addition to the existing Banknet Reference Number (BRN), Switch Serial Number (SSN), and Trace IDs. However, Mastercard may announce changes to these fields in a future release.

## Transaction message flow impact

The manner in which a customer is connected to Mastercard determines the group of message flows that apply and the transaction message types they send or receive within that group. Customers can interface to the Mastercard Dual Message System, Single Message System, or both, as applicable. This announcement affects the message flows marked in the Transaction message flow impact table.

**Table 1: Transaction message flow impact**

Acquirer to Mastercard	Mastercard to issuer	Impacted
Dual Message System	Dual Message System	√
Dual Message System	Single Message System	√
Single Message System	Single Message System	√
Single Message System	Dual Message System	√

Examples of message types within the Dual Message System and Single Message System are:

- Authorization Request/0100 and First Presentment/1240 messages
- Financial Transaction Request/0200 and Financial Transaction Advice/0220 messages

## Enhancements

Mastercard will introduce changes to support this announcement.

### Dual Message System (Authorization)

Mastercard will introduce DE 105 (Multi-Use Transaction Identification Data) and subelement 001 (Transaction Link Identifier [TLID]) as a new data element and subelement in the Authorization platform.

Mastercard will also generate a new TLID as a 36-Character Universally Unique Identifier (UUID) and populate it in DE 105, subelement 001 of all original authorization request messages, specifically for the first message in the transaction lifecycle.

### Dual Message System (Clearing)

Mastercard will introduce DE 105 (Multi-Use Transaction Identification Data) and subfield 001 (Transaction Link Identifier [TLID]) as a new data element and subfield in Clearing platform.

Mastercard may generate a new TLID as a 36-Character Universally Unique Identifier (UUID) and populate it in DE 105, subfield 001 of the First Presentment and send it to the issuer in the outbound message if a TLID was not previously assigned to the transaction.

If submitted by the acquirer in the First Presentment message, Mastercard will send it to the issuer in the outbound message.

### Single Message System

Mastercard will introduce DE 105 (Multi-Use Transaction Identification Data) and subelement 001 (Transaction Link Identifier [TLID]) as a new data element and subelement in the Single Message System.

Mastercard will also generate a new TLID as a 36-Character Universally Unique Identifier (UUID) and populate it in DE 105, subelement 001 of all original authorization and financial request messages, specifically for the first message in the transaction lifecycle.

## Related documentation

Information relevant to this release announcement can be found in the documents available on Mastercard Connect™. Mastercard updates manuals with necessary changes after release implementation. Depending on timing, information provided in this release announcement may not be reflected in a manual until it is updated.

### Announcements

#### Reference manuals

For information about the current state of Mastercard processing refer to the:

- *Customer Interface Specification*
- *IPM Clearing Formats*
- *Single Message System Specifications*

#### Other media

Statements made in videos presented at the Customer Technical Conference are current when the video was recorded. Videos are currently available only for those announcement presented at the Customer Technical Conference. Mastercard may update announcements without updating the corresponding video. Refer to the most recent version of the announcement for the most up-to-date information.

[AN 7102 Introducing Mastercard Transaction Link Identifier](#), Customer Technical Conference, May 2023

## Platform impact

The Platform impact table lists the impact of this announcement. For items that are marked √ (Yes), details are available in the corresponding topics.

**Table 2: Platform impact**

Topic	Dual Message System (Authorization)	Dual Message System (Clearing)	Single Message System
Message flows			
Message layouts			
Data element definitions	√	√	√
IPM MPE		√	
Interchange			
CAB programs, descriptions, and associated MCCs			
Edits			
Error numbers			
Alternate processing			
Interchange compliance			
Pricing and fees			
Reports			
Bulk files			

Topic	Dual Message System (Authorization)	Dual Message System (Clearing)	Single Message System
Forms			
Quarterly Mastercard reporting			
Transaction Investigator	√	√	√
SAFE			
Single Message Transaction Manager			√
250-byte Batch Data File			
80-byte Financial Institution Table File			

## Authorization

Mastercard will introduce changes to the Authorization Platform to support this announcement.

### DE 105 (Multi-Use Transaction Identification Data)

DE 105 is alphanumeric, variable length using a tag-length-data encoding scheme to allow for easy addition of new subelements.

#### Attributes

Attribute	Description
Data representation	ans...36
Data element length	3 positions, value = 036
Data field	Contents of subelements
Subfields	1
Justification	See subelement

#### Usage

Following is the usage of DE 105 (whether it is mandatory, conditional, optional, system provided, or not required) in applicable messages.

Message	Org	Sys	Dst
Authorization Request/0100	C	X	C
Authorization Request Response/0110	CE	•	C
Authorization Advice/0120: Acquirer-generated	•	X	C
Authorization Advice/0120: System-generated	C	X	C

Message	Org	Sys	Dst
Authorization Advice Response/0130: Issuer-generated (Responding to an Acquirer-generated 0120)	CE	•	C
Authorization Advice Response/0130: System-generated	CE	•	C
Reversal Request/0400	C	X	C
Reversal Request Response/0410	CE	•	C
Reversal Advice/0420: System generated	C	X	C
Reversal Advice Response/0430	CE	•	C

#### Subelement 001 (Transaction Link ID [TLID])

Mastercard will generate a value and populate it in messages to the destination if not previously assigned, or will pass through the value provided by the originator.

#### Transaction Investigator updates for the Authorization Platform

For the Authorization Platform, Mastercard will update the Transaction Investigator to support this announcement.

## Clearing

Mastercard will introduce changes to the Clearing Platform to support this announcement.

#### DE 105 (Multi-Use Transaction Identification Data)

DE 105 is alphanumeric, variable length using a tag-length-data encoding scheme to allow for easy addition of new subfields.

#### Attributes

Attribute	Description
Data representation	ans...36
Data element length	3 positions, value = 036
Data field	Contents of subelements
Subfields	1
Justification	See subelement

#### Usage

Following is the usage of DE 105 (whether it is mandatory, conditional, optional, system provided, or not required) in applicable messages.

Message	Org	Sys	Dst
First Presentment/1240	C	X	C

Message	Org	Sys	Dst
Financial Detail Addendum/1644	C	X	C
First Chargeback/1442 and Arbitration Chargeback/1442	C	.	C
Second Presentment/1240	C	.	C

#### Subfield 001 (Transaction Link ID [TLID])

Mastercard will generate a value and populate it in messages to the destination if not previously assigned, or will pass through the value provided by the originator.

#### Transaction Investigator updates for the Clearing Platform

For the Clearing Platform, Mastercard will update the Transaction Investigator to support this announcement.

#### IPM MPE

Mastercard will update IPM MPE tables to support this announcement.

- Add new DE 105 to IP0006T1: Data Element Attributes & Table
- Add new DE 105 to IP0007T1: Data Element Subfield Attributes

#### Single Message System

Mastercard will introduce changes to the Single Message System to support this announcement.

#### DE 105 (Multi-Use Transaction Identification Data)

DE 105 is alphanumeric, variable length using a tag-length-data encoding scheme to allow for easy addition of new subelements.

#### Attributes

Attribute	Description
Data representation	ans...36
Data element length	3 positions, value = 036
Data field	Contents of subelements
Subfields	1
Justification	See subelement

#### Usage

Following is the usage of DE 105 (whether it is mandatory, conditional, optional, system provided, or not required) in applicable messages.

Message	Org	Sys	Dst
Financial Transaction Request/0200	C	X	C
Financial Transaction Request Response/0210	CE	.	C

Message	Org	Sys	Dst
Financial Transaction Advice/0220: Debit Mastercard stand-in	C	X	C
Acquirer Reversal Advice/0420: acquirer initiated	C	.	C
Acquirer Reversal Advice/0420: time-out induced, acquirer	C	.	C
Acquirer Reversal Advice/0420: time-out induced, system initiated	C	X	C
Acquirer Reversal Advice/0420: exception, system initiated	C	X	C
Acquirer Reversal Advice/0420: acquirer initiated exception	C	.	C
Issuer Reversal Advice/0422: exception, system initiated	C	X	C
Issuer Reversal Advice/0422: exception, issuer initiated	C	.	C
Acquirer Reversal Advice Response/0430: system initiated	CE	X	C
Acquirer Reversal Advice Response/0430: issuer initiated	CE	.	C
Issuer Reversal Advice Response/0432: exception, acquirer initiated	CE	.	C
Issuer Reversal Advice Response/0432: exception, system initiated	CE	X	C

#### Subelement 001 (Transaction Link ID [TLID])

Mastercard will generate a value and populate it in messages to the destination if not previously assigned, or will pass through the value provided by the originator.

#### Single Message Transaction Manager

The Single Message Transaction Manager will be updated to support this announcement.