



EXTERNAL INTERFACE SPECIFICATIONS AUTHORIZATION RECORD FORMAT

EIS 1080

VERSION 14.8 SEPTEMBER 16, 2016 © 2016 TSYS Acquiring Solutions[®], L.L.C. All rights reserved worldwide. TSYS[®] is a registered trademark of Total System Services, Inc. Other marks are trademarks or registered trademarks of their respective owner. The information in this document is confidential and proprietary and is distributed to TSYS clients for their exclusive use in operating TSYS applications. It may not be reproduced in any form without prior written permission from TSYS Acquiring Solutions.

Table of Content

Related documentation	15
Applicable documents	15
Related TSYS Acquiring Solutions documents	
Document revisions	
Overview	61
Introduction	61
Authorization request and response	61
Message formats	63
Introduction	63
Using Encryption and Tokens	65
Authorization request/response message formats and constituent fields	67
Authorization message constituent fields (G1)	67
Debit or EBT additional fields in authorization message (G2)	
No addendum data (G3v000)	69
Commercial card (G3v001)	70
Card verification code 2 (G3v007)	70
Fleet fueling card (G3v008)	70
Set e-Commerce (G3v009)	71
RESERVED - CCPS (G3v010)	72
Chip condition code (G3v011)	72
Electronic Benefits Transfer (G3v013)	73
MOTO/ e-Commerce (G3v014)	73
Service development indicator (G3v015)	74
Secure e-Commerce transaction (G3v017)	74
Existing debt indicator (G3v018)	75
MasterCard universal cardholder authentication field (G3v019)	75
Developer information (G3v020)	75
Merchant verification value (G3v021)	76
Additional amounts (G3v022)	76
Visa and MasterCard healthcare (G3v023)	80
MasterCard advice code (G3v024)	81
Transaction fee amount (G3v025)	82
Partial authorization indicator (G3v026)	82

POS data code (G3v027)82
American Express additional data (G3v028)
Extended AVS data (G3v029)
Amex merchant name/location data (G3v030)85
Digital entity identifier (G3v031)
Currency conversion data (G3v032)
Reversal request/adjustment response code (G3v033)87
Card product code (G3v034)
Promotional code (G3v035)88
Payment transaction type identifier (G3v036)89
Real time substantiation indicator (G3v037)
Electro-magnetic signature (G3v038)
Cardholder verification method (G3v039)90
Visa ISA charge indicator (G3v040)
NTIA UPC/SKU data (G3v041)91
RESERVED Visa contactless (G3v042)
Network ID (G3v043)
Automated teller machines (G3v044)92
RESERVED Integrated Chip Card (G3v045)94
Card type response group (G3v046)
RESERVED TSYS internal use only (G3v047)
Cardholder verification results (G3v048)96
Gen 2 terminal authentication (G3v049)97
Association timestamp (G3v50)98
EMS service request/response (G3v051)99
Voltage encryption transmission block (G3v052)
TSYS token request/response (G3v053)101
Transit program (G3v054)
Integrated Chip Card (ICC) EMV TLV Format (G3v055)103
Message reason code (G3v056)
Additional response data (G3v057)
Alternate account ID 1 (G3v058)
MasterCard mapping service (G3v059)
MasterCard PayPass mobile (G3v060)
Spend qualified indicator (G3v061)
Card brand tokenization (G3v062)
Amex card acceptor name/location (G3v063)
MasterCard Wallet Identifier (G3v064)

Payment Facilitator (G3v066)	
- ", " (00,000)	116
Authorization indicator (G3v067)	116
Fraud enhanced data (G3v068)	117
Lane ID (G3v069)	118
Payment Specific Data (G3v070)	118
POS Environment Indicator (G3v071)	119
Electronic Commerce Security Level Information (G3v072)	119
Gift card information (G3v200)	120
General industry requirements	121
General	121
Direct marketing	121
Hotel and lodging	121
Auto rental	121
Automated fueling	122
Direct debit	122
Electronic Benefits Transfer (EBT)	122
Health care benefits	122
Field definitions	
Account data source code	
Account type (from)	
Account type (to)	124
Acquirer Bank Identification Number (BIN)	125
	105
Acquirer transaction currency code	123
Acquirer transaction currency code	
•	125
Actual amount, cardholder billing	125
Actual amount, cardholder billing	125
Actual amount, cardholder billing. Actual amount, settlement Actual amount, transaction.	125 125 125
Actual amount, cardholder billing. Actual amount, settlement Actual amount, transaction Additional amount.	125 125 125 125
Actual amount, cardholder billing. Actual amount, settlement Actual amount, transaction Additional amount. Additional amount - account type	125125125125125125
Actual amount, cardholder billing. Actual amount, settlement Actual amount, transaction Additional amount. Additional amount - account type Additional amount - amount type	125125125125125126126
Actual amount, cardholder billing. Actual amount, settlement Actual amount, transaction Additional amount. Additional amount - account type Additional amount - amount type Additional amount - currency code	125125125125125126127
Actual amount, cardholder billing. Actual amount, settlement Actual amount, transaction Additional amount. Additional amount - account type Additional amount - amount type Additional amount - currency code Additional amount - sign	125125125125125126127127
Actual amount, cardholder billing. Actual amount, settlement Actual amount, transaction Additional amount. Additional amount - account type Additional amount - amount type Additional amount - currency code Additional amount - sign Additional amount	125125125125125127127
Actual amount, cardholder billing. Actual amount, settlement Actual amount, transaction Additional amount - account type Additional amount - amount type Additional amount - currency code Additional amount - sign Additional amount Additional response data	125125125125125127127127127

Card verification results	149
Cardholder billing amount	149
Cardholder billing conversion rate	149
Cardholder billing currency code	150
Cardholder certificate serial number	150
Cardholder identification code	150
Cardholder identification data	151
Static key with twenty-three byte cardholder ID	152
Static key with thirty-two byte cardholder ID	152
DUK/PT key with thirty-two byte cardholder ID	152
Address verification data	153
Cardholder verification method	154
Cardholder Verification Method (CVM) results	155
Cardholder verification results	155
CAVV (Card Authentication Verification Value)	156
CAVV results code	156
Check acceptance data	157
Chip condition code	158
City code	159
Commercial card request indicator	159
Commercial card response indicator	
Conversion date	160
Country code	160
Cryptogram amount	160
Cryptogram cashback amount	
Cryptogram currency code	
Cryptogram information data	160
Cryptogram transaction type	
Cryptogram version number	
Currency code	161
Customer data field	161
Track one data	162
Track two data	
Manually entered data	163
Check acceptance information	
Encrypted track data	
Encrypted manually entered data	
Derivation key index	

Developer ID	.164
Device code	.165
Digital entity identifier	.165
Electro magnetic signature	.166
Electronic commerce security level indicator	.166
Electronic voucher serial number	.167
EMS additional information	.168
EMS results code	.168
EMS risk score	.168
EMS risk score reason code	.168
EMS scoring response indicator	.168
EMS service request indicator	.169
Encryption Transmission Block (ETB)	.169
Encryption type	.169
Existing debt indicator	.169
Extended AVS data	.170
Cardholder billing postal code	.170
Cardholder billing address	.170
Cardholder billing city	.170
Cardholder billing state/province	.170
Cardholder billing country code	.170
Cardholder billing first name	.170
Cardholder billing last name	.170
Cardholder billing phone number	.171
Ship-to postal code	.171
Ship-to address	.171
Ship-to city	.171
Ship-to state/province	.171
Ship-to country code	.171
Ship-to first name	.171
Ship-to last name	.171
Ship-to phone number	.172
FCS ID	.172
Field separator	.172
Filler (spaces)	.172
Filler (zeros)	
Gateway ID	.172
Gen2 terminal authentication	.172

Authentication code	172
Authentication factor 1	172
Authentication factor 2	173
GenKey	173
Group III version number	173
Group separator	175
Healthcare, MasterCard or Discover member defined data	175
MasterCard and Discover free form	175
Healthcare	175
Host message identifier	176
Identification number	176
IFD serial number	176
Independent Sales Organization (ISO) identifier	176
Industry code	177
Interface device serial number	177
ISA charge indicator	177
Issuer application data	177
Issuer discretionary data	178
Issuer script	178
Issuer script results	178
Key Set Identifier (KSID)	178
Lane ID	178
Language indicator	178
Local transaction date	179
Local transaction time	179
Mapped Card Expiration Date	179
Mapped PAN indicator	179
Mapped product code	180
Market specific data identifier	180
Prestigious property indicator.	180
Market specific data identifier.	181
Stay or rental duration	181
MasterCard wallet identifier	182
Merchant ABA number.	182
Merchant advice code	182
Merchant category code	182
Merchant certificate serial number	182
Marchant city	182

Merchant country code
Merchant region code
Merchant DBA name
Merchant email
Merchant ID code
Merchant number
Merchant phone
Merchant postal code
Merchant settlement agent number
Merchant street address
Merchant Verification Value (MVV)
Message reason code
Message delimiter
MOTO/e-Commerce indicator
Network ID
Network identification code
NTIA UPC/SKU data
Operator/clerk ID
Original purchase data
PAN reference identifier
Partial authorization indicator
Payment account reference
Payment facilitator identifier
Payment facilitator name*sub-merchant name
Payment service provider name
Payment transaction type identifier
PayPass mobile device type191
PayPass mobile domain server
POS data code
Subfield 1 - Terminal card data input capability
Subfield 2 - Terminal cardholder authentication capability
Subfield 3 - Terminal card-capture capability
Subfield 4 - Terminal operating environment
Subfield 5 - Cardholder present data
Subfield 6 - Card present data197
Subfield 7 - Card data input mode
Subfield 8 - Cardholder authentication method
Subfield 9 - Cardholder authentication entity

Subfield 10 - Card data output capability	200
Subfield 11 - Terminal data output capability	200
Subfield 12 - PIN capture capability	200
POS environment indicator	201
Promotional code	201
Real time substantiation indicator	202
Receiving Institution Identification (RIID)	202
Record format	202
Registered user indicator	203
Registered user last profile date change	203
Reimbursement attribute	204
Requested Authorization Characteristics Indicator (ACI)	204
Response code	205
Retrieval reference number	207
Returned Authorization Characteristics Indicator (ACI)	207
Reversal and cancel data I	208
Approval code	209
Local transaction date	209
Local transaction time	209
Response code	209
Retrieval reference number	209
Reversal and cancel data II	209
System trace audit number	209
Network identification code	210
Reversal and incremental transaction ID	210
Reversal request/adjustment response code	210
Secondary amount	210
Secondary PIN block	211
Service development indicator	211
Settlement amount	211
Settlement conversion rate	212
Settlement currency code	212
Settlement date	212
Sharing group	212
Spend qualified indicator	212
Store number	
Sub-merchant city	213
Sub-merchant country code	213

Sub-merchant identifier	.3
Sub-merchant postal code	3
Sub-merchant state/province code	3
System trace audit number	.3
Terminal capability profile	4
Terminal country code	4
Terminal number	4
Terminal transaction date	4
Terminal transaction time	4
Terminal type	5
Terminal verification results	5
Time zone differential	5
TLV data	6
Token	6
Token Cryptogram Block A	6
Token Cryptogram Block B	7
Token status	8
Total authorized amount	8
Transaction amount	9
Transaction category code	9
Transaction code	9
Transaction date	24
Transaction fee amount	24
Transaction identifier	25
Transaction sequence number	25
Transit transaction type indicator	25
Transportation mode indicator	25
Transtain	26
UCAF authentication data	27
UCAF collection indicator	27
Unpredictable number	28
Validation code	28
Discover usage	28
Non-Discover usage	29
Verification code (CVV2, CVC2, CID)	
Verification code result code	
Visa contactless	31
Voucher approval code (EBT)	

XID	.232
Control and character sets	.233
Introduction	.233
Track one character definition	.233
Track two character definition	.236
Authorization message character set	.238
Character conversion summary	.240
MOD-10 check-digit algorithm	.243
Longitudinal Redundancy Check (LRC)	.243
Conversion of binary to ASCII characters	.244
Message format examples	.245
Card present examples	.245
Credit	.245
Debit/EBT	.276
ATM	.297
Card not present examples	.310
Credit & Debit.	.310
Check examples	.321
Check guarantee authorization - request	.321
Certegy/Equifax check guarantee (key MICR) - request	.323
Certegy/Equifax check guarantee (raw MICR) - request	.324
Certegy/Equifax check guarantee (driver's license) - request	.326
Certegy/Equifax check guarantee (driver's license with raw MICR data) -	
request	
SCAN check guarantee (short MICR) - request	
International Check Service (ICS) check guarantee (MICR read) - request	
International Check Service (ICS) check guarantee (key MICR) - request	.332
International Check Service (ICS) check guarantee (account number) -	221
request	
, ,	
TeleCheck check guarantee (key full MICR) - request	
TeleCheck check guarantee (raw MICR) - request	
Gen2 Terminal Authentication Gen2 Terminal G	
Authentication request	
Authentication response	344

Deactivation request	345
Deactivation response	346
Encryption and token examples	348
Encrypted credit	348
Encrypted debit non-confirmation - request	350
Encrypted credit with token - request	352
Encrypted credit with token request - response	354
Debit non-confirmation with token request - request	356
Debit care/EBT with token request-response	358
Tokenized bill pay	359
Tokenized PINless debit bill payment - request	361
Appendix A	365
Appendix B	

Chapter 2 Related documentation

2.1 Applicable documents

This document describes the request and response record formats for Second Generation Point Of Sale (POS) authorization devices using TSYS Acquiring Solutions' authorization services. The following documents provide additional definition and background information. Please refer to the related documents listed for applicable information.

2.2 Related TSYS Acquiring Solutions documents

Related TSYS Acquiring Solutions documents are listed in <u>Table 2.1</u>.

Table 2.1 Related TSYS Acquiring Solutions documents

Reference number	Name	Revision / generation	Related topic
EIS 1051	External Interface Specification	v3.2	Authorization Link Level Protocol
EIS 1052	External Interface Specification	v3.3	Data Capture Link Level Protocol
EIS 1081	External Interface Specification	v7.5.1	Data Capture Record Formats
EIS 1053	External Interface Specification	v1.0	Authorization Direct Connect Protocol

2.3 Document revisions

Table 2.2 Version 14.8 document revisions

Chapter	Section	Action	Data
Message formats	4.2.15	Update	Updated Section 4.2.15 MasterCard universal cardholder authentication field (G3v019) with correct usage
	4.2.32	Update	Updated section name with correct field name Payment transaction type identifier (G3v036) previously Payment transaction identifier (G3v036)
	4.2.33	Update	Updated section name with correct field name Real time substantiation indicator (G3v037) previously Real time substantiation (G3v037)
	4.2.44	Update	Updated length 9 in <u>Table 4.91</u>
	4.2.47	Update	Updated Section 4.2.47 EMS service request/response (G3v051)
	4.2.56	Update	Updated definition in <u>Section 4.2.56</u> <u>MasterCard PayPass mobile (G3v060)</u>
	4.2.63	Update	Updated definition in <u>Section 4.2.63</u> <u>Authorization indicator (G3v067)</u>
	4.2.64	Update	Updated definition in Section 4.2.64 Fraud enhanced data (G3v068)

Chapter	Section	Action	Data
Field definitions	5.24	Update	Updated definition in Section 5.24 Authorization indicator
	5.42	Update	Updated definition in Section 5.42 Card product code
	5.52	Update	Updated Section 5.52 Cardholder verification method
	5.71	Add	Added new MasterCard ranges in Table 5.31
	5.77	Update	Updated Section 5.77 Electronic commerce security level indicator
	5.149	Update	Updated definition in Section 5.149 Payment transaction type identifier
	5.150	Update	Updated definition in Section 5.150 PayPass mobile device type and added information in Table 5.51
	5.151	Update	Updated definition in Section 5.151 PayPass mobile domain server
	<u>5.155</u>	Update	Updated definition in Section 5.155 Real time substantiation indicator
	5.159	Update	Update definition in Section 5.159 Registered user last profile date change
	5.207	Update	Updated definition in Section 5.207 Transportation mode indicator
	5.209	Update	Updated definition in Section 5.209 UCAF authentication data
	5.210	Update	Updated definition in Section 5.210 UCAF collection indicator

Table 2.3 Version 14.7 document revisions

Chapter	Section	Action	Data
Message formats	4.2.13	Add	Added defintion to Section 4.2.13 Secure e-Commerce transaction (G3v017) updated Table 4.29 and Table 4.30
	4.2.22	Update	Updated section name from Product participation group(G3v026) to Partial authorization indicator (G3v026)
	4.2.66	Add	Added new Section 4.2.66 Payment Specific Data (G3v070)
	4.2.67	Add	Added new Section 4.2.67 POS Environment Indicator (G3v071)
	4.2.68	Add	Added new Section 4.2.68 Electronic Commerce Security Level Information (G3v072)

Related documentation

Chapter	Section	Action	Data
Field definitions	5.9.2	Add	Added a note about Discover merchant initiated transactions in Section 5.9.2 Additional amount - amount type and new value of 43 added in Table 5.5
	<u>5.56</u>	Add	Added a new value U in <u>Table 5.27</u>
	5.74	Update	Updated the device type for code A in Table 5.32
	5.77	Add	Added new section Section 5.77 Electronic commerce security level indicator
	5.135	Add	Added information in Section 5.135 Message reason code removed the message reason code table
	5.137	Add	Added Amex SafeKey to Indicator 5 in <u>Table A5.46</u>
	5.138	Remove	Removed Network ID 002 in Table 5.47
	5.143	Add	Added new Section 5.143 PAN reference identifier
	5.144	Update	Updated Section 5.144 Partial authorization indicator previously named Product participation group
	<u>5.145</u>	Add	Added new Section 5.145 Payment account reference
	<u>5.150</u>	Add	Added value A in <u>Table 5.57</u>
	<u>5.162</u>	Add	Added value D3 in <u>Table 5.72</u>
	5.167	Add	Added Discover merchant initiated transactions in Section 5.168 Reversal request/adjustment response code
	5.168	Update	Updated value 17 in Section 5.168 Reversal request/adjustment response code

Chapter	Section	Action	Data
	5.199	Add	Added MasterCard Authorization Chargeback Protection in Section 5.199 Transaction amount
	<u>5.210</u>	Update	Updated <u>Table 5.81</u>
Control and character sets	6.2	Update	Updated <u>Table 6.1</u>
	<u>6.3</u>	Update	Updated <u>Table 6.2</u>

Table 2.4 Version 14.6 document revisions

Chapter	Section	Action	Data
Field definitions	5.74	Add	Adding Code A - TSYS Secure EPayments (TSEP) in <u>Table 5.32</u>
	5.138	Add	Added the Network ID of 0777 and 1001 in <u>Table 5.47</u>
	5.210	Update	Updated Section 5.210 UCAF collection indicator and value 0 in Table 5.81

Table 2.5 Version 14.5 document revisions

Chapter	Section	Action	Data
Field definitions	5.51.3	Update	Updated <u>Table 5.24</u> by adding Visa and Discover only
	<u>5.152.6</u>	Update	Updated value X in <u>Table 5.58</u>
Appendix A		Remove	Removed Tags 9F0D, 9F0E and 9F0F in Table A2

Table 2.6 Version 14.4 document revisions

Chapter	Section	Action	Data
Message formats	4.2.9	Add	Added definition to Section 4.2.9 Chip condition code (G3v011)
	4.2.16	Update	Updated definition in Section 4.2.16 Developer information (G3v020) and changed Version ID to Application ID in Table 4.35
	4.2.23	Update	Updated definition for Section 4.2.23 POS data code (G3v027)
	4.2.24	Add	Added definition to Section 4.2.24 American Express additional data (G3v028)

Chapter	Section	Action	Data
Field definitions	5.18	Update	Updated Version ID to Application ID
	<u>5.150</u>	Update	Updated Section 5.150 PayPass mobile device type
	5.152.1 5.152.2	Add	Added sub-heading Section 5.152.1 Subfield 1 - Terminal card data input capability and updated values 0, 1, 2 and H in Table 5.53 Added sub-heading Section 5.152.2 Subfield 2 - Terminal cardholder authentication capability and updated value 9 in Table 5.54
	5.152.3	Add	Added sub-heading Section 5.152.3 Subfield 3 - Terminal card-capture capability and updated value 9 in Table 5.55
	5.152.4	Add	Added sub-heading Section 5.152.4 Subfield 4 - Terminal operating environment and updated values 0 and 9 in Table 5.56
	<u>5.152.5</u> <u>5.152.6</u>	Add	Added sub-heading Section 5.152.5 Subfield 5 - Cardholder present data and updated value 8 in Table 5.57
	5.152.7	Add	Added sub-heading Section 5.152.6 Subfield 6 - Card present data
	5.152.8	Add	Added sub-heading Section 5.152.7 Subfield 7 - Card data input mode and updated values 0 and 1 in Table 5.59 Added sub-heading Section 5.152.8
	5.152.9	Add	Subfield 8 - Cardholder authentication method and updated value 9 in Table 5.60 Added sub-heading Section 5.152.9
	5.152.10	Add	Subfield 9 - Cardholder authentication entity and updated value 9 in Table 5.61 Added sub-heading Section 5.152.10
			Subfield 10 - Card data output capability and updated value 0 Table 5.62

Chapter	Section	Action	Data
	5.152.11	Add	Added sub-heading Section 5.152.11 Subfield 11 - Terminal data output capability and updated value 0 Table 5.63
	5.152.12	Add	Added sub-heading Section 5.152.12 Subfield 12 - PIN capture capability and updated value 1 Table 5.64

Table 2.7 Version 14.3 document revisions

Chapter	Section	Action	Data
Field definitions	5.137	Update	Updated definition for values 5 and 6 in <u>Table 5.46</u>

Table 2.8 Version 14.2 document revisions

Chapter	Section	Action	Data
Field definitions	<u>5.71</u>	Add	Added length of 19 to the Visa and MasterCard in <u>Table 5.31</u>
Message format examples		Removed	Removed PINless debit bill payment - request and PINless debit authorization reversal- request

Table 2.9 Version 14.1 document revisions

Chapter	Section	Action	Data
Field definitions	5.150	Update	Updated value X in <u>Table 5.53</u>
			Updated values X and Y and added value Z in Table 5.152.7

Table 2.10 Version 14.0 document revisions

Chapter	Section	Action	Data
Message formats	4.2.65	Add	Added new G3v09 for Lane ID Section 4.2.65 Lane ID (G3v069)
			NOTE The Lane ID will not be effective until April 2016.
Field definitions	5.110	Add	Added new Section 5.110 Lane ID
			NOTE The Lane ID will not be effective until April 2016.

Table 2.11 Version 13.8 document revisions

Chapter	Section	Action	Data
Message formats	4.2.65		Added new G3v09 for Lane ID Section 4.2.65 Lane ID (G3v069)
Field definitions	5.110	Add	Added new Section 5.110 Lane ID

Table 2.12 Version 13.7 document revisions

Chapter	Section	Action	Data
Message formats	4.2.27		Updated Reserved length and format in Table 4.58

Table 2.13 Version 13.6 document revisions

Chapter	Section	Action	Data
Field definitions	5.24	Update	Updated definition in <u>Section 5.24</u> Authorization indicator

Table 2.14 Version 13.5 document revisions

Chapter	Section	Action	Data
Field definitions	<u>5.137</u>	Update	Updated <u>Table 5.46</u>

Table 2.15 Version 13.4 document revisions

Chapter	Section	Action	Data
Message formats	4.2.13	Update	Updated <u>Table 4.29</u>
	4.2.27	Update	Updated Section 4.2.27 Digital entity identifier (G3v031)
	4.2.58	Update	Updated Section 4.2.58 Card brand
	4.2.59	Update	tokenization (G3v062)
	4.2.63	Add	Updated Table 4.120
	4.2.64	Add	Added new Section 4.2.63 Authorization indicator (G3v067)
			Added new Section 4.2.64 Fraud enhanced data (G3v068)

Chapter	Section	Action	Data
Field definitions	5.24	Add	Added new Section 5.24 Authorization indicator
	5.40 5.75	Update Add	Updated Section 5.40 Card brand token requestor ID
	5.112	Add	Added new Section 5.75 Digital entity
	<u>5.123</u>	Add	identifier
	<u>5.124</u>	Add	Added new Section 5.112 Local transaction date
	<u>5.125</u>	Add	Added new Section 5.123 Merchant city
	<u>5.126</u>	Update	Added new <u>Section 5.124 Merchant</u>
	5.137	Update	country code
	<u>5.148</u>	Add	Added new Section 5.125 Merchant region code
	5.158	Add	Updated Section 5.126 Merchant
	5.195 5.196	Update Update	DBA name Updated Table 5.67
	<u>5.210</u>	Add	Added new Section 5.148 Payment
	5.212.1	Update	service provider name
		1	Added new Section 5.158 Registered user indicator
			Updated Section 5.195 Token Cryptogram Block A
			Updated Section 5.196 Token Cryptogram Block B
			Added value 7 in <u>Table 5.81</u>
			Updated Section 5.212.1 Discover usage
Appendix A	8.4	Add	Added Section 8.4 MasterCard

Table 2.16 Version 13.3 document revisions

Chapter	Section	Action	Data
Field definitions	<u>5.1</u>	Update	Updated Note in Section 5.1 Account data source code
	<u>5.51</u>	Update	
	<u>5.150</u>	Update	Updated description in Section 5.51 Cardholder identification data
			Updated decription in Section 5.150 PayPass mobile device type
Control and character sets	6.8	Update	Updated Section 6.8 Conversion of binary to ASCII characters
Message format	7.1.1.16	Update	Updated Byte 1 Content in <u>Table 7.16</u>
<u>examples</u>	7.1.2.4	Add	Added fields in <u>Table 7.23</u>
	7.1.2.5	Add	Added fields in <u>Table 7.24</u>
	7.1.2.6	Add	Added fields in <u>Table 7.25</u>
	7.1.2.7	Add	Added fields in <u>Table 7.26</u>
	7.1.2.9	Add	Added fields in <u>Table 7.28</u>
	7.1.2.11	Add	Added fields in <u>Table 7.30</u>
Appendix A	8.3	Update	Updated Section 8.3 Discover/PayPal

Table 2.17 Version 13.2 document revisions

Chapter	Section	Action	Data
Related documentation	2.2	Add	Added reference document in Table 2.1
Field definitions	5.137	Update	Updated <u>Table 5.51</u>
	5.138	Remove	Removed Alaska Option from Section 5.138 Network ID
Appendix B		Add	Added description information to value S1 in Section Card product codes

Table 2.18 Version 13.1 document revisions

Chapter	Section	Action	Data
Message formats	4.2.59	Remove	Removed Merchant City from Table 4.120

Chapter	Section	Action	Data
Field definitions		Remove	Removed Merchant City section

Table 2.19 Version 13.0 document revisions

Chapter	Section	Action	Data
Message formats	4.2.44	Update	Updated Section 4.2.44 Cardholder verification results (G3v048)
	4.2.58	Update	Updated Section 4.2.58 Card brand
	4.2.59	Update	tokenization (G3v062)
	4.2.61	Add	Updated Section 4.2.59 Amex card acceptor name/location (G3v063)
	4.2.62	Add	Added Section 4.2.61 ISO Identifier (G3v065)
			Added Section 4.2.62 Payment Facilitator (G3v066)
Field definitions	<u>5.16</u>	Add	Added new values in <u>Table 5.26</u>
	5.101	Add	Added new Section 5.101 Independent Sales Organization (ISO)
	<u>5.123</u>	Add	identifier
	5.143	Add	Added new Section 5.123 Merchant city
	<u>5.147</u>	Add	Added new Section 5.143 PAN
	<u>5.150</u>	Remove	reference identifier
	5.179	Add	Added new Section 5.147 Payment facilitator name*sub-merchant name
	<u>5.180</u>	Add	Removed 9 as a value from Table 5.152.5 and Table 5.152.6
	<u>5.181</u>	Add	Added new Section 5.179 Sub-
	<u>5.182</u>	Add	merchant city
	5.183	Add	Added new Section 5.180 Sub- merchant country code
			Added new Section 5.181 Sub- merchant identifier
			Added new Section 5.182 Sub- merchant postal code
			Added new Section 5.183 Submerchant state/province code

Table 2.20 Version 12.4 document revisions

Chapter	Section	Action	Data
Message formats	4.2.13	Update	Updated Table 4.29
	4.2.58	Update	Updated Section 4.2.58 Card brand tokenization (G3v062)
	4.2.59	Add	Added Table 4.122 and Table 4.123
Field definitions	5.35	Update	Updated Section 5.35 Card brand token action indicator
	<u>5.40</u>	Update	Updated Section 5.40 Card brand
	<u>5.51.4</u>	Update	token requestor ID
	5.118	Add	Updated Section 5.51.4 Address verification data
	<u>5.150</u>	Add	
	<u>5.209</u>	Update	Added Section 5.118 MasterCard wallet identifier
	<u>5.210</u>	Add	Added new values in <u>Table 5.152.5</u>
			Updated Section 5.209 UCAF authentication data
			Added new values in <u>Table 5.81</u>
Message format examples	7.1.1.14	Update	Updated field 64 in Table 7.14

Table 2.21 Version 12.3 document revisions

Chapter	Section	Action	Data
Message formats	4.2.59	Update	Updated Section 4.2.59 Amex card acceptor name/location (G3v063)
Field definitions	<u>5.123</u>	Update	Updated Section 5.123 Merchant city

Table 2.22 Version 12.2 document revisions

Chapter	Section	Action	Data
Message formats	4.1.1	Update	Updated Section 4.1.1 Using Encryption and Tokens
	4.2.13	Update	Updated Section 4.2.13 Secure e-
	4.2.25	Update	Commerce transaction (G3v017)
	4.2.26	Update	Updated <u>Table 4.54</u>
	4.2.49	Update	Updated Section 4.2.26 Amex merchant name/location data
	4.2.55	Update	(G3v030)
	4.2.58	Add	Updated Section 4.2.49 TSYS token request/response (G3v053)
	4.2.59	Add	
			Updated <u>Section 4.2.55 MasterCard</u> mapping service (G3v059)
			Added Section 4.2.58 Card brand tokenization (G3v062)
			Added Section 4.2.59 Amex card acceptor name/location (G3v063)

Chapter	Section	Action	Data
Field definitions	<u>5.14</u>	Update	Updated Section 5.14 Alternate
	<u>5.33</u>	Add	account ID 1
	<u>5.34</u>	Add	Added Section 5.33 Card brand token
	<u>5.35</u>	Add	Added Section 5.34 Card brand token account range status
	5.36	Add	Added Section 5.35 Card brand token action indicator
	<u>5.37</u>	Add	
	5.38	Add	Added Section 5.36 Card brand token assurance level
	<u>5.39</u>	Add	Added Section 5.37 Card brand token
	<u>5.40</u>	Add	expiration date
	5.40	Add	Added Section 5.38 Card brand token PAN last 4 digits
	5.88.2	Update	Added Section 5.39 Card brand token replacement PAN expiration date
	<u>5.88.6</u>	Update	
	5.88.7	Update	Added Section 5.40 Card brand token requestor ID
	<u>5.115</u>	Update	Added Section 5.41 Card brand token status
	<u>5.123</u>	Add	
	<u>5.127</u>	Add	Updated Section 5.88.2 Cardholder billing address
	5.128	Add	Updated Section 5.88.6 Cardholder billing first name
	<u>5.130</u>	Add	Updated Section 5.88.7 Cardholder
	<u>5.131</u>	Add	billing last name
	5.133	Add	Updated Section 5.115 Mapped PAN indicator
	<u>5.150</u>	Add	
	<u>5.164</u>	Update	Added Section 5.123 Merchant city Added Section 5.127 Merchant email
	<u>5.177</u>	Update	
	<u>5.195</u>	Add	Added Section 5.128 Merchant ID code
	5.196	Add	Added Section 5.130 Merchant phone
	5.201	Update	Added Section 5.131 Merchant postal code

Chapter	Section	Action	Data
			Added Section 5.133 Merchant street address
			Added values in <u>Table 5.152.6</u>
			Updated <u>Table 5.70</u>
			Updated <u>Table 5.75</u>
			Added Section 5.195 Token Cryptogram Block A
			Added Section 5.196 Token Cryptogram Block B
			Updated <u>Table 5.78</u>
Message format examples	7.1.1.10	Update	Updated Table 7.10
<u>Onampioo</u>	7.1.2.2	Update	Updated <u>Table 7.21</u>
Appendix A	8.2	Add	Added new value in Section 8.2 American Express

Table 2.23 Version 12.1 document revisions

Chapter	Section	Action	Data
Field definitions	<u>5.51</u>	Update	Updated <u>Table 5.23</u>
Message format examples	7.1.2.1	Update	Updated <u>Table 7.20</u>
	7.1.2.4	Update	Updated <u>Table 7.23</u>
	7.1.2.5	Update	Updated <u>Table 7.24</u>
	7.5.2	Update	Updated <u>Table 7.62</u>
	<u>7.5.5</u>	Update	Updated <u>Table 7.65</u>

Table 2.24 Version 12.0 document revisions

Chapter	Section	Action	Data
Message formats	4.2.24	Update	Updated heading in Section 4.2.24 American Express additional data
	4.2.25	Update	(G3v028)
	4 2 44	Undete	Updated Section 4.2.25 Extended AVS data (C3x030) and Table 4.54
	4.2.44	Update	AVS data (G3v029) and Table 4.54
	4.2.57	Add	Updated Section 4.2.44 Cardholder verification results (G3v048)
			Added Section 4.2.57 Spend qualified indicator (G3v061)
Field definitions	<u>5.15</u>	Update	Updated Section 5.15 American Express additional data
	<u>5.15.1</u>	Update	
	5.15.3	Add	Updated Section 5.15.1 AMEX card not present internet telephone data (ITD)
	<u>5.16</u>	Update	Added Section 5.15.3 Card present
	<u>5.51.4</u>	Update	Goods Sold Data
	<u>5.59</u>	Update	Updated Section 5.16 Amex merchant name/location data
	<u>5.88.6</u>	Update	Updated Section 5.51.4 Address
	5.88.7	Update	verification data
	5.147	Update	Updated Section 5.59 City code
	<u>5.177</u>	Add	Updated Section 5.88.6 Cardholder billing first name
	<u>5.200</u>	Update	
	<u>5.209</u>	Update	Updated Section 5.88.7 Cardholder billing last name
	5.210	Update	Updated <u>Table 5.50</u>
			Added Section 5.177 Spend qualified indicator
			Updated <u>Table 5.78</u>
			Updated Section 5.209 UCAF authentication data
			Updated <u>Table 5.81</u>
Message format		Remove	Removed the section on gift card
examples			

Chapter	Section	Action	Data
Appendix B		Update	Updated Section Card product codes

Table 2.25 Version 11.4 document revisions

Chapter	Section	Action	Data
Message formats	4.2.1	Update	Updated <u>Table 4.5</u>
	4.2.16	Update	Updated Section 4.2.16 Developer information (G3v020)
	4.2.25	Update	Updated <u>Table 4.54</u>
	4.2.51	Update	Updated <u>Table 4.104</u>
	4.2.56	Update	Updated 4.114
Field definitions	<u>5.1</u>	Update	Updated Section 5.1 Account data source code
	5.32.3	Update	
	<u>5.50</u>	Update	Updated Section 5.32.3 Merchant state/province
	<u>5.51.4</u>	Update	Updated <u>Table 5.22</u>
	<u>5.53</u>	Update	Updated Section 5.51.4 Address verification data
	<u>5.93</u>	Add	Updated Section 5.53 Cardholder
	<u>5.156</u>	Update	Verification Method (CVM) results
			Added Section 5.93 Gateway ID
			Updated <u>Table 5.66</u> to remove Stored Value Systems Gift Card
Message format examples	7.1.1.12	Update	Updated <u>Table 7.12</u>
examples	7.1.1.14	Update	Updated <u>Table 7.14</u>
	7.1.1.15	Update	Updated <u>Table 7.15</u>
	7.1.2.2	Update	Updated <u>Table 7.4</u>
	7.1.2.11	Add	Added Section 7.1.2.11 Debit integrated chip card (ICC - EMV
	7.1.2.12	Add	format) - request
			Added Section 7.1.2.12 Debit integrated chip card (ICC - EMV format) - response
Appendix A		Update	Updated <u>Table B.2</u> and added <u>Table B.3</u>

Table 2.26 Version 11.3 document revisions

Chapter	Section	Action	Data
Message formats	4.2.23	Update	Updated Section 4.2.23 POS data code (G3v027)
	4.2.30	Update	Updated Section 4.2.30 Card product
	4.2.53	Update	code (G3v034)
	4.2.54	Update	Updated <u>Table 4.108</u>
	4.2.55	Add	Updated Section 4.2.54 Alternate account ID 1 (G3v058)
	4.2.56	Add	Added Section 4.2.55 MasterCard
			mapping service (G3v059)
			Added Section 4.2.56 MasterCard PayPass mobile (G3v060)

Chapter	Section	Action	Data
Field definitions	5.1	Update	Updated Table 5.1
	5.10	Update	Updated Section 5.10 Additional response data
	<u>5.22</u>	Update Updated Section 5.2	Updated Section 5.22 Approval code
	<u>5.33</u>		
	<u>5.44</u>	Update	Updated Section 5.33 Card brand token
	<u>5.71</u>	Update	Updated <u>Table 5.21</u>
	<u>5.75</u>	Add	Updated <u>Table 5.31</u>
	<u>5.95</u>	Update	Added Section 5.75 Digital entity identifier
	5.114	Add	
	<u>5.115</u>	Add	Updated <u>Table 5.39</u>
	<u>5.116</u>	Add	Added Section 5.114 Mapped Card Expiration Date
	<u>5.137</u>	Add	Added Section 5.115 Mapped PAN indicator
	5.150	Update	Added Section 5.116 Mapped product code
	5.144	Update	
	<u>5.153</u>	Update	Added Section 5.137 MOTO/e- Commerce indicator
	<u>5.168</u>	Update	Updated Section 5.150 PayPass
	<u>5.201</u>	Update mobile device type	
	<u>5.204</u>	Update	Updated <u>Table 5.49</u>
	5.213	Update	Updated Section 5.153 POS environment indicator
			Updated Section 5.168 Reversal request/adjustment response code
			Updated <u>Table 5.78</u>
			Updated Section 5.204 Transaction identifier
			Updated Section 5.213 Verification code (CVV2, CVC2, CID)

Chapter	Section	Action	Data
Message format examples	7.1.1.6	Update	Updated Section 7.1.1.6 AFD completion advice request (Visa,
	7.1.1.7	Update	MasterCard, PayPal and Discover)
	7.1.2.9	Update	Updated Section 7.1.1.7 AFD completion advice response (Visa, MasterCard, PayPal and Discover)
			Updated Section 7.1.2.9 Direct debit - request
Appendix A	8.3	Update	Updated Section 8.3 Discover/PayPal
Appendix B		Add	Added Appendix B

Table 2.27 Version 11.2 document revisions

Chapter	Section	Action	Data
Message formats	4.2.23	Update	Updated Section 4.2.23 POS data code (G3v027)
	4.2.51	Update	Updated Section 4.2.51 Integrated Chip Card (ICC) EMV TLV Format (G3v055)
Field definitions	5.135 5.150	Update Update	Updated Section 5.135 Message reason code Updated Section 5.150 PayPass mobile device type
Appendix A		Add	Added information to Appendix A

Table 2.28 Version 11.1 document revisions

Chapter	Section	Action	Data
Field definitions	5.25	Update	Updated link in Section 5.25 Authorization request cryptogram
	5.26	Update	(ARQC)
	5.135	Update	Updated link in Section 5.26 Authorization response cryptogram (ARPC)
			Updated Section 5.135 Message reason code

Table 2.29 Version 11.0 document revisions

Chapter	Section	Action	Data
Message formats	4.2.53	Add	Added Section 4.2.53 Additional
	4.2.54	Add	response data (G3v057)
			Added Section 4.2.54 Alternate account ID 1 (G3v058)
Field definitions	5.10	Add	Added Section 5.10 Additional response data
	<u>5.14</u>	Add	
	<u>5.22</u>	Add	Added Section 5.14 Alternate account ID 1
	<u>5.33</u>	Add	Added values to <u>Table 5.12</u>
	<u>5.95</u>	Add	Added value to <u>Table 4.16</u>
	<u>5.135</u>	Update	Added values to <u>Table 5.39</u>
	<u>5.162</u>	Update	Updated Section 5.135 Message reason code
	<u>5.168</u>	Update	icason code
	<u>5.203</u>	Update	Updated <u>Table 5.72</u>
	<u>3.203</u>	Opuate	Updated Section 5.168 Reversal
	<u>5.206</u>	Add	request/adjustment response code
			Updated Section 5.203 Transaction fee amount
			Added values to Table 5.79

Chapter	Section	Action	Data
Message format examples	7.1	Add	Added values to Table 7.1
CAMPLES	7.1.1.6	Update	Updated heading name in Section 7.1.1.6 AFD completion advice request (Visa, MasterCard, PayPal and Discover) and added values to
	7.1.1.7	Update	Table 7.6
	7.1.1.12 and 6.1.1.13	Update	Updated heading name in Section 7.1.1.7 AFD completion advice response (Visa, MasterCard, PayPal and Discover) and added values to
	7.1.2.9 and 6.1.2.10	Update	Table 7.7 Updated information in Section
	7.2	Add	7.1.1.12 Credit integrated chip card (ICC - EMV format) - request (G3v055) and Section 6.1.1.13
			Updated information in <u>Section</u> 7.1.2.9 <u>Direct debit - request</u> and <u>Section 6.1.2.10</u>
			Added values to Table 7.37

Table 2.30 Version 10.4 document revisions

Chapter	Section	Action	Data
Message formats	4.2.24	Update	Updated <u>Table 4.52</u>
	4.2.38	Update	Updated <u>Table 4.80</u> and <u>Table 4.81</u> title caption
	4.2.41	Update	Updated <u>Table 4.86</u> and <u>Table 4.87</u> title caption
	4.2.51	Update	Updated Section 4.2.51 Integrated Chip Card (ICC) EMV TLV Format
	4.2.52	Add	$\frac{\text{Chip Card (ICC) Enviv TEV Tollinate}}{\text{(G3v055)}}$
			Added new Section 4.2.52 Message reason code (G3v056)

Chapter	Section	Action	Data
Field definitions	<u>5.1</u>	Update	Updated <u>Table 5.1</u>
	<u>5.50</u>	Update	Updated <u>Table 5.22</u>
	<u>5.51</u>	Update	Updated Section 5.51 Cardholder identification data
	<u>5.74</u>	Update	
	<u>5.135</u>	Add	Updated <u>Table 5.32</u>
	<u>5.150</u>	Update	Added new Section 5.135 Message reason code
			Updated <u>Table 5.152.6</u> and <u>Table 5.152.7</u>
Message format	7.1.1.16	Update	Updated Table 7.16
<u>examples</u>	7.1.1.17	Update	Updated <u>Table 7.17</u>
Appendix A		Update	Updated <u>Table B.</u>

Table 2.31 Version 10.3 document revisions

Chapter	Section	Action	Data
Field definitions	5.33	Update	Updated Section 5.33 Card brand token
	<u>5.71.3</u> - <u>5.71.6</u>	Update	Updated Section 5.71.3 Manually entered data - Section 5.71.6
	<u>5.213</u>	Update	Encrypted manually entered data
			Updated Section 5.213 Verification code (CVV2, CVC2, CID)

Table 2.32 Version 10.2 document revisions

Chapter	Section	Action	Data
Message formats	4.2.23	Update	Updated Section 4.2.23 POS data code (G3v027)
	4.2.26	Update	Updated <u>Table 4.56</u>
	4.2.51	Add	Added Section 4.2.51 Integrated Chip
	4.103	Add	Card (ICC) EMV TLV Format (G3v055)
			Added Section 4.103 Response message - Transit program response (version 054)

Chapter	Section	Action	Data
Field definitions	5.15.1	Update	Updated <u>Table 5.8</u>
	5.16	Update	Updated Section 5.16 Amex merchant name/location data
	<u>5.22</u>	Update	Updated Section 5.22 Approval code
	<u>5.33</u>	Update	
	<u>5.67</u>	Update	Updated Section 5.33 Card brand token
	<u>5.86</u>	Update	Updated Section 5.67 Cryptogram information data
	<u>5.95</u>	Update	Updated <u>Table 5.38</u>
	5.117.2	Update	
	<u>5.150</u>	Update	Updated <u>Table 5.39</u>
	<u>5.193</u>	Add	Updated <u>Table 5.45</u>
			Updated Section 5.150 PayPass
	<u>5.195</u>	Update	mobile device type
			Added new Section 5.193 TLV data
			Updated <u>Table 5.77</u>
Message format	7.1.1.10	Update	Updated Table 7.10
<u>examples</u>	6.1.1.14	Add	Added Section 6.1.1.14
	7.1.1.13	Add	Added Section 7.1.1.15 Credit
	7.2.2.1	Update	contactless using EMV data rules authorization - response
	7.3	Update	Updated <u>Table 7.43</u>
	7.5.1	Update	Updated <u>Table 7.44</u>
	<u>7.5.2</u>	Update	Updated <u>Table 7.61</u>
	7.5.3	Update	Updated <u>Table 7.62</u>
	7.5.7	Update	Updated <u>Table 7.63</u>
	<u>7.5.8</u>	Add	Updated <u>Table 7.67</u>
			Added Section 7.5.8 Tokenized PINless debit bill payment - request

Table 2.33 Version 10.1.1 document revisions

Chapter	Section	Action	Data
Message formats	4.2.9	Update	Updated Section 4.2.9 Chip condition code (G3v011)
	4.2.23	Add	
	4.2.41	Update	Added new line in Section 4.2.23 POS data code (G3v027)
			Updated <u>Table 4.86</u>
Field definitions	<u>5.1</u>	Update	Updated Table 5.1
	<u>5.50</u>	Update	Updated <u>Table 5.22</u>
	<u>5.58</u>	Update	Updated Section 5.58 Chip condition code
	<u>5.150</u>	Update	Updated Section 5.150 PayPass mobile device type
Message format	7.1.1.12	Update	Updated <u>Table 6.12</u>
<u>examples</u>	6.1.1.13	Update	Updated <u>Table 6.13</u>
	<u>6.1.1.14</u> - <u>7.1.1.17</u>	Add	Added Section 6.1.1.14 - Section 7.1.1.17 Retail/restaurant - Chip Card
	7.1.2.9	Update	Fallback- response Updated Table 7.24
	6.1.2.10	Update	Updated <u>Table 7.25</u>

Table 2.34 Version 10.1 document revisions

Chapter	Section	Action	Data
Message formats	4.1	Add	Added rows to Table 4.1
	4.1.1	Add	Added paragraph to the end of Section 4.1.1 Using Encryption and Tokens
	4.2.4	Add	Added response code in comments column to <u>Table 4.12</u>
	4.2.35	Update	Updated <u>Table 4.74</u>
	4.2.48	Update	Updated Section 4.2.48 Voltage encryption transmission block (G3v052) and Table 4.98

Chapter	Section	Action	Data
Field definitions	<u>5.16</u>	Add	Added new Section 5.16 Amex
	= 24		merchant name/location data
	<u>5.61</u>	Add	A 11 1 . T 11 F 20
	5.71	Add	Added row to <u>Table 5.30</u>
	<u>J./1</u>	Muu	Added new paragraph to Section
			5.201 Transaction code
	5.157	Add	
			Added new rows to <u>Table 5.67</u>
	<u>5.162</u>	Add	
	5.004	A 11	Added new codes to <u>Table 5.72</u>
	<u>5.201</u>	Add	A 11-11 t- T-11- 5 70
			Added new column to <u>Table 5.78</u>
Message format	7.4.2	Update	Updated <u>Table 7.58</u>
<u>examples</u>			
	7.5.7	Add	Added new Section 7.5.7 Tokenized bill pay

Table 2.35 Version 10.0 document revisions

Chapter	Section	Action	Data
Message formats	4.1.1	Updated	Updated Section 4.1.1 Using Encryption and Tokens
	4.2.48	Update	Updated <u>Table 4.98</u>
	4.2.49	Update	Updated <u>Table 4.101</u>
	4.2.50	Add	Added Section 4.2.50 Transit program (G3v054)

Chapter	Section	Action	Data
Field definitions	5.27	Add	Added sentence to Section 5.27 Authorization response text
	<u>5.57</u>	Add	Added table to Section 5.57 Check
	5.74	Add	acceptance data
	<u>5.95</u>	Add	Added new code and updated Table 5.32
	<u>5.144</u>	Update	Added new value to <u>Table 5.39</u>
	<u>5.168</u>	Update	Updated <u>Table 5.49</u>
	5.193	Update	Updated sentence in Section 5.168 Reversal request/adjustment response
	5.201	Update	code
	<u>5.206</u>	Add	Updated Section 5.193 TLV data
	<u>5.207</u>	Add	Updated <u>Table 5.78</u>
	5.213	Update	Added Section 5.206 Transit transaction type indicator
			Added Section 5.207 Transportation mode indicator
			Updated <u>Table 5.84</u>
Message format examples	7.1.1.6	Update	Updated the name for Section 7.1.1.6 AFD completion advice request (Visa,
1	7.1.1.7	Update	MasterCard, PayPal and Discover) and updated Table 7.6
	7.1.2.1	Update	Updated the name of Section 7.1.1.7 AFD completion advice response
	7.5.2	Updated	(Visa, MasterCard, PayPal and Discover) and updated Table 7.7
	<u>7.5.4</u>	Update	Updated <u>Table 7.20</u>
	<u>7.5.5</u>	Update	Updated <u>Table 7.62</u>
	756	Lindata	Updated <u>Table 7.64</u>
	7.5.6	Update	Updated the name of Section 7.5.5 Debit non-confirmation with token request - request and updated Table 7.65
			Updated <u>Table 7.66</u>

Table 2.36 Version 9.2.1 document revisions

Chapter	Section	Action	Data
Message formats	4.1	Add	Added information in Table 4.1
	4.1.1	Add	Added Section 4.1.1 Using Encryption and Tokens
	4.2.48	Add	Added Section 4.2.48 Voltage
	4.2.49	Add	encryption transmission block (G3v052)
			Added Section 4.2.49 TSYS token request/response (G3v053)
Field definitions	<u>5.85</u>	Add	Added Section 5.85 Encryption
	5.86	Add	Transmission Block (ETB) Added Section 5.86 Encryption type
	<u>5.95</u>	Add	31
	<u>5.157</u>	Add	Added values in <u>Table 5.95</u> Added rows in <u>Table 5.67</u>
	<u>5.162</u>	Add	
			Added and updated rows in Table 5.72
	<u>5.193</u>	Add	
	5.201	Add	Added Section 5.193 TLV data
	<u> </u>	Tidd	Added row in <u>Table 5.78</u>
Message format examples	7.5	Add	Added Section 7.5 Encryption and token examples
	7.5.1 - 7.5.6	Add	Added Section 7.5.1 Encrypted credit - Section 7.5.6 Debit care/EBT with token request-response
			The state of the s

Table 2.37 Version 9.2 document revisions

Chapter	Section	Action	Data
Message formats	4.2.4	Update	Updated the title for Table 4.11
	4.2.47	Add	Added new Section 4.2.47 EMS service request/response (G3v051)

Chapter	Section	Action	Data
Field definitions	<u>5.33</u>	Update	Updated Table 4.16
	<u>5.79</u>	Add	Added new Section 5.79 EMS additional information
	<u>5.80</u>	Add	
	<u>5.81</u>	Add	Added new Section 5.80 EMS results code
	<u>5.82</u>	Add	Added new Section 5.81 EMS risk score
	<u>5.83</u>	Add	
	5.84	Add	Added new Section 5.82 EMS risk score reason code
	<u>5.88</u>	Add	Added new Section 5.83 EMS scoring response indicator
	<u>5.162</u>	Update	
	<u>5.165</u>	Add	Added new Section 5.84 EMS service request indicator
	<u>5.168</u>	Add	Added new value to <u>Table 5.39</u>
			Updated <u>Table 5.72</u>
			Added Section 5.165.4 Response code
			Added new reason code value in Section 5.168 Reversal request/adjustment response code
Message format	7.1.1.12	Update	Updated <u>Table 6.12</u>
<u>examples</u>	7.3	Add	Added Section 7.3 Check examples

Table 2.38 Version 9.1 document revisions

Chapter	Section	Action	Data
Field definitions	5.199	Update	Updated paragraph in Section 5.199 Transaction amount
	<u>5.201</u>	Update	Updated <u>Table 5.78</u>

Table 2.39 Version 9.0 document revisions

Chapter	Section	Action	Data
Message formats	4.2.18	Update	Updated <u>Table 4.40</u>

Chapter	Section	Action	Data
Field definitions	<u>5.9</u>	Update	Updated Section 5.9 Additional
	<u>5.9.5</u>	Add	amount
	5.71	Update	Added Section 5.9.5 Additional amount
	5.134	Add	Updated Section 5.71 Customer data field
	5.144	Add	
	<u>5.161</u>	Update	Added paragraph to Section 5.134 Merchant Verification Value (MVV)
	<u>5.163</u>	Update	Added information in <u>Table 5.49</u>
	5.199	Add	Updated description in <u>Table 5.70</u> and the Note under Table 4.56
	<u>5.204</u>	Add	Updated Section 5.163 Retrieval reference number
			Added paragraph to Section 5.199 Transaction amount
			Added paragraph to Section 5.204 Transaction identifier

Table 2.40 Version 8.9 document revisions

Chapter	Section	Action	Data
Message formats	4.2.28	Add	Added new values in <u>Table 4.61</u>
	<u>4.2.36</u>	Add	Added new value in <u>Table 4.77</u>
Response code	<u>5.138</u>	Add	Added new values to <u>Table 5.47</u>
	<u>5.162</u>	Update	Updated value in <u>Table 5.163</u>
	<u>5.169</u>	Update	Updated description in Section 5.169 Secondary amount
Message format examples	7.1.3.5	Update	Updated <u>Table 7.36</u>

Table 2.41 Version 8.8 document revisions

Chapter	Section	Action	Data
Field definitions	<u>5.9.2</u>	Add	Added value to <u>Table 5.5</u>
	5.22	Add	Added new values to <u>Table 5.14</u>
	<u>5.162</u>	Add	Added new value to <u>Table 5.163</u>
Message format	7.1.1.19	Add	Added new Section 7.1.1.19 Cash
<u>examples</u>	7.1.2.2	Add	<u>advance - request</u>
	7.1.2.2	Update	Added new Section 7.1.2.2 Debit authorization reversal - request
	7.1.2.4	Update	Updated <u>Table 7.21</u>
	<u>7.1.2.5</u>	Update	Updated <u>Table 7.23</u>
	7.1.2.6	Update	Updated <u>Table 7.24</u>
	7.1.2.7	Add	Updated <u>Table 7.25</u>
	7.1.2.9	Update	Added new Section 7.1.2.7 Electronic benefits transfer (EBT) non-
	7.1.2.10	Update	confirmation - request
	6.1.3.1	Update	Updated <u>Table 6.30</u>
	6.1.3.2	Add	Updated Section 7.1.2.10 Direct debit - confirmation message
	7.1.3.5	Update	Updated <u>Table 6.32</u>
			Added new Section 6.1.3.2
			Updated <u>Table 7.36</u>

Table 2.42 Version 8.7 document revisions

Chapter	Section	Action	Data
Field definitions	5.166.1	Add	Added information from Section 5.166.1 System trace audit number.
Message format examples	7.1.1.6	Remove	Removed Systems Audit Number and the Field Separator row from Table 7.6.
	7.1.1.7	Remove	Removed Systems Audit Number and the Field Separator row from Table 7.7.

Table 2.43 Version 8.6 document revisions

Chapter	Section	Action	Data
Message formats	4		Reorganized <u>Chapter 3</u> .
	4.2.29	Update Add	Updated heading of Section 4.2.29 Reversal request/adjustment response code (G3v033)
	4.2.42	Update	Added new length to <u>Table 4.62</u>
	4.2.45	Add	Updated <u>Table 4.88</u> and <u>Table 4.89</u>
	4.2.46	Add	Added new Section 4.2.45 Gen 2 terminal authentication (G3v049)
			Added new Section 4.2.46 Association timestamp (G3v50)
Field definitions	<u>5</u>	Update	Updated cross reference links to chapter 3
			Updated sections <u>5.1</u> , <u>5.22</u> , <u>5.23</u> , , <u>5.52</u> , <u>5.112</u> , <u>5.113</u> , <u>5.163</u> , <u>5.165</u> , <u>5.165.2</u> , <u>5.165.3</u> , <u>5.165.5</u> , <u>5.166</u> , <u>5.166.1</u> , <u>5.168</u> , <u>5.199</u> and <u>5.204</u>
	<u>5.93</u>	Add	Added new Section 5.93 Gateway ID
	<u>5.94.1</u>	Add	Added new Section 5.94.1 Authentication code
	<u>5.94.2</u>	Add	Added new Section 5.94.2
	<u>5.94.3</u>	Add	Authentication factor 1
	<u>5.94.4</u>	Add	Added new Section 5.94.3 Authentication factor 2
	<u>5.95</u>	Add	Added new Section 5.94.4 GenKey
	<u>5.162</u>	Add	Added new groups to <u>Table 5.39</u>
	5.201	Add	Added comment to Section 5.162 Response code and added transaction codes to Table 5.163
			Added new transaction codes in Table 5.78

Chapter	Section	Action	Data
Message format examples	Z		Reorganized Chapter 6
<u>examples</u>	7.1.1.6	Add	Added new Section 7.1.1.6 AFD completion advice request (Visa,
	6.1.1.7	Add	MasterCard, PayPal and Discover)
	7.4	Add	Added new Section 6.1.1.7
	<u>7.4.1</u>	Add	Added new Section 7.4 Gen2 Terminal Authentication
	7.4.2	Add	
	7.4.3	Add	Added new Section 7.4.1 Authentication request
	7.4.4	Add	Added new Section 7.4.2 Authentication response
			Added new Section 7.4.3 Deactivation request
			Added new <u>Section 7.4.4 Deactivation</u> response

Table 2.44 Version 8.5 document revisions

Chapter	Section	Action	Data
Message formats	3.2	Add	Added Group 3 version 47 and Group 3 version 48
	3.3	Add	Added <u>Table 3.93</u>
Field definitions	4.16	Add	Added new Section 4.16
	4.21	Add	Added new <u>Table 4.14</u>
	<u>4.70</u>	Add	Added values to <u>Table 4.28</u>
	4.103	Add	Added value to <u>Table 4.44</u>
Message format examples	6.7	Update	Updated content in <u>Table 6.7</u>
1	<u>6.36</u>	Add	Added information in <u>Table 6.39</u>
Appendix A		Update	Updated <u>Table A8.2</u>

Table 2.45 Version 8.4.1 document revisions

Chapter	Section	Action	Data
Message formats	4.4	Update	Updated <u>Table 4.86</u>

Chapter	Section	Action	Data
Field definitions	5.165	Update	Updated section <u>5.165</u> with an ATM transaction supporting statement
	<u>5.166</u>	Update	Updated section <u>5.166</u> with an ATM transaction supporting statement
	5.201	Add	Added two new transaction codes to Table 5.78
Message format	7.1.1.4	Update	Updated section 7.1.1.4
<u>examples</u>	7.1.3.2	Update	Updated section 7.1.3.2
	7.1.3.3	Update	Updated section 7.1.3.3
	7.1.3.4	Update	Updated section 7.1.3.4
	7.1.3.5	Add	Added new section 7.1.3.5
	7.3.6	Update	Updated <u>Table 6.12</u>
	7.3.6	Update	Updated <u>Table 6.29</u>

Table 2.46 Version 8.4 document revisions

Chapter	Section	Action	Data
Field definitions	<u>5.71</u>	Update	Updated the Discover Network in Table 5.31

Table 2.47 Version 8.3 document revision

Chapter	Section	Action	Data
Field definitions	5.172	Update	Updated the Description in Section 5.172 Settlement amount

Table 2.48 Version 8.2 document revisions

Chapter	Section	Action	Data
POS Check is no lo been removed from		ted effective	4/17/09. All references to POS Check have

All references to Diners have been removed from the spec.

Chapter	Section	Action	Data
Message formats	3.2.21	Update	Updated the format for the IFD Serial Number in <u>Table 4.86</u>
		Add	Added two new rows in <u>Table 4.86</u>
Field definitions	5.71	Add	Added card ranges to Discover Network Card type in <u>Table 5.31</u>
	5.74	Add	Added two new values in <u>Table 5.32</u>
	5.137	Update	Updated the description for value 5 in Table 5.46
	<u>5.155</u>	Add	Added new value in <u>Table 5.65</u>
	5.189	Add	Added new field definition Section 5.189 Terminal transaction time
	5.200	Update	Updated the Transaction Type description for 9C in <u>Table 5.78</u>
Message format examples	7.3.6	Update	Updated the format for the IFD Serial Number in Table 6.12
		Add	Added two new rows in <u>Table 6.12</u>
	7.3.6	Update	Updated the format for the IFD Serial Number in <u>Table 6.29</u>
		Add	Added two new rows in <u>Table 6.29</u>

Table 2.49 Version 8.1 document revisions

Chapter	Section	Action	Data
Message formats	4.2.38	Add	Added <u>Table 4.80</u>
	4.2.40	Add	Added <u>Table 4.84</u>
	3.2.21	Add	Added <u>Table 4.86</u>
	4.2.42	Add	Added <u>Table 4.88</u>
		Add	Added <u>Table 3.89</u>
		Add	Added <u>Table 3.90</u>
		Add	Added <u>Table 3.91</u>

Chapter	Section	Action	Data
Field definitions	<u>5.2</u>	Add	Added new Section 5.2 Account type (from)
	5.3	Add	Added new Section 5.3 Account type (to)
	<u>5.19</u>	Add	Added new Section 5.19 Application interchange profile
		Add	Added new Section
	<u>5.44</u>	Add	
	5.64	Add	Added new Section 5.44 Card type
	<u>5.65</u>	Add	Added new Section 5.64 Cryptogram amount
	<u>5.66</u>	Add	Added new Section 5.65 Cryptogram cashback amount
	<u>5.67</u>	Add	Added new Section 5.66 Cryptogram
	<u>5.68</u>	Add	currency code
	5.74	Add	Added new Section 5.67 Cryptogram information data
	<u>5.95</u>	Add	Added new Section 5.68 Cryptogram
	<u>5.100</u>	Add	transaction type
	<u>5.105</u>	Add	Added code to Table 5.32
	5.108	Add	Added new value in <u>Table 5.39</u>
	<u>5.138</u>	Add	Added new Section 5.100 IFD serial number
	<u>5.170</u>	Add	Added new Section 5.105 Issuer application
	5.186	Add	data
	<u>5.188</u>	Add	Added new Section 5.108 Issuer script results
	5.190	Add	Added new Section 5.138 Network ID
	5.200	Add	Added new Section 5.170 Secondary PIN
	5.201	Add	block
	<u>5.215</u>	Add	Added new Section 5.186 Terminal country code
			Added new Section 5.188 Terminal transaction date
			Added new Section 5.190 Terminal type

Chapter	Section	Action	Data
			Added new Section 5.200 Transaction category code Added new codes in Table 5.78 Added new Data Element in Section 5.215 Visa contactless
Message format examples	7.1.1.4 7.1.3.2 7.1.3.3 7.1.3.4 7.3.6 7.3.6 7.3.6 6.3.12	Add	Added new Section 7.1.1.4 Auto rental - request Added new Section 7.1.3.2 ATM balance inquiry - request Added new Section 7.1.3.3 ATM deposit - request Added new Section 7.1.3.4 ATM account transfer - request Added Table 6.12 Added Table 6.29 Added Table 6.30

Table 2.50 Version 8.0 document revisions

Chapter	Section	Action	Data
Field definitions	5.22	Add	Added values to <u>Table 4.11</u> & <u>Table 5.12</u>
	<u>5.33</u>	Add	Added values to <u>Table 4.16</u>
	<u>5.74</u>	Add	Added codes to <u>Table 5.32</u>

Table 2.51 Version 7.7.2document revisions

Chapter	Section	Action	Data
Message formats	4.2.33	Update	Updated Real time substantiation indicator (G3v037)
Field definitions	5.117.2	Add	Added value to <u>Table 5.45</u>
	<u>5.147</u>	Add	Added value to <u>Table 5.50</u>
Message format examples		Update	Updated <u>Table 7.43</u>

Table 2.52 Version 7.7.1 document revisions

Chapter	Section	Action	Data
Message formats	4.2.37	Update	Updated <u>Table 4.78</u>
	4.2.39	Add	Added <u>Table 4.82</u>
		Update	Updated <u>Table 3.84</u>
		Update	Updated <u>Table 3.86</u>
		Update	Updated <u>Table 3.87</u>
		Add	Added <u>Table 3.88</u>
Field definitions	<u>5.95</u>	Add	Added values to <u>Table 5.39</u>
	<u>5.138</u>	Add	Added new definition Network ID
	<u>5.201</u>	Add	Added value to <u>Table 5.78</u>
Message format examples		Add	Added new message format <u>Table 7.43</u>

Table 2.53 Version 7.7 document revisions

Chapter	Section	Action	Data
Message formats		Update	Updated Section Group 3 version 29 examples
	<u>4.2.33</u> <u>4.2.35</u>	Update Add	Updated <u>Table 4.70</u> Added <u>Table 4.74</u> , <u>Table 4.76</u> , <u>Table 4.78</u>
	4.2.52	Update Add	and <u>Table 4.80</u> Updated <u>Table 4.106</u> Added <u>Table 3.84</u> , <u>Table 3.85</u> , <u>Table 3.86</u> and <u>Table 3.87</u>

Chapter	Section	Action	Data
Field definitions	5.15.1	Update	Updated Section 5.15.1 AMEX card not present internet telephone data (ITD)
	<u>5.22</u>	Add	
	<u>5.33</u>	Update	Added to <u>Table 5.12</u> added note
	<u>5.51</u>	Add	Updated <u>Table 4.16</u>
	<u>5.51.3</u>		Added note
	<u>5.51.5</u>	Update	Updated DUK/PT key with thirty-two byte
	<u>5.51.4</u>	Add	cardholder ID and Table 5.24
			Added to Section 5.51.4 Address verification data
	<u>5.52</u>	Add	
	<u>5.71.1</u>	Update	Added new definition <u>Cardholder</u> <u>verification method</u>
	<u>5.71.2</u>	Update	Updated Section 5.71.1 Track one data
	<u>5.104</u>	Add	Updated Section 5.71.2 Track two data
	<u>5.117.2</u>	Add	Added new definition ISA charge indicator
	<u>5.140</u>	Add	Added new value to <u>Table 5.45</u>
	5.164	Update	Added new definition NTIA UPC/SKU data
	<u>5.215</u>	Add	
			Updated <u>Table 5.73</u>
		T. 1	Added new definition Visa contactless
Message format examples	<u>6.3.6</u>	Update	Updated <u>Table 6.24</u>
	6.1.4 Update	Updated <u>Table 6.32</u>	
	7.2.1.6	Update	Updated <u>Table 7.42</u>
	6.6.1	Update	Updated <u>Table 6.27</u>
	6.3.10	Update	Updated <u>Table 6.28</u>
Appendix A		Add	Added Appendix A

Table 2.54 Version 7.6.1 document revisions

Chapter	Section	Action	Data
Message formats	4.2.34	Add	Added <u>Table 4.72</u>
	3.3	Add	Added <u>Table 3.81</u> , <u>Table 3.82</u> and <u>Table 3.83</u>
Field definitions	5.22	Remove	Removed Domestic JCB from table identifier
	<u>5.51.4</u>	Remove	
	<u>5.76</u>	Add	Removed Domestic JCB Added new section Electro magnetic signature
	<u>5.95</u>	Add	
	<u>5.201</u>	Remove	Added value to <u>Table 5.39</u>
	<u>5.212</u>	Remove	Removed Domestic JCB from transaction code 58
			Removed Domestic JCB

Table 2.55 Version 7.6document revisions

Chapter	Section	Action	Data
Message formats	3.3	Update	Updated <u>Table 4.5</u>
	4.2.26	Update	Updated section to break out version 31, 32, 33, and 34
POS Check service		Update	Updated the Industry Type content
		Update	Updated description

All revisions supporting version 7.5.3 are marked with change bars.

Table 2.56 Version 7.5.3 document revisions

Chapter	Section	Action	Data
Field definitions	<u>5.204</u>	Update	Updated definition

Table 2.57 Version 7.5.2 document revisions

Chapter	Section	Action	Data
Message formats	3.79	Add	Added Table 3.79, Card-level results response (version 034)
	4.66	Add	Added <u>Table 4.66</u> , <u>Request message - Promotional code (version 035)</u>
	4.42	Update	Updated <u>Table 4.42</u> , <u>Request message - Visa</u> and <u>MasterCard healthcare data (version 023)</u>
	4.2.20	Add	Added MasterCard advice code (G3v024)
	3.67	Update	Updated <u>Table 3.67</u> , <u>Additional amounts</u> participant (version 022)
	3.80	Add	Added Table 3.80, Response Promotional Code (version 035)
		Add	Added MasterCard or Discover free form (version 023) description
Field definitions	<u>5.153</u>	Add	Added new field - POS environment indicator
	5.97.1	Update	Updated definition - <u>MasterCard and</u> <u>Discover free form</u>
	5.97.2	Update	Updated definition - <u>Healthcare</u>
	<u>5.95</u>	Add	Added new values to <u>Table 5.39</u> , <u>Group III</u> <u>version number</u>
	5.22	Add	Added Table 5.13, Approval source values in the first position of the approval code for Discover/PayPal transactions
	<u>5.71</u>	Update	Updated <u>Table 5.31</u> , <u>Customer data field</u>
	<u>5.212</u>	Update	Updated definition - <u>Discover usage</u> and <u>Non-Discover usage</u>

Table 2.58 Version 7.5.1 document revisions

Chapter	Section	Action	Data
Message formats	3.79	Add	Added to <u>Table 3.79</u> , <u>Card-level results</u> response (version 034)
Field definitions	5.33	Add	Added new line to description - <u>Card brand</u> token

All revisions supporting versions 7.5 are marked with change bars.

Table 2.59 Version 7.5 document revisions

Chapter	Section	Action	Data
Message formats		Update	Updated description of <u>Table 4.42</u> , <u>Request</u> message - Visa and <u>MasterCard healthcare</u> data (version 023)
Message formats	3.3	Update	Updated description of <u>Table 3.68</u> , <u>Visa and MasterCard Healthcare</u> (version 023)
Field definitions	5.22	Update	Updated the description of Table 4.11 and added Table 5.12 Updated the value of D - Visa Signature Preferred
Field definitions	5.97	Update	Changed the field name and updated the description
Field definitions	5.137	Update	Added two new values to Table <u>5.46</u> , MOTO/e-Commerce indicator

Table 2.60 Version 7.4.2 document revisions

Chapter	Section	Action	Data
Message format examples	6.3.10		Updated <u>Table 6.28</u> , <u>Debit non-confirmation - request</u>

Table 2.61 Version 7.4.1 document revisions

Chapter	Section	Action	Data
Message formats	4.2.27	Add	Added new request table: <u>Table 4.64</u> , <u>Request message - Card product code</u> <u>(version 034)</u>
Message formats	3.3	Add	Added new response table: <u>Table 3.79</u> , <u>Card-level results response (version 034)</u>
Field definitions	<u>5.33</u>	Add	Added new section - <u>Card brand token</u>
Field definitions	<u>5.95</u>	Update	Updated Table <u>5.39</u> , <u>Group III version</u> <u>number</u> with value 034 - Card-level results
Field definitions	<u>5.156</u>	Update	Change stored value in Table <u>5.66</u> , <u>RIID</u> <u>values</u>
Field definitions	<u>5.165.1</u>	Update	Update description
Field definitions	<u>5.165.2</u>	Update	Update description
Field definitions	<u>5.165.3</u>	Update	Update description
Field definitions	<u>5.165.5</u>	Update	Update description
Field definitions	5.166.1	Update	Update description

Chapter	Section	Action	Data
Field definitions	<u>5.166.2</u>	Update	Update description
Message format examples	6.21	Add	Added Table <u>6.28</u> , <u>Debit non-confirmation</u> <u>- request</u>

Table 2.62 Version 7.4 document revisions

Chapter	Section	Action	Data
Message formats	4.4	Update	Update <u>Table 4.5</u> , <u>Request message -</u> Authorization fields comprising Group 1
Message formats	4.2.27	Add	Added new section - <u>Digital entity identifier</u> (G3v031) includes <u>Table 4.58</u> , <u>Table 4.60</u> and <u>Table 4.62</u>
Message formats	3.3	Add	Added new response tables: <u>Table 3.76</u> , <u>Table 3.77</u> and <u>Table 3.78</u>
Field definitions	5.5	Add	Added new section - Acquirer transaction currency code
Field definitions	5.6	Add	Added new section - Actual amount, cardholder billing
Field definitions	5.7	Add	Added new section - Actual amount, settlement
Field definitions	<u>5.8</u>	Add	Added new section - Actual amount, transaction
Field definitions	5.11	Update	Added two columns, "Domestic" and "International" and deleted "Error Ineligible" authorization response message from Table 5.7, Address verification result code
Field definitions	5.14	Add	Added new section - Alternate account ID 1
Field definitions	5.15	Add	Added new section - Agent identification result
Field definitions	<u>5.46</u>	Add	Added new section - <u>Cardholder billing amount</u>
Field definitions	5.48	Add	Added new section - <u>Cardholder billing currency</u> code
Field definitions	5.47	Add	Added new section - <u>Cardholder billing</u> conversion rate
Field definitions	<u>5.62</u>	Add	Added new section - Conversion date
Field definitions	5.70	Update	Updated description text
Field definitions	<u>5.95</u>	Update	Updated Table <u>5.39</u> , <u>Group III version number</u> with three new values
Field definitions	<u>5.137</u>	Update	Deleted line in table

Chapter	Section	Action	Data
Field definitions	5.168	Add	Added new section - Reversal request/adjustment response code
Field definitions	<u>5.173</u>	Add	Added new section - <u>Settlement conversion rate</u>
Field definitions	5.174	Add	Added new section - <u>Settlement currency code</u>
Field definitions	5.201	Update	Updated Table <u>5.78</u> , <u>Transaction code</u> with one new value; changed transaction types to "Reserved for future use."
Field definitions	5.204	Update	Added note to description.
Message format examples	6.3.3	Update	Updated Table 6.21, Direct debit - request
Message format examples	6.1.4	Update	Deleted "G-Clear Text PIN" line; Changed length of "Operator/Clerk ID" to 0 or 8.
Message format examples	6.1.3.3	Add	Added new section - Gift card - response
Message format examples	6.1.6	Delete	Deleted "P-Preferred Customer" line.
Message format examples	6.6.1	Update	Updated note and table.

Table 2.63 Version 7.3.2 document revisions

Chapter	Section	Action	Data
All	All	Update	Updated language to reflect Vital Processing Services name change to TSYS Acquiring Solutions
Field definitions	<u>Table 5.16</u> 3	Add	Added "Serv Not Allowed" authorization response message, response code 59.
Field definitions	<u>Table 5.16</u> <u>3</u>	Correction	Deleted duplicate entries for response codes R0 and R1.
Message format examples	Table 6.2 Table 7.39 Table 7.40 Table 6.25 Table 7.37 Table 7.38 Table 7.5	Update	Updated cross references for Address Verification Data field description to section <u>5.51.4</u> .

Chapter 3 Overview

3.1 Introduction

This document describes the request and response record formats for Second Generation Point Of Sale (POS) authorization devices using TSYS Acquiring Solutions' authorization services. This document defines only the record format structures message.

WARNING: Direct debit and EBT card transactions utilize a third communication packet.

<u>Figure 3.1</u> represents an authorization request transmitted to TSYS Acquiring Solutions using public communication services with a subsequent authorization response returned by TSYS Acquiring Solutions. Note that Direct Debit and EBT card transactions utilize a third communication packet.

3.2 Authorization request and response

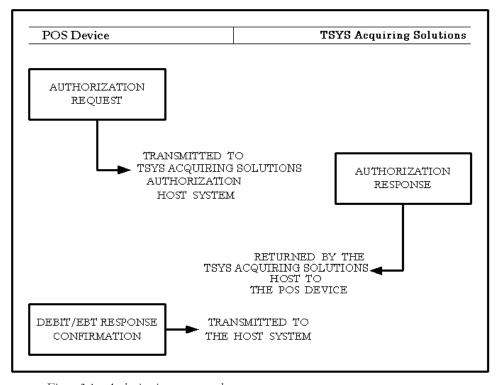


Figure 3.1 Authorization request and response

This Page Intentionally Blank

Chapter 4 Message formats

4.1 Introduction

The following illustrations provide examples of how the authorization message format components are structured. All authorization request and response messages are framed beginning with a Start-of-Text character and terminated with End-of-Text and Longitudinal Redundancy Check (LRC) characters. Authorization request and response message data elements are separated into functional data groupings. TSYS Acquiring Solutions currently defines and supports three separate data groupings for both authorization request and response messages:

Group I + III request fields represent base data elements which must be supplied in every authorization request. The TSYS Acquiring Solutions host always responds with a corresponding set of Group I+III response fields.

Group II + III fields are directly associated with performing Direct Debit transactions. To perform a Debit Card transaction, Group II data elements must be combined and concatenated with Base Group I and III. When Groups I, II, and III are supplied in the authorization request, the host responds with a corresponding set of Group I, II, and III response fields.

Additional Group III definitions are utilized to augment Base Group I and I + II with additional miscellaneous information as needed for authorization. Multiple group definitions exist for Group III. The formatting of any Group III representation is defined by an embedded version number (5.95).

Single or multiple Group III segments could be supplied within any given authorization request message. The presence of multiple Group III segments is designated by the insertion of a Group Separator <GS> character (5.96) between each group section.

Whenever one or more Group III request segments are supplied with Group I specifically, the host responds with Group I and corresponding Group III response segment(s). Group II cannot be supplied without Group I + III data. The presence of two or more groups is designated by the letter supplied in the Record Format field (5.157). Table 4.1 provides a summary of the Record Format designation for each allowable grouping.

Table 4.1 Group and record format designations

Request record	Response record	Group designation
D	E	Credit Card/Addendum Data (Groups I + III)
W	Е	Encrypted Credit Card / Addendum Data (Groups I + III)
Y	Е	Tokenized Credit Card / Addendum Data (Groups I + III)

Request record	Response record	Group designation
Т	U	Debit Cards or Electronic Benefits Transfer- EBT (Groups I + II + III)
X	U	Encrypted Debit Cards or Electronic Benefits Transfer - EBT (Groups I + II + III)
Z	U	Tokenized Debit Cards or Electronic Benefits Transfer - EBT (Groups I + II + III)
V	N/A	Debit Cards or EBT Confirmation Record

NOTE With the addition of encryption <u>4.2.48</u> or tokens <u>4.2.49</u>, Gen2 Terminal Authentication is required.

<u>Table 4.2</u> through <u>Table 4.3</u> outline the request and response message components.

Table 4.5 through Table 4.107 lists valid constituent fields for all Group 1, Group 2 and Group 3 Authorization request and response messages.

Table 4.2 Authorization request record format components

Start-of-tex	t <stx></stx>
Base Group	I + III (Required)
Addendum	Group II (Required for Direct Debit/EBT)
Addendum	Group III (Additional Information)
Group Sepa submitted)	nrator (Present only if multiple Group III addendum fields are
Addendum	Group III (Additional Information)
Termination	n Character <etx></etx>
Longitudina	al Redundancy Check <lrc></lrc>

Table 4.3 Authorization response record format components

Authorization Response Record format components						
Start-of-text <stx></stx>						
Base Group I + III (Always Returned)						
Addendum Group II (Returned for Direct Debit/EBT)						
Addendum Group III (Additional Information)						
Group Separator (Present only if multiple Group III addendum fields are submitted)						
Addendum Group III (Additional Information)						
Termination Character <etx></etx>						

Authorization Response Record format components

Longitudinal Redundancy Check <LRC>

NOTE:

Summary of Groupings: Credit Card transactions require the use of record formats D and E. These records must include the Base Group I, and at a minimum, Base Group III Version Number 000. Direct Debit and EBT transactions require the use of record formats T, U, and V. These records must include the Base Group I, Base Group II, and at a minimum, Base Group III Version Number 000.

Table 4.4 Debit/EBT confirmation record

Group	Length	Format	Reference	Content	Comments
0	1	A/N	<u>5.157</u>	Record Format	
	1	NUM	<u>5.21</u>	Application Type	
	1	A/N	<u>5.136</u>	Message Delimiter	
	6	NUM	5.4	Acquirer Bank Identification Number (BIN)	
	8	A/N	<u>5.98</u>	Host Message Identifier	
	6	NUM	<u>5.179</u>	System Trace Audit Number	

4.1.1 Using Encryption and Tokens

Security features include the use of encryption and tokens. Encryption allows the transaction to hold encrypted data which ensures transmission security. Tokens can be requested in a transaction and returned with a response. The use of tokens does not enhance transmission security but it allows a receiver to store unique card-type data that then reduces PCI Audit Scope for the merchant. Gen 2 Terminal Authentication (G3V049) is required in order to use either security feature.

Encryption

When including encrypted data in the Customer Data Field (5.71), this needs to be identified in the Record Format (5.157). For Credit transactions, use Record Format 'W'. For Debit transactions, use Record Format 'X'. Group III Version 052 (4.2.48) will be required to include the Encryption Type and Encryption Transmission Block so that the data may be decrypted. Refer to details later in this document.

Tokens

Tokenization is offered in two varieties: TSYS Tokenization and Card Brand Tokenization. They are addressed in different sections. Please refer to Group III Version 053 (4.2.42) for a description of TSYS Tokenization. Please refer to Group III Version 062 (4.2.58) for a description of Card Brand Tokenization.

NOTE Card Brand Tokenization is an optional feature just like TSYS Tokenization. The merchant should feel free to make a decision on which solution is the best for the line of business.

4.2 Authorization request/response message formats and constituent fields

4.2.1 Authorization message constituent fields (G1)

NOTE: This table includes all the fields valid in a Gen 2 authorization message and does not represent a specific message type. Examples of specific messaging requirements are included in <u>Chapter 6</u>.

Table 4.5 Request message - Authorization fields comprising Group 1

Group	Length	Format	Reference	Content
I	1	A/N	5.157	Record Format
	1	NUM	5.21	Application Type
	1	A/N	5.136	Message Delimiter
	6	NUM	5.4	Acquirer BIN
	12	NUM	5.129	Merchant Number
	4	NUM	5.177	Store Number
	4	NUM	5.187	Terminal Number
	1	A/N	5.74	Device Code
	1	A/N	<u>5.101</u>	Industry Code
	3	NUM	5.70	Currency Code
	3	NUM	5.63	Country Code
	9	A/N	5.59	City Code
	2	NUM	5.110	Language Indicator
	3	NUM	5.192	Time Zone Differential
	4	NUM	5.121	Merchant Category Code
	1	A/N	5.161	Requested ACI
	4	NUM	5.205	Transaction Sequence Number
	2	A/N	5.201	Transaction Code
	1	A/N	5.50	Cardholder Identification Code
	1	A/N	5.1	Account Data Source
	1 - 79	A/N	5.71	Customer Data Field
	1	ASCII	5.90	Field Separator
	0, 128	A/N	5.51	Cardholder Identification Data
	1	ASCII	5.90	Field Separator
	0, 6	NUM	5.156	Receiving Institution ID
	1	ASCII	5.90	Field Separator
	1	1	1	1

Group	Length	Format	Reference	Content
	1 - 12	NUM	5.199	Transaction Amount
	1	ASCII	5.90	Field Separator
	0-12	NUM	5.169	Secondary Amount
	1	ASCII	5.90	Field Separator
	0, 4	A/N	5.117	Market Specific Data
	1	ASCII	5.90	Field Separator
	0, 40	A/N	5.32	Card Acceptor Data
	1	ASCII	5.90	Field Separator
	15	A/N	5.167	Reversal and Incremental Transaction ID
	1	ASCII	5.90	Field Separator
	0, 30	A/N	5.165	Reversal and Cancel Data I
	1	ASCII	5.90	Field Separator

Table 4.6 Response message - Authorization fields comprising Group 1

Group	Length	Format	Reference	Content	Comments
I	1	A/N	5.157	Record Format	
	1	NUM	5.21	Application Type	
	1	A/N	5.136	Message Delimiter	
	1	A/N	5.164	Returned ACI	
	4	NUM	5.177	Store Number	
	4	NUM	5.187	Terminal Number	
	1	A/N	5.28	Authorization Source Code	
	4	NUM	5.205	Transaction Sequence Number	
	2	A/N	5.162	Response Code	
	6	A/N	5.22	Approval Code	
	6	NUM	5.112	Local Transaction Date	MMDDYY
	6	NUM	5.113	Local Transaction Time	HHMMSS
	16	A/N	5.27	Authorization Response Text	
	1	A/N	5.11	AVS Result Code	
	12	A/N	5.163	Retrieval Reference Number	
	1	A/N	5.117	Mkt. Specific Data Identifier	
	0, 15	A/N	5.204	Transaction Identifier	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0, 4	A/N	5.212	Validation Code	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>

4.2.2 Debit or EBT additional fields in authorization message (G2)

Table 4.7 Request message - Debit card or electronic benefits transfer (EBT) authorization fields comprising Group 2

Group	Length	Format	Reference	Content	Comments
II	0, 7	A/N	5.166	Reversal and Cancel Data II	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1-30	A/N	5.176	Sharing Group	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0, 9	NUM	5.118	Merchant ABA Number	
	0, 4	A/N	5.132	Merchant Settlement Agent No.	
	1	ASCII	5.90	Field Separator	<fs></fs>
	6	NUM	5.12	Agent Bank Number	
	6	NUM	5.13	Agent Chain Number	
	3	NUM	5.31	Batch Number	
	1	A/N	<u>5.158</u>	Reimbursement Attribute	
	0, 12	A/N	5.142	Original Purchase Data	
	1	ASCII	5.90	Field Separator	<fs></fs>

Table 4.8 Response message - Debit card or electronic benefits transfer (EBT) authorization fields comprising Group 2

Debit Cards/EBT							
Group	Length	Format	Reference	Content	Comments		
II	6	A/N	<u>5.4</u>	Acquirer BIN			
	8	A/N	<u>5.98</u>	Host Message Identifier			
	6	NUM	<u>5.179</u>	System Trace Audit Number			
	1	A/N	5.139	Network ID Code			
	4	NUM	<u>5.175</u>	Settlement Date	MMDD		
	1	ASCII	<u>5.90</u>	*Field Separator	<fs></fs>		

^{*} Not present for previous 'B' format response message

4.2.3 No addendum data (G3v000)

Table 4.9 Request message - No addendum data (version 000)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	000

Table 4.10 Response message - No addendum data (version 000)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	000

4.2.4 Commercial card (G3v001)

Table 4.11 Request message - Commercial card request indicator (Visa and MasterCard only, version 001)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	001
	4	A/N	5.60	Commercial Card Request Indicator	!010
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.12 Response message - Commercial card response indicator (version 001)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	001
	0-1	A/N	5.61	Commercial Card Response Indicator	B,R,L,S,D,0
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.5 Card verification code 2 (G3v007)

Table 4.13 Request message - Card verification code 2 (CVV2, version 007)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	007
	6	A/N	5.213	Verification Code	
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.14 Response message - Card verification code 2 (CVV2, version 007)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	007
	0-1	A/N	5.214	Verification Code Result Code	
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.6 Fleet fueling card (G3v008)

Table 4.15 Request message - Fleet fueling card (version 008)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	008
	0, 17	A/N	5.99	Identification Number	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.16 Response message - Fleet fueling card (version 008)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	008
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.7 Set e-Commerce (G3v009)

Table 4.17 Request message- Set e-Commerce (version 009)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	009
	0, 32	A/N	5.49	Cardholder Certificate Serial Number	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1-32	A/N	5.122	Merchant Certificate Serial Number	
	1	ASCII	5.90	Field Separator	<fs></fs>
	40	A/N	5.217	XID	
	40	A/N	5.208	Transtain	
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.18 Response message- Set e-Commerce (version 009)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	009
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.8 RESERVED - CCPS (G3v010)

Table 4.19 Request message - CCPS (version 010, reserved for future use)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	5.95	Group III Version Number	010
	3	NUM	5.43	Card Sequence Number	
	6	A/N	<u>5.185</u>	Terminal Capability Profile	
	10	A/N	5.191	Terminal Verification Results	
	8	A/N	5.211	Unpredictable Number	
	0, 8	NUM	5.103	Interface Device Serial Number	
	1	ASCII	5.90	Field Separator	<fs></fs>
	2	A/N	5.72	Derivation Key Index	
	2	A/N	5.69	Cryptogram Version Number	
	8	A/N	5.45	Card Verification Results	
	0, 16	A/N	5.106	Issuer Discretionary Data	
	1	ASCII	5.90	Field Separator	<fs></fs>
	16	A/N	5.23	Authorization Request Cryptogram	
	4	A/N	5.20	Application Transaction Counter	
	4	A/N	5.19	Application Interchange Profile	
	6	NUM	5.202	Transaction Date	YYMMD
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.20 Response message - CCPS (version 010, reserved for future use)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	010
	16	A/N	5.26	Authorization Response Cryptogram	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0,512	A/N	<u>5.107</u>	Issuer Script	
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.9 Chip condition code (G3v011)

Group 3 Version 11 must be sent when the Account Data Source Code value is equal to "Z" (see Table 4.21 for record format and version number).

Table 4.21 Request message - Chip condition code (version 011)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	011
	1	A/N	<u>5.58</u>	Chip Condition Code	
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.22 Response message - Chip condition code (version 011)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	011
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.10 Electronic Benefits Transfer (G3v013)

Table 4.23 Request message - Electronic Benefits Transfer (EBT) (version 013)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	013
	0, 7	A/N	5.89	FCS ID	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0, 15	A/N	5.77	Electronic Voucher Serial Number	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0, 6	A/N	<u>5.216</u>	Voucher Approval Code	
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.24 Response message - Electronic Benefits Transfer (EBT) (version 013)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	013
	0,12	NUM	5.29	Available Balance	
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.11 MOTO/ e-Commerce (G3v014)

Table 4.25 Request message - MOTO/e-Commerce (version 014)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	014
	1	A/N	5.137	MOTO/e-Commerce Indicator	
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.26 Response - MOTO/e-Commerce (version 014)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	014
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.12 Service development indicator (G3v015)

Table 4.27 Request message - Service development indicator (version 015)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	015
	1	NUM	<u>5.171</u>	Service Development Indicator	6,5,7
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.28 Response message - Service development indicator (version 015)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	015
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.13 Secure e-Commerce transaction (G3v017)

CAVV/XID: This group is used in secure e-Commerce transactions such as Visa 3-D Secure, Amex SafeKey, or Discover ProtectBuy. For these Cardholder Authentication Verification Value (CAVV) transactions, the group will contain the Transaction ID (XID) and the CAVV values. Secure e-Commerce transactions require the use of a valid e-Commerce Indicator value in G3v014.

Amex Tokenization: This group is also used in Amex Tokenization. For this usage, the group will contain the Token Data Block B and Token Data Block A. Block A is required and Block B is included only if the Token cryptogram is longer than 20 bytes.

Table 4.29 Request message - Secure e-Commerce transaction (version 017)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	5.95	Group III Version Number	017
	0, 40	A/N	5.217 or 5.196	XID or Token Cryptogram Block B	
	40	A/N	5.55 or 5.195	CAVV or Token Cryptogram Block A	
	1	ASCII	5.96	Group Separator	<g\$></g\$>

Table 4.30 Response message - Secure e-Commerce transaction (version 017)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	017
	0, 1	A/N	5.56	CAVV Results Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.14 Existing debt indicator (G3v018)

Table 4.31 Request message - Existing debt indicator (version 018)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	018
	1	NUM	<u>5.87</u>	Existing Debt Indicator	9
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.32 Response message - Existing debt indicator (version 018)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	018
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.15 MasterCard universal cardholder authentication field (G3v019)

Table 4.33 Request message - MasterCard universal cardholder authentication field (MasterCard credit transactions only, version 019)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	019
	1	NUM	<u>5.210</u>	UCAF Collection Indicator	
	0-32	A/N and Special	5.209	UCAF Authentication Data	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.34 Response message - MasterCard universal cardholder authentication field (MasterCard transactions only, version 019)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	019
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.16 Developer information (G3v020)

Effective March 1, 2016, Group 3 Version 20 is mandatory for all format D, T, W, X, Y and Z transactions.

Table 4.35 Request message - Developer information (version 020)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	020
	6	A/N	<u>5.73</u>	Developer ID (TSYS Acquiring Solutions assigned)	
	4	A/N	5.215	Application ID (TSYS Acquiring Solutions assigned)	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0, 10	A/N		Gateway ID	This data is optional
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.36 Response message - Developer tracking ID (version020)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	020
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.17 Merchant verification value (G3v021)

Table 4.37 Request message - Merchant verification value (version 021)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	021
	10	A/N	<u>5.134</u>	Merchant Verification Value	0-9, A-F only
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.38 Response message - Merchant verification value (version 021)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	021
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.18 Additional amounts (G3v022)

Group 3 Version 22 for Additional Amounts can support on the request either no additional amounts or four field separated additional amounts. If the transaction does not require additional amounts in the request but requires additional amounts in the response, the POS device should send only the 022 version number. If the transaction does require additional amounts in the request, the POS device should send the 022 version number plus the field separated additional amounts. The POS device should send the field separators for all four additional amounts even if some of the amount data fields are not used. All five subfields for an amount must be present for the amount to be valid.

Table 4.39 Request message - Additional amounts participant (no request amounts, version 022)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	022
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.40 Request message - Additional amounts participant (with request amounts, version 022)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	022
	2	NUM	5.9.1	First Additional Amount Account Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	2	NUM	5.9.2	First Additional Amount Amount Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	3	NUM	5.9.3	First Additional Amount Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ALPHA	5.9.4	First Additional Amount Sign	
	1	ASCII	5.90	Field Separator	<fs></fs>
	12	N	<u>5.9.5</u>	First Additional Amount	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 2	NUM	5.9.1	Second Additional Amount Account Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 2	NUM	5.9.2	Second Additional Amount Amount Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 3	NUM	5.9.3	Second Additional Amount Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 1	ALPHA	5.9.4	Second Additional Amount Sign	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 12	N	<u>5.9.5</u>	Second Additional Amount	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 2	NUM	5.9.1	Third Additional Amount Account Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 2	NUM	5.9.2	Third Additional Amount Amount Type	

Group	Length	Format	Reference	Content	Comments
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 3	NUM	5.9.3	Third Additional Amount Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 1	ALPHA	5.9.4	Third Additional Amount Sign	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 12	N	<u>5.9.5</u>	Third Additional Amount	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 2	NUM	5.9.1	Fourth Additional Amount Account Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 2	NUM	<u>5.9.2</u>	Fourth Additional Amount Amount Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 3	NUM	5.9.3	Fourth Additional Amount Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 1	ALPHA	5.9.4	Fourth Additional Amount Sign	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 12	N	<u>5.9.5</u>	Fourth Additional Amount	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.41 Response message - Additional amounts participant (version 022)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	022
	2	NUM	5.9.1	First Additional Amount Account Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	2	NUM	5.9.2	First Additional Amount Amount Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	3	NUM	5.9.3	First Additional Amount Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	A/N	5.9.4	First Additional Amount Sign	
	1	ASCII	5.90	Field Separator	<fs></fs>
	12	N	<u>5.9</u>	First Additional Amount	

Group	Length	Format	Reference	Content	Comments
	1	ASCII	5.90	Field Separator	<fs></fs>
	2	NUM	5.9.1	Second Additional Amount Account Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	2	NUM	5.9.2	Second Additional Amount Amount Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	3	NUM	5.9.3	Second Additional Amount Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	A/N	5.9.4	Second Additional Amount Sign	
	1	ASCII	5.90	Field Separator	<fs></fs>
	12	N	5.9	Second Additional Amount	
	1	ASCII	5.90	Field Separator	<fs></fs>
	2	NUM	5.9.1	Third Additional Amount Account Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	2	NUM	5.9.2	Third Additional Amount Amount Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	3	NUM	5.9.3	Third Additional Amount Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	A/N	5.9.4	Third Additional Amount Sign	
	1	ASCII	5.90	Field Separator	<fs></fs>
	12	NUM	5.9	Third Additional Amount	
	1	ASCII	5.90	Field Separator	<fs></fs>
	2	NUM	5.9.1	Fourth Additional Amount Account Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	2	NUM	5.9.2	Fourth Additional Amount Amount Type	
	1	ASCII	5.90	Field Separator	<fs></fs>
	3	NUM	5.9.3	Fourth Additional Amount Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	A/N	5.9.4	Fourth Additional Amount Sign	
	1	ASCII	5.90	Field Separator	<fs></fs>

Group	Length	Format	Reference	Content	Comments
	12	NUM	<u>5.9</u>	Fourth Additional Amount	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Group 3 version 22 examples

Additional amounts not required in request but required in response:

<request group 2 data>022

One additional amount in request:

Three additional amounts in request:

<request group 2 data>022nn<FS>nn<FS>nnn<FS>c<FS>nnnnnnnnnnnnn<FS>
nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS>nn<FS nn<FS nn<FS

4.2.19 Visa and MasterCard healthcare (G3v023)

Table 4.42 Request message - Visa and MasterCard healthcare data (version 023)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	023
III	0-199*	ANS	5.97	Healthcare, MasterCard or Discover Member Defined Data	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

^{* =} free form length is 0-99

This field may contain up to five sub-elements. Each sub-element describes one health service. Each sub-element may contain two tagged-length-variable (TLV) tagged data that identify the health care provider (tag 1) and the specific service performed (tag 2).

Each sub-element starts with a two character sub-element id (01, 02, 03, 04, or 05), followed by a two character length descriptor. The length descriptor tells how many data bytes follow in the sub-element.

Each tagged datum starts with a two character tag id, followed by a two character length descriptor. The length descriptor tells how many data characters follow within the TLV tagged datum.

Example: A clinic with two health providers (192387322 and 192782222) wishes to confirm eligibility for two services, 1A and V4. The following string would be submitted in group 3 version 023.

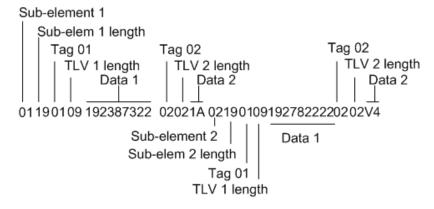


Figure 4.1 Group 3 version 023example

Table 4.43 Response message - Visa and MasterCard healthcare data (version 023)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	023
III	0-199*	ANS	5.97	Healthcare, MasterCard or Discover Member Defined Data	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

⁼ free form length is 0-99

4.2.20 MasterCard advice code (G3v024)

For MasterCard and Discover values unrelated to health care. May contain free form data.

Table 4.44 Request message - Merchant Advice Code (MAC) (version 024)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	024
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.45 Response message - Merchant Advice Code (MAC) (version 024)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	024
	2	A/N	<u>5.120</u>	Merchant Advice Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.21 Transaction fee amount (G3v025)

Table 4.46 Request message - Transaction fee amount (version 025)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	025
	0 or 9	A/N	5.203	Transaction Fee Amount	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.47 Response message - Transaction fee amount (version 025)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	025
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.22 Partial authorization indicator (G3v026)

Table 4.48 Request message - Partial authorization indicator (version 026)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	026
	1 to 10	ALPHA	5.144	Partial Authorization Indicator	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.49 Response message - Partial authorization indicator (version 026)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	026
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.23 POS data code (G3v027)

Group 3 Version 27 is mandatory for all card present transactions effective March 1, 2016.

Table 4.50 Request message - POS data code (version 027)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	027
	12	A/N	5.150	POS Data Code	
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.51 Response message - POS data code (version 027)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	027

Group	Length	Format	Reference	Content	Comments
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.24 American Express additional data (G3v028)

Group 3 Version 28 is optionally used specifically for American Express transactions, to hold additional data. Please see <u>Section 5.15</u> for more information.

Table 4.52 Request message - Amex additional data (version 028)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	028
	16-287	ANS	<u>5.15</u>	Amex Additional Data	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.53 Response message - Amex additional data (version 028)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	028
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.25 Extended AVS data (G3v029)

For American Express transactions, Group 3 Version 29 should be sent on all American Express transactions that contain Address Verification Data. For American Express, extended AVS Data in G3V29 takes priority over AVS Data sent in the Cardholder Identification Data field. If Extended AVS Data is sent in G3V29, AVS Data should not be sent in the Cardholder Identification Data field. If Extended AVS Data is sent in G3V29 and AVS Data is sent in the Cardholder Identification Data field, the AVS Data in the Cardholder Identification Data field will not be used. If this Group is used, there must at least be data in the Cardholder Billing Postal Code field or the transaction will be rejected.

For Discover transactions, this structure is used for the Enhanced Address Verification Service, for Cardholder First and Last Names only. The postal code and first five characters of the street address should still be sent in Cardholder identification data as usual. For Discover transactions, the Cardholder Billing Postal Code is not required.

NOTE The POS Device should send an empty Group 3 Version 48 whenever Group 3 Version 29 data is sent. This is to receive the response.

Table 4.54 Request message - Extended AVS data, (version 029)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	029
	5-9	A/N	<u>5.88.1</u>	Cardholder Billing Postal Code	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>

р	Length	Format	Reference	Content	Comments
	0-20	ANS	5.88.2	Cardholder Billing (Street) Address	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0	ALPHA	5.88.3	Cardholder Billing City (future use)	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0	A/N	5.88.4	Cardholder Billing State/Province (future use)	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0	NUM	5.88.5	Cardholder Billing Country Code (future use)	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0-35	ANS	5.88.6	Cardholder Billing First Name (Amex)	Value is truncated at 1 characters for
				Cardholder First Name (Discover)	Amex transactions
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0-35	ANS	5.88.7	Cardholder Billing Last Name (Amex)	Value is truncated at 3 characters for
				Cardholder Last Name (Discover)	Amex transactions
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0-10	NUM	5.88.8	Cardholder Billing Phone Number	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0-9	A/N	5.88.9	Ship-to Postal Code	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0-50	A/N	5.88.10	Ship-to Address	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0	ALPHA	5.88.11	Ship-to City (future use)	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0	A/N	5.88.12	Ship-to State/Province (future use)	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0 or 3	NUM	5.88.13	Ship-to Country Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-15	ALPHA	5.88.14	Ship-to First Name	

Group	Length	Format	Reference	Content	Comments
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0-30	ALPHA	5.88.15	Ship-to Last Name	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0-10	NUM	5.88.16	Ship-to Phone Number	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.55 Response message - Extended AVS data, (version 029)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	5.95	Group III Version Number	029
	1	ASCII	5.96	Group Separator	<gs></gs>

Group 3 version 29 examples

Example for US postal code only:

Example for Canadian postal code only:

Example for billing address only:

Example for billing address, name and phone number:

54321<fs>123~FRONT STREET<fs><fs><fs>JOHN<fs>SMITH<fs>3213214321<fs><fs><fs><fs><fs><fs><fs><fs><fs><

Example for billing address, name, phone number and all ship-to data:

54321<fs>123~FRONT~STREET<fs><fs><fs>JOHN<fs>SMITH<fs>3213214321<fs>12345<fs>321~BACK~ROAD<fs><fs>840<fs>LISA<fs>JONES<fs>1231231234<fs>

4.2.26 Amex merchant name/location data (G3v030)

This version is obsolete effective 10/17/2014. Group 3 Version 063 should be used instead.

Table 4.56 Request message - Amex merchant name/location data (version 030)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	030

Group	Length	Format	Reference	Content	Comments
	15-99	ANS	5.16	Amex Merchant Name/Location Data/Telephone Number/Email Address	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.57 Response message - Amex merchant name/location data (version 030)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	030
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.27 Digital entity identifier (G3v031)

Gen2 Group 3, Version 31 "Digital Entity Identifier" identifies the digital entity from which the authorization message originated.

Table 4.58 Request message - Digital entity identifier (version 031)

Group	Length	Format	Reference	Content	Comments				
III	Digital Er	Digital Entity Identifier (Version 031)							
	3	NUM	<u>5.95</u>	Group III Version Number	031				
	5	A/N	<u>5.75</u>	Digital Entity Identifier					
	0, 12	NUM		Reserved	The point of sale does not need to send this field. This subfield is reserved for internal use only.				
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>				

Table 4.59 Response message - Digital Entity Identifier (version 031)

Group	Length	Format	Reference	Content	Comments			
III	Digital Ent	Digital Entity Identifier (Version 031)						
	3	NUM	<u>5.95</u>	Group III Version Number	031			
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>			

Refer to section <u>6.8</u>, <u>Conversion of binary to ASCII characters</u> for instructions on converting the six byte binary Agent Identification Result to 12 ASCII characters.

4.2.28 Currency conversion data (G3v032)

Gen2 Group 3 Version 32 "Currency Conversion Data" supports Currency Conversion data.

Table 4.60 Request Message - Currency conversion data request (version 032)

Group	Length	Format	Reference	Content	Comments			
III	Currency (Currency Conversion Data (Version 032)						
	3	NUM	<u>5.95</u>	Group III Version Number	032			
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>			

Table 4.61 Response Message - Currency conversion data response (version 032)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	032
	0-12	NUM	5.46	Cardholder Billing Amount	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-8	NUM	5.173	Settlement Conversion Rate	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-8	NUM	5.47	Cardholder Billing Conversion Rate	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-4	NUM	5.62	Conversion Date	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-3	NUM	5.5	Acquirer Transaction Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-3	NUM	5.174	Settlement Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-3	NUM	5.48	Cardholder Billing Currency Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-12	NUM	5.8	Actual Amount, Transaction	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-12	NUM		Reserved	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-12	NUM		Reserved	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.29 Reversal request/adjustment response code (G3v033)

"Reversal Request Code" supports MasterCard reversals. Group 3 version 33 is allowed only for MasterCard transactions. "Adjustment Response Code" supports MasterCard AFD credit advice message.

Table 4.62 Request message - Reversal request code request (version 033)

Group	Length	Format	Reference	Content	Comments
III	onse Code (Version 033)				
	3	NUM	5.95	Group III Version Number	033
	2	NUM	5.168	Reversal Request Code/Adjustment Response Code	
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.63 Response message - Reversal request code request (version 033)

Group	Length	Format	Reference	Content	Comments			
III	Reversal Request Code (Version 033)							
	3	NUM	<u>5.95</u>	Group III Version Number	033			
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>			

4.2.30 Card product code (G3v034)

"Card product code" support Visa transactions.

Table 4.64 Request message - Card product code (version 034)

Group	Length	Format	Reference	Content	Comments				
III	Card Product Code (Version 034)								
	3	NUM	<u>5.95</u>	Group III Version Number	034				
	1	ASCII	5.96	Group Separator	<gs></gs>				

Table 4.65 Response message - Card product code (version 034)

Group	Length	Format	Reference	Content	Comments				
III	Card Product Code (Version 034)								
	3	NUM	<u>5.95</u>	Group III Version Number	034				
	0 or 2	A/N	<u>5.42</u>	Card Product Code					
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>				
	1	ASCII	5.96	Group Separator	<gs></gs>				

4.2.31 Promotional code (G3v035)

Table 4.66 Request message - Promotional code (version 035)

Group	Length	Format	Reference	Content	Comments			
III	Request Promotional Code							
	3	NUM	<u>5.95</u>	Group III Version Number	035			

Group	Length	Format	Reference	Content	Comments
	0-50	A/N	5.153	Promotion Codes	Card specific format
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.67 Response message - Promotional code (version 035)

Group	Length	Format	Reference	Content	Comments			
III	Request Promotional Code							
	3	NUM	<u>5.95</u>	Group III Version Number	035			
	0-50	A/N	5.153	Promotion Codes	Card specific format			
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>			
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>			

4.2.32 Payment transaction type identifier (G3v036)

Table 4.68 Request message - Payment transaction type identifier (version 036)

Group	Length	Format	Reference	Content	Comments			
III	Payment Transaction Type Identifier							
	3	NUM	<u>5.95</u>	Group III Version Number	036			
	3	A/N	5.149	Payment Transaction Type Identifier				
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>			

Table 4.69 Response message - Payment transaction identifier (version 036)

Group	Length	Format	Reference	Content	Comments			
III	Payment Transaction Type Identifier							
	3	NUM	<u>5.95</u>	Group III Version Number	036			
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>			

4.2.33 Real time substantiation indicator (G3v037)

Table 4.70 Request message - Real time substantiation indicator (version 037)

Group	Length	Format	Reference	Content	Comments			
III	Real Time Substantiation Indicator							
	3	NUM	<u>5.95</u>	Group III Version Number	037			
	1	NUM	<u>5.155</u>	Real Time Substantiation Indicator				
	1	ASCII	5.96	Group Separator	<gs></gs>			

Version 037 is only valid for MasterCard.

Table 4.71 Response message - Real time substantiation indicator (version 037)

Group	Length	Format	Reference	Content	Comments			
III	Real Time Substantiation Indicator							
	3	NUM	<u>5.95</u>	Group III Version Number	037			
	1	ASCII	5.96	Group Separator	<gs></gs>			

4.2.34 Electro-magnetic signature (G3v038)

Table 4.72 Request message - Electro magnetic signature (version 038)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	038
	128	ASCII HEX	5.76	Electro Magnetic Signature	Magnetic Stripe Card Data - pass through only
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.73 Response message - Electro magnetic signature (version 038)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	038
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.35 Cardholder verification method (G3v039)

Table 4.74 Request message - Cardholder verification method (version 039)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	039
	1	A/N	<u>5.52</u>	Cardholder Verification Method	
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.75 Response message - Cardholder verification method (version 039)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	039
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.36 Visa ISA charge indicator (G3v040)

Table 4.76 Request message - Visa ISA charge indicator (version 040)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	040
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.77 Response message - Visa ISA charge indicator (version 040)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	040
	0-1	ASCII	5.104	ISA Charge Indicator	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.37 NTIA UPC/SKU data (G3v041)

Table 4.78 Request message - NTIA UPC/SKU data (version 041)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	041
	1-34	ANS	5.140	UPC/SKU	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.79 Response message - NTIA UPC/SKU data (version 041)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	041
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.38 RESERVED Visa contactless (G3v042)

Table 4.80 Request message - V is a contactless (version 042) Reserved, no new development using this version 042 after 10/15/2012

Group	Length	Format	Reference	Content	Comments
III	3	NUM	5.95	Group III Version Number	042
	0, 12	NUM	5.64	Cryptogram Amount	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0, 16	AN	5.215	Application Cryptogram	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0, 4	AN	5.20	Transaction Application Counter	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0, 2-64	AN	5.215	Customer Exclusive Data	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0, 2-8	AN	5.215	Form Factor	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0, 2-64	AN	5.105	Issuer Application Data	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>

Group	Length	Format	Reference	Content	Comments
	0, 8	AN	5.211	Unpredictable Number	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-3	NUM	5.43	Card Sequence Number	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.81 Response message - Visa Contactless (version 042) Reserved, no new development using this version 042 after 10/15/2012

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	042
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.39 Network ID (G3v043)

Table 4.82 Request message - Network ID (version 043)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	043
	4	NUM	5.138	Network ID	Must not be "0000"
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.83 Response message - Network ID (version 043)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	043
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.40 Automated teller machines (G3v044)

Table 4.84 Request message - Automated Teller Machine (ATM) (version 044)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	044
	0 or 2	NUM	5.2	Account Type (from)	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0 or 2	NUM	5.3	Account Type (to)	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.85 Response message - Automated Teller Machine (ATM) (version 044)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	044
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.41 RESERVED Integrated Chip Card (G3v045)

Table 4.86 Request message - Integrated Chip Card (ICC) EMV format (version 045) Reserved, no new development using this version 045 after 10/15/2012

Group	Length	Format	Reference	Content	Comments
III	3	NUM	5.95	Group III Version Number	045
	12	NUM	5.64	Cryptogram Amount	Tag 9F02
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,16	AN	5.23	Authorization Request Cryptogram (ARQC)	Tag 9F26
	1	ASCII	5.90	Field Separator	<fs></fs>
	4	AN	5.20	Transaction Application Counter	Tag 9F36
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-64	AN	5.215	Customer Exclusive Data	Visa USA only. Tag 9F7C
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-10	AN	<u>5.215</u>	Form Factor	Tag 9F6E
	1	ASCII	5.90	Field Separator	<fs></fs>
	8	AN	5.211	Unpredictable Number	Tag 9F37
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-3	NUM	5.43	Card Sequence Number	Send up to 3 decimal digits. Tag 5F34
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,2	NUM	5.67	Cryptogram Information Data	Tag 9F27
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-64	AN	<u>5.105</u>	Issuer Application Data	Tag 9F10
	1	ASCII	5.90	Field Separator	<fs></fs>
	3	NUM	5.186	Terminal Country Code	Tag 9F1A
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,8	ASCII	5.100	IFD Serial Number	Tag 9F1E
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,6	AN	5.185	Terminal Capability Profile	Tag 9F33
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-40	AN	5.108	Issuer Script Results	Tag 9F5B
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,4	NUM	5.19	Application Interchange Profile	Tag 82
	1	ASCII	5.90	Field Separator	<fs></fs>

Group	Length	Format	Reference	Content	Comments
	0,10	NUM	5.191	Terminal Verification Results	Tag 95
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,2	NUM	5.68	Cryptogram Transaction Type	Tag 9C
	1	ASCII	5.90	Field Separator	<fs></fs>
	6	NUM	5.189	Terminal Transaction Time	Tag 9F21
	1	ASCII	5.90	Field Separator	<fs></fs>
	6	NUM	5.187	Terminal Transaction Date	YYMMDD. Tag 9A
	1	ASCII	5.90	Field Separator	<fs></fs>
	3	NUM	5.66	Cryptogram Currency Code	Tag 5F2A
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,12	NUM	5.65	Cryptogram Cashback Amount	Required when cryptogram amount includes cashback amount. Tag 9F03
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,6	AN		Cardholder Verification Method Results	Tag 9F34
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,2	AN	5.190	Terminal Type	Tag 9F35
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,1	AN	5.200	Transaction Category Code	MC usage only. Tag 9F53
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,16	AN	5.170	Secondary PIN Block	Visa usage only. Tag C0. Only used when terminal is changing Encrypted PIN to be loaded into card.
	4	ACCII	5 00	Field Separator	<fs></fs>
	1	ASCII	<u>5.90</u>	rieid Separator	1132

Table 4.87 Response message - Integrated Chip Card (ICC) EMV format (version 045) Reserved, no new development using this version 045 after 10/15/2012

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	045
	0-510	AN	5.107	Issuer Script	Can repeat up to 10 times
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-510	AN	5.26	Authorization Response Cryptogram (ARPC)	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.42 Card type response group (G3v046)

Table 4.88 Request message - Card Type Response group (version 46)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	046
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.89 Response message - Card Type Response group (version 46)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	046
	1-20	ANS	5.44	Card Type	If POS sends G3V46 in the request the host will respond with card type.
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.43 RESERVED TSYS internal use only (G3v047)

This request response group is reserved for TSYS usage only.

4.2.44 Cardholder verification results (G3v048)

Group 3 Version 48 Cardholder Verification Results carries Amex verification response codes for cardholder identification data from other data elements in the authorization request.

Group 3 Version 48 also carries Discover Cardholder Full Name Result Code.

To receive the Cardholder Verification Results, the POS Device should send an empty Group 3 Version 48. For Amex transactions, email (G3v028) and/or phone (G3v029) must also be sent. For Discover transactions, cardholder name (G3v029) must be sent.

Table 4.90 Request message - cardholder verification results (version 48)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	048
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.91 Response message - cardholder verification results (version 48)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	048
	9	AN	5.54	Cardholder verification results	Can be used for Amex or Discover
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.45 Gen 2 terminal authentication (G3v049)

Gen2 Group 3 Version 49 is used by POS devices that perform authentication with the transaction processing host.

Table 4.92 Request message - Gen 2 terminal authentication (version 49)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	049
	0 or 24	ASCII	5.94.4	GenKey	ASCII Representation of HEX, • 0 length on Authentication request • 24 length on Deactiviation and Authorization request
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.93 Response message - Gen 2 terminal authentication (version 49)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	049
	0 or 24	ASCII	5.94.4	GenKey	ASCII Representation of HEX, • 24 length on Authentication response • 0 length on Deactivation and Authorization response
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.46 Association timestamp (G3v50)

The Association timestamp version supports a specific date/time and other data elements provided by the association for message matching. Currently only valid on MasterCard AFD credit advice messages.

Table 4.94 Request message - Association timestamp (version 50)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	050
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.95 Response message - Association timestamp (version 50)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	050
	0, 10	NUM	<u>5.23</u>	Association Timestamp	mmdddhhmmss
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.47 EMS service request/response (G3v051)

This MasterCard only field is used by participating Card Not Present merchants to request and receive results on a predictive risk score by the Expert Monitoring System (EMS) that may assist in determining if a CNP transaction is fraudulent. It is valid for MasterCard Authorization Request/0100 transactions only.

Table 4.96 Request message - EMS service (version 051)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	051
	1	NUM	5.84	EMS Service Request Indicator	MasterCard usage only
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.97 Response message - EMS service (version 051)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	051
	2	NUM	<u>5.83</u>	EMS Scoring Response Indicator	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.80</u>	EMS Results Code	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.79</u>	EMS Additional Information	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0, 3	NUM	<u>5.81</u>	EMS Risk Score	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0, 2	ANS	<u>5.82</u>	Risk score reason code	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.48 Voltage encryption transmission block (G3v052)

Group 3 Version 52 is used by POS devices that encrypt card data.

NOTE Group 3 Version 049 - Gen2 Terminal Authentication is required in order to use Encryption.

Table 4.98 Request message - Encrypted data

Group	Length	Format	Reference	Content	Comments
III	5	NUM	<u>5.95</u>	Group III Version Number	052
	1	A/N	<u>5.86</u>	Encryption Type	
	250-300	A/N, "+", "/", "="	<u>5.85</u>	Encryption Transmission Block (ETB)	Base-64 encoded
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.99 Response message - Encrypted data

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	052
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.49 TSYS token request/response (G3v053)

NOTE This group is for TSYS Tokenization only. To use Card Brand Tokenization, please refer to Group 3, version 062.

Presence of Group 3 Version 53 with any Transaction Code (5.201) indicates the POS Device is requesting a TSYS token. The token is delivered in the response.

NOTE Group 3 Version 049 - Gen2 Terminal Authentication is required in order to use TSYS Tokens.

TSYS Tokens

When requesting a token, Group III Version 053 (4.2.49) is required and the token will be sent in the response. Use of Transaction Code '5T' will send a token in the response message without performing any card verification. Use of G3V053 with any other Transaction Code (4.163) performs the usual card verification or authorization request as specified. Refer to details later in this document.

TSYS Purchase with a Token

In general, a purchase with a token is used for processing recurring payments for existing debt or repeat business. The token must have been requested previously with a valid PAN. When using a token in place of the PAN, use Record Format 'Y' for credit transactions and Record Format 'Z' for debit transactions. This functionality is not available for card present scenarios. For these types of authorization requests, the source of the customer data entered must be 'manually keyed', the Cardholder ID Code must indicate the transaction is CNP including e-Commerce and Full Address Verification Data (CID = 'N'). The token should be passed in the Customer Data Field. Please refer to Section 6.5 for an example. The transaction codes acceptable for use in a token purchase are indicated as such in Table 4.73. Record Format 'Y' and 'Z' transactions should never contain a request for token (TSYS token request/response (G3v053)). This type of transaction would be rejected.

Table 4.100 Request message - Token request

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	053
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.101 Response message - Token request

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	053

2	AN	<u>5.195</u>	Token Status	Status of token retrieval
1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
0, 13-19	A/N	5.193	Token	Format- preserved token with last 4 digits preserved.
1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.50 Transit program (G3v054)

Table 4.102 Request message - Transit program request (version 054)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	054
	2	NUM	<u>5.206</u>	Transit Transaction Type Indicator	Valid value
	2	NUM	5.207	Transportation Mode Indicator	Valid value
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.103 Response message - Transit program response (version 054)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	054
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.51 Integrated Chip Card (ICC) EMV TLV Format (G3v055)

All data in Group 3 Version 55 must be expressed as hexadecimal characters A-F and 0-9.

Table 4.104 Request message - Integrated Chip Card (ICC) EMV TLV format (version 055)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	055
	6-255	Hex	5.193	Refer to Appendix A	TLV data, 2 characters per byte
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

The following list of EMV tags are mandatory and must be sent on any transaction that contains group 3 version 55. If either or both of these tags are missing the transaction will be rejected.

Tag	Tag name	Description
DF79	Kernal Version Number	The version number of the kernel used to process the chip data in the transaction. (variable 1 - 32)
DF78	Device Serial Number	The manufacturer's unique serial number of the device that interacts with the chip card. (variable 1 - 20)

Table 4.105 Response message - Integrated Chip Card (ICC) EMV TLV format (version 055)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	055
	6-255	ASCII Hex		Typically includes one or more issuer scripts (tag 71 or 72) and issuer authentication data (tag 91)	TLV data, 2 characters per byte
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.52 Message reason code (G3v056)

NOTE Group 3 Version 056 - Message Reason Code is required on all ICC chip card reversals.

Table 4.106 Request message - Message reason code

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	056
	4	NUM	<u>5.135</u>	Message Reason Code	
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.107 Response message - Message reason code

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	056
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.53 Additional response data (G3v057)

Table 4.108 Request message - Additional response data

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	057
	0-25	A/N/S	5.10	Additional Response Data	Additional data for Discover/ PayPal AFD messages
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.109 Response message - Additional response data

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	057
	0-25	A/N/S	5.10	Additional Response Data	Additional data for Discover/ PayPal AFD messages
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.54 Alternate account ID 1 (G3v058)

It is recommended that Group 3, version 58 be accompanied by Group 3, version 59 for MasterCard transactions.

Table 4.110 Request message - Alternate account ID 1 (G3v058)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	058
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.111 Response message - Alternate account ID 1 (G3v058)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	058
	1-28	NUM	<u>5.14</u>	Alternate Account ID 1	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.55 MasterCard mapping service (G3v059)

It is recommended that Group 3, version 59 be accompanied by Group 3, version 58 for MasterCard transit transactions.

Table 4.112 Request message-MasterCard mapping service

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	059
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.113 Response message-MasterCard mapping service

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	059
	1	A/N	<u>5.115</u>	Mapped PAN Indicator	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	4	NUM	<u>5.118</u>	Mapped Card Expiration Date	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	3	A/N	<u>5.116</u>	Mapped Product Code	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<g\$></g\$>

4.2.56 MasterCard PayPass mobile (G3v060)

This MasterCard only group indicates the Service Manager or program initiator of the MasterCard Mobile Remote Payments Program. It also identifies the type of PayPass device used by the cardholder to initiate the transaction. This is applicable in Authorization Request/0100, Authorization Advice/0120, and Reversal Request/0400 MTIs.

Table 4.114 Request message- MasterCard PayPass mobile

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	060
	0, 1	A/N	<u>5.151</u>	PayPass Mobile Domain Server	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0, 2	A/N	<u>5.150</u>	PayPass Mobile Device Type	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.115 Response message-MasterCard PayPass mobile

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	060
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.57 Spend qualified indicator (G3v061)

This group should be sent on all Visa transactions.

Table 4.116 Request message - spend qualified indicator

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	061
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.117 Response message - spend qualified indicator

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	061
	0, 1	A/N	<u>5.177</u>	Spend Qualified Indicator	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.58 Card brand tokenization (G3v062)

NOTE This group is for Card Brand Tokenization only. To use TSYS Tokenization, please refer to Group 3, version 053.

This group may be sent on Visa, MasterCard, American Express, or Discover token purchase transactions. This is recommended if the merchant uses or pays for card brand tokenization. This group can be included if the merchant expects to see any of the data in the response fields.

For card brand tokenization, the Token is a surrogate value for a PAN that is consistent with ISO 8583 message requirements and is a 13 to 19-digit numeric value that passes basic validation rules of an account number, including the LUHN check. Tokens are generated within a BIN range that has been designated as a token BIN range. Please refer to Section 4.1.1 for a high-level description of the use of this feature.

There are three separate cases that apply: Token Request, Token Maintenance, and Token Purchase. They are described in the following sections. In the tables that follow, the applicable fields are listed for each case. If the Card Brand offers the case, there will be a column that shows which fields are mandatory, conditional, or optional for each applicable card brand. The following abbreviations apply.

Abbreviation	Full Description
M	Mandatory - For a request, the field is required. For a response, the field will be present.
С	Conditional - For a request, the field will be required in some situations. For a response, the field may be present. Consult the field description for complete details.
О	Optional - The field may or may not be present. Consult the field description for complete details.
MC	MasterCard
V	Visa
AX	American Express
D	Discover

Card Brand Token Request

This scenario is used to request a token. MasterCard is the only card brand offering this use case at this time. For this scenario, use Transaction Code **5D**. In the request, enter the *desired* Assurance Level. In the response will be the *assigned* Assurance Level.

Card Brand Token Request- Request

ID	Field Name	MC
5.40	Card Brand Token Requestor ID	M
5.36	Card Brand Token Assurance Level	О

Card Brand Token Request-Response

ID	Field Name	МС
5.36	Card Brand Token Assurance Level	С
5.33	Card Brand Token	С
5.37	Card Brand Token Expiration Date	С

Card Brand Token Status Inquiry and Maintenance

This scenario is used for requesting the status of a token and maintaining a token. MasterCard is the only card brand offering this scenario at this time. For this scenario, use Transaction Code 5D. In the request, enter the *desired* Assurance Level. In the response will be the *assigned* Assurance Level. The Assurance Level should be sent back if requested.

Card Brand Token Maintenance- Request

ID	Field Name	MC
5.40	Card Brand Token Requestor ID	M
5.36	Card Brand Token Assurance Level	О
5.35	Card Brand Token Action Indicator	M
5.39	Card Brand Token Replacement PAN Expiration Date	С

Card Brand Token Maintenance-Response

ID	Field Name	МС
<u>5.36</u>	Card Brand Token Assurance Level	С
5.33	Card Brand Token	С
5.37	Card Brand Token Expiration Date	С
<u>5.40</u>	Card Brand Token Status	С

Card Brand Token Purchase

This scenario is used to authorize a transaction using a card brand Token instead of a PAN. MasterCard, Visa or Discover are the only card brands offering this use case at this time.

For this scenario, use an ordinary Transaction Code as used in any purchase transaction. The Token will be contained in the Customer Data Field just as a PAN would be. The Token expiration date will also be held in the Customer Data Field.

Recurring purchase, Card on File, Contactless, Application Initiated (Digital Wallet), and Partial Shipment transactions that use a card brand token must be clearly identified. Please refer POS Data Code in to Group 3 Version 27 (subfields 5, 6, & 7) for more information.

Card Brand Token Purchase- Request

ID	Field Name	MC	٧	D	AX
<u>5.40</u>	Card Brand Token Requestor ID	С	С	N/A	C*

^{*} Refer to the EMVCo Payment Tokenization Specification - Technical Framework specification for additional information.

Card Brand Token Purchase-Response

ID	Field Name	MC	٧	D	AX
<u>5.36</u>	Card Brand Token Assurance Level	О	С	M	N/A
<u>5.38</u>	Card Brand Token PAN Last 4 Digits	С	С	M	M
<u>5.34</u>	Card Brand Token Account Range Status	N/A	С	N/A	N/A

NOTE Transit merchants will see additional information in Group 3, Version 58 and 59 for MasterCard transactions in this scenario.

Table 4.118 Request message- card brand tokenization

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	062
	0, 11	NUM	<u>5.40</u>	Card Brand Token Requestor ID	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0, 2	A/N	<u>5.36</u>	Card Brand Token Assurance Level	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0, 1	A/N	<u>5.35</u>	Card Brand Token Action Indicator	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>

Group	Length	Format	Reference	Content	Comments
0, 4 NUM <u>5.39</u> Card Brand Token R PAN Expiration		Card Brand Token Replacement PAN Expiration	MMYY		
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.119 Response message - card brand tokenization

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	062
	0, 2	A/N	<u>5.36</u>	Card Brand Token Assurance Level	
	1	ASCII	5.90	Field Separator	<fs></fs>
Group	Length	Format	Reference	Content	Comments
	0, 4	NUM	5.38	Card Brand Token PAN Last 4 Digits	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0,1	A/N	5.34	Card Brand Token Account Range Status	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0, 13-19	NUM	5.33	Card Brand Token	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0, 4	NUM	5.37	Card Brand Token Expiration Date	MMYY
	1	ASCII	5.90	Field Separator	<fs></fs>
	0, 1	A/N	<u>5.40</u>	Card Brand Token Status	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.59 Amex card acceptor name/location (G3v063)

This version is used in lieu of G3v030.

This data is required for the following:

- Oil Company Industry, including Customer Activated Terminal (CAT) transactions where more than one Service Establishment Number is used for each physical location. Only the Merchant ID Code and Postal Code Fields are required.
- Payment Service Providers (Aggregators) and OptBlue participants. All Fields are required.

It is recommended that this data be populated by all merchants in every American Express authorization request.

Table 4.120 Request message - Amex card acceptor name/location

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	063
	1-20	NUM	5.128	Merchant ID Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-30	A/N	5.126	Merchant DBA Name	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-20	A/N	5.133	Merchant Street Address	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0, 10	A/N	5.130	Merchant Phone	
	1	ASCII	5.90	Field Separator	<fs></fs>
	0-20	ANS	5.127	Merchant Email	
	1	ASCII	5.90	Field Separator	<fs></fs>
	5-10	ANS	5.131	Merchant Postal Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	13	ASCII	<u>5.123</u>	Merchant City	
	1	ASCII	5.90	Field Separator	<fs></fs>
	3	ASCII	5.125	Merchant Region Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	3	ASCII	5.124	Merchant Country Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1-20	ASCII	5.148	Payment Service Provider Name	
	1	ASCII	5.90	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.121 Response message - Amex card acceptor name/location

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	063
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.60 MasterCard Wallet Identifier (G3v064)

Table 4.122 Request message - MasterCard wallet identifier

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	064
	3	AN	5.118	MasterCard Wallet Identifier	3 char fixed length
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.123 Response message - MasterCard wallet identifier

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	064
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.61 ISO Identifier (G3v065)

This group must be provided on all MasterCard transactions where the merchant has a relationship with an ISO.

Table 4.124 Request message - ISO identifier

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	065
	11	NUM	<u>5.101</u>	ISO Identifier	
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.125 Response message - ISO identifier

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	065
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.62 Payment Facilitator (G3v066)

This group must be provided on all MasterCard transactions where the merchant has a relationship with a Payment Facilitator. If G3v066 is present in the message, all fields must be present and populated (cannot be all spaces). Otherwise, the transaction will be rejected.

Table 4.126 Request message - payment facilitator

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	066
	11	NUM	5.143	Payment Facilitator Identifier	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	3-25	AN	<u>5.147</u>	Payment Facilitator Name*Sub- Merchant Name	
	1	ASCII	5.90	Field Separator	<fs></fs>
	15	NUM	<u>5.181</u>	Sub-Merchant Identifier	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1-13	AN	5.179	Sub-Merchant City	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	2	AN	5.183	Sub-Merchant State/Province Code	
	1	ASCII	5.90	Field Separator	<fs></fs>
	3	NUM	5.180	Sub-Merchant Country Code	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	5-9	AN	5.182	Sub-Merchant Postal Code	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	5.96	Group Separator	<gs></gs>

Table 4.127 Response message - payment facilitator

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	066
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.63 Authorization indicator (G3v067)

This MasterCard only group must be included on all MasterCard Authorization Request/0100, Authorization Advice/0120, and Reversal Request/0400 transactions.

Table 4.128 Request message - Authorization indicator (version 067)

Group	Length	Format	Reference	Content	Comments		
III	Authorization Indicator						
	3	NUM	<u>5.95</u>	Group III Version Number	067		
	1	NUM	<u>5.24</u>	Authorization Indicator			
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>		

Version 067 is only valid for MasterCard

Table 4.129 Response message - Authorization indicator (version 067)

Group	Length	Format	Reference	Content	Comments				
III	Authoriza	Authorization Indicator							
	3	NUM	<u>5.95</u>	Group III Version Number	067				
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>				

4.2.64 Fraud enhanced data (G3v068)

This Discover only group indicates whether the cardholder is a registered user on a merchant's website. Merchants must populate these values in Discover Authorization Request/0100 messages for e-Commerce transactions. It may also be populated in some cases for merchants that cannot properly report e-commerce transactions.

Table 4.130 Request message - Fraud enhanced data (version 068)

Group	Length	Format	Reference	Content	Comments			
III	Fraud Enhanced Data							
	3	NUM	<u>5.95</u>	Group III Version Number	068			
	1	NUM	5.158	Registered User Indicator				
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>			
	8	NUM	5.159	Registered User Last Profile Date Change	Format: DDMMYY YY			
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>			
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>			

Version 068 is only valid for Discover

Table 4.131 Response message - Fraud enhanced data (version 068)

Group	Length	Format	Reference	Content	Comments				
III	Fraud En	Fraud Enhanced Data							
	3	NUM	<u>5.95</u>	Group III Version Number	068				
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>				

4.2.65 Lane ID (G3v069)

Table 4.132 Request message - Lane ID (version 069)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	069
	8	NUM	<u>5.110</u>	Lane ID	
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.133 Response message - Lane ID (version 069)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	069
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.66 Payment Specific Data (G3v070)

Table 4.134 Request message - Payment Specific Data (version 070)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	070
	0-35	A/N	<u>5.145</u>	Payment Account Reference	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0-35	A/N	<u>5.143</u>	PAN Reference Identifier	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.135 Response message - Payment Specific Data (version 070)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	070
	0-35	A/N	<u>5.145</u>	Payment Account Reference	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0-35	A/N	<u>5.143</u>	PAN Reference Identifier	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.67 POS Environment Indicator (G3v071)

Table 4.136 Request message - POS Environment Indicator (version 071)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	070
	1	A/N	<u>5.153</u>	POS Environment Indicator	
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.137 Response message - POS Environment Indicator (version 071)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	071
	1	ASCII	5.96	Group Separator	<gs></gs>

4.2.68 Electronic Commerce Security Level Information (G3v072)

Table 4.138 Request message - Electronic Commerce Security Level Information (version 072)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	072
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.139 Response message - Electronic Commerce Security Level Information (version 072)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	072
	0, 3	A/N	5.77	Electronic Commerce Security level Indicator	

1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.2.69 Gift card information (G3v200)

Table 4.140 Request message - Gift card information - request (version 200)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	200
	0-8	NUM	<u>5.141</u>	Operator / Clerk ID	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	A/N	5.30	Bar Code Format	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

Table 4.141 Response message - Gift card information - request (version 200)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	<u>5.95</u>	Group III Version Number	200
	0 or 12	NUM	<u>5.29</u>	Available Balance	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	0 or 12	NUM	5.17	Amount Actually Used From Card	
	1	ASCII	<u>5.90</u>	Field Separator	<fs></fs>
	1	ASCII	<u>5.96</u>	Group Separator	<gs></gs>

4.3 General industry requirements

TSYS Acquiring Solutions' implementation of the "D" record format is intended to address the new and changing requirements associated with Visa's Custom Payment Services (CPS) and MasterCard's Merit Programs and would not be applicable for all global regions.

These programs generally provide enhanced charge back protection for participating merchants. Additionally, merchants could qualify to receive reduced interchange rates. As a participant in these incentive programs, merchants are required to either perform additional authentication procedures or provide additional industry specific information for reporting purposes. Please note that for all merchant industries, the support of "Repeat" transaction types is recommended but not required. Support of Check Guarantee, Private Label, and Debit Card/EBT functionality is always optional.

The following provides information concerning general industry requirements.

4.3.1 General

This document defines this group as encompassing General Retail, Restaurant, Banking, and Passenger Transport as the message format requirements are generally the same for authorization. Please be aware that each of these industries require unique data capture settlement formats. Refer to Chapter 6 for a representation of the required authorization request format.

4.3.2 Direct marketing

Direct marketing environments are classified as those environments where the card or cardholder are not physically present at the time of purchase. A merchant accepting credit card payments in a mail/telephone order environment would be an example. In order to qualify for the best possible transaction interchange rates, a merchant is required to perform an address verifications check to assist in determining the authenticity of a transaction request. Refer to 7.2 for a representation of the required authorization request formats for card not present transactions. Support of Authorization Reversal requests is required for participation in the interchange incentive programs.

4.3.3 Hotel and lodging

Refer to 7.1 and 7.2 for a representation of the required authorization request format. Support of Incremental and Authorization Reversal transactions is required.

4.3.4 Auto rental

Refer to 7.1 and 7.2 for a representation of the required authorization request format. Support of Incremental and Authorization Reversal transactions is required for participation in the interchange incentive programs. Please note that TSYS Acquiring Solutions does not currently support Visa and American Express Auto-Rental requirements.

4.3.5 Automated fueling

Transactions occurring at customer activated automated fueling systems need only perform a \$1.00 pre-authorization before fueling. The authorization code obtained is then valid for up to a \$50.00 dispersal of fuel. Fueling amounts in excess of \$50.00 should occur as "over-the-counter" transactions where the card can be physically presented. Please note that transactions occurring at an automated fuel dispenser must currently be settled separately from those occurring over-the-counter. Refer to 7.1.1.5 for a representation of the required authorization request format for automated fueling systems. Transactions occurring over-the-counter should utilize the general authorization format indicated in 7.1.1.1.

4.3.6 Direct debit

These transactions require the Track Two image of the card's magnetic stripe and an encrypted cardholder Personal Identification Number (PIN). Refer to 7.1.2 for a representation of the required request format.

4.3.7 Electronic Benefits Transfer (EBT)

These transactions require either the Track Two image of the card's magnetic stripe or a manually entered account number, an encrypted cardholder PIN, and an FCS ID for Food Stamp and Cash Benefit Purchases or the Serial Number of a Food Stamps Electronic Voucher. Please refer to 7.1.2 for a representation of the required request format.

Please note that the aforementioned conditions are subject to change.

4.3.8 Health care benefits

Healthcare/Transit Auto-Substantiation Transaction

If merchants do not support Partial Authorizations and the amount requested exceeds the available balance on the benefit account, the transaction will be declined.

Chapter 5 Field definitions

This section describes the individual fields contained in the authorization request and response formats.

5.1 Account data source code

This field contains a one-character code identifying the source of the customer data entered in field 4.1 (see <u>Table 4.5</u> for record format and version number).

Table 5.1 Account data source code

Code	Description
A	Bar code/Payment code read
D	Full magnetic stripe read and transmit, Track two
G	Chip Card Read Data (CCPS)
Н	Full magnetic stripe read and transmit, Track one
Р	Manually keyed, Chip Card read capable terminal
Q	Proximity payment device using track data rules (transmit only Track two to Sierra)
R	Proximity payment device using EMV-Chip data rules
S	Full magnetic stripe read (Track two only), Chip Card capable terminal
Т	Manually keyed, Track two capable
X	Manually keyed, Track one capable
@	Manually keyed, terminal has no card reading capability
E-F, I-O	Reserved for Asia/Pacific Region
W	Chip Card transaction processed as magnetic stripe due to the terminal application not having any EMV applications in common with the chip card.
Z	Chip Card transaction processed as magnetic stripe from a chip capable terminal, due to card or terminal failure
U-V, Y, 1-9	Reserved for future use

NOTES:	For Authorization Reversal transactions and AFD Completion advice transactions, this field must contain a value indicating the transaction was manually keyed.
	If a dual Track reading terminal is being used, the correct value of D or H for the magnetic stripe data must be transmitted.
	When data is manually keyed at a dual Track reading terminal, transmit either a T or an X.

5.2 Account type (from)

A two digit code identifying the account type affected by this transaction. For domestic account transfers, the account from which an account transfer is made.

Table 5.2 Account type (from)

Value	Description
00	Not Applicable
10	Savings Account
20	Checking Account
30	Credit Card Account
40	Universal

5.3 Account type (to)

For domestic account transfers, a two digit code identifying the account type to which an account transfer is made.

Table 5.3 Account type (to)

Value	Description
00	Not Applicable
10	Savings Account
20	Checking Account
30	Credit Card Account
40	Universal

5.4 Acquirer Bank Identification Number (BIN)

This field contains a six-character numeric Visa assigned Bank Identification Number (BIN) issued by the merchant's member bank or processor (see <u>Table 4.5</u> for record format and version number). The Acquirer BIN identifies the member bank that signed the merchant using the POS application. This field cannot be zero-filled.

This field should be configured as a parameter.

5.5 Acquirer transaction currency code

This is the local currency of the acquirer or source location of the transaction. It specifies the currency that is used in the transaction amount field.

5.6 Actual amount, cardholder billing

This field indicates the transaction amount in the issuer's currency. It is the amount billed to the Cardholder in the cardholder account currency. This field may be populated in partial reversal transactions.

5.7 Actual amount, settlement

This field contains the amount of the funds to be transferred between the issuer and acquirer. This field may be populated in partial reversal transactions.

5.8 Actual amount, transaction

This field contains the actual transaction amount in the acquirer's transaction currency. This field may be populated in partial reversal transactions.

5.9 Additional amount

This field contains any additional amounts related to the authorization request or response, including identifiers for account type, amount type, and currency code and whether the amount is a debit or credit. (See <u>Table 4.39</u> and <u>Table 4.40</u>)

5.9.1 Additional amount - account type

Table 5.4 Additional amount - account type

Value	Description
00	Not specified
10	Savings
20	Checking
30	Credit Card

Value	Description
40	Universal
60	Stored Value Account
96	Cash Benefits Account (for use by Electronic Benefits Transfer transactions only)
98	Food Stamps Account (for use by Electronic Benefits Transfer transactions only)

5.9.2 Additional amount - amount type

Table 5.5 Additional amount - amount type

Value	Description	
01	Deposit account: Ledger balance Credit card account: Open to buy	
02	Deposit account: Available balance Credit card account: Credit limit	
05	Amex Prepaid Card available amount remaining (Amex only)	
48	Amount Healthcare (Visa authorization request only)	
4T	Amount Transit (Visa authorization request only)	
3S	Amount Co-payment	
57	Original Amount	
10	Partial authorized amount	
4U	Amount Prescription/Rx (Visa and MC authorization requests)	
4V	Amount Vision/Optical (Visa authorization request only)	
4W	Amount clinic/other qualified medical (Visa authorization request only)	
4X	Amount Dental (Visa authorization request only)	
80	Amount cash over- Discover only	
81	Original Amount Cash Over- Discover Only	
43	Total cumulative authorized amount for series of incremental authorization transactions (Discover only)	

NOTE A Discover Merchant Initiated Transactions [MIT] is any transaction that relates to a previous consumer-initiated transaction that originated from a digital wallet. The Additional amount - amount type field will contain the original transaction amount [value 57] for the following types of merchant initiated transactions: partial shipment, recurring, and reauthorization of full amount

5.9.3 Additional amount - currency code

This field contains a three-character numeric Currency Code identifying the currency for the returned additional amount.

5.9.4 Additional amount - sign

Table 5.6 Additional amount - sign

Value	Description
С	Positive balance
D	Negative balance

5.9.5 Additional amount

The 12-character numeric amount, left justified and zero filled.

5.10 Additional response data

This field contains additional data from a Discover/PayPal AFD authorization response message that must be used in a Discover/PayPal AFD completion advice message.

Example:

Original Discover/PayPal AFD authorization message

- Request: G3v057 is required, but contains no data
- Response: G3v057 is populated with data required for an AFD completion advice transaction

Advice Transaction

- Request: Echo back G3v057 data from the original authorization response
- Response: G3v057 is empty

Sub-field	Description	
1	Response Source/Reason Code	
2	Address Verification Result Code	
3	Reserved	
4	Reserved	

Sub-field	Description
5	CVV Results Code (requests and responses)
6	Reserved
7	Reserved
8	Card Authentication Results Code
9	Reserved
10	CVV2 Results Code
11	Reserved
12	Check Settlement Code (CAVV)
13	CAVV Results
14	Merchant Advice Code (MasterCard)

5.11 Address verification result code

This one-character field contains the Address Verification Result Code. An Address Verification Result Code can provide additional information concerning the authentication of a particular transaction for which cardholder Address Verification was requested. An Address Verification result code of "0" is returned in the response message when no address verification has been requested. The value returned should be stored and submitted as part of the data capture settlement record.

Table 5.7 Address verification result code

Address Verification	Authorization Response	Response Definition	Code Applies to	
Result Code	Message		Domestic	International
0	Approved	Address verification was not requested	X	X
A	Address Match	Address match only	X	X
В	Address Match	Street Address match for international transaction Postal Code not verified because of incompatible formats (Acquirer sent both street address and Postal Code)	X	X
С	Serv Unavailable	Street address and Postal Code not verified for international transaction because of incompatible formats (Acquirer sent both street and Postal Code)	X	X
D	Exact Match	Street Address match for international transaction		X

Address	Authorization	Response Definition	Code Applies to	
Verification Result Code	Response Message		Domestic	International
F	Exact Match	Street Address and Postal Code Match. Applies to UK only		X
G	Ver Unavailable	Non-U.S. Issuer does not participate		X
I	Ver Unavailable	Address information not verified for international transaction		X
M	Exact Match	Street Address match for international transaction		X
N	No Match	No address or ZIP match	X	X
P	Zip Match	Postal Codes match for international transaction Street address not verified because of incompatible formats (Acquirer sent both street address and Postal Code)		X
R	Retry	Issuer system unavailable	X	
S	Serv Unavailable	Service not supported	X	
U	Ver Unavailable	Address unavailable	X	
W	Zip Match	Nine character numeric ZIP match only	X	
X	Exact Match	Exact match, nine character numeric ZIP	X	
Y	Exact Match	Exact match, five character numeric ZIP	X	
Z	Zip Match	Five character numeric ZIP match only	X	X
1	Cardholder name and ZIP match	AMEX only	N/A	N/A
2	Cardholder name, address, and ZIP match	AMEX only	N/A	N/A
3	Cardholder name and address match	AMEX only	N/A	N/A
4	Cardholder name match	AMEX only	N/A	N/A
5	Cardholder name incorrect, ZIP match	AMEX only	N/A	N/A

Address Verification	Authorization	Response Definition	Code Applies to	
Result Code	Response Message		Domestic	International
6	Cardholder name incorrect, address and ZIP match	AMEX only	N/A	N/A
7	Cardholder name incorrect, address match	AMEX only	N/A	N/A
8	Cardholder, all do not match	AMEX only	N/A	N/A

5.12 Agent bank number

This six-character numeric contains an agent number assigned by the signing member or processor (see <u>Table 4.7</u> for record format and version number). The number identifies an institution which signs merchants as an agent of a member. The member uses this number to identify the agent within TSYS Acquiring Solutions' system.

This field should be configured as a parameter.

5.13 Agent chain number

This six-character numeric field contains a merchant chain identification number assigned by the signing member or processor (see <u>Table 4.7</u> for record format and version number). The member uses this number to identify the merchant chain within the TSYS Acquiring Solutions' system. This field should be configured as a parameter.

5.14 Alternate account ID 1

This field contains alternate account number information.

For MasterCard transit transactions, this field will contain the Primary Account Number (PAN).

5.15 American Express additional data

This field is optionally used specifically for American Express transactions, to hold additional data. Only one of these formats can be used at a time.

- The ITD format has a minimum length of 74 bytes and a maximum of 265.
- The APD format has a minimum of 151 bytes and a maximum of 290.
- The Card Present Goods Sold format has a specific length of 16 bytes.

5.15.1 AMEX card not present internet telephone data (ITD)

This format can be used for Merchants in mail-, telephone- and internet-order industries that submit Card Not Present - Internet Telephone Data (ITD). For merchants using this format, ITD subfields may contain source data, including the Cardmember's web and email addresses, host computer name, HTTP browser, product SKU (Stock Keeping Unit) inventory reference number, shipping method and country to which product will be shipped

Table 5.8 Card not present (mail, telephone, and internet order) ITD format

Byte	Length	Format	Field Description	Content
1-2	2	A/N	PRIMARY ID	Primary ID (Card Type Code) is constant literal "AX" (American Express).
3-5	3	A/N	SECONDARY ID	Secondary ID (Data Type Code). Valid IDs include: ITD = Card Not Present Data
6-8	3	A/N	CUSTOMER EMAIL ID (CE ID)	Customer EMail ID is constant "CE~" (Customer EMail). Note: ~ = character space.
9-10	2	NUM	VARIABLE LENGTH INDICATOR (CE VLI)	CE VLI indicates length of CUSTOMER EMAIL variable data (not including CE ID or VLI).
11-34	1-60	A/N & special character s	CUSTOMER EMAIL Note: Example is 24 bytes.	Customer's e-mail address. Example: CFFROST@EMAILADDRESS. COM
35-37	3	A/N	CUSTOMER HOSTNAME ID (CH ID)	Customer HostName ID is constant "CH~" (Customer HostName). Note: ~ = character space.
38-39	2	NUM	VARIABLE LENGTH INDICATOR (CH VLI)	CH VLI indicates length of CUSTOMER HOSTNAME variable data (not including CH ID or VLI).
40-53	1-60	A/N & special character s	CUSTOMER HOSTNAME Note: Example is 14 bytes.	Name of the server that the customer is connected to. Example: PHX.QW.AOL.COM
54-56	3	A/N	HTTP BROWSER TYPE ID (HBT ID)	HTTP Browser Type ID is constant "HBT" (HTTP Browser Type).
57-58	2	NUM	VARIABLE LENGTH INDICATOR (HBT VLI)	HBT VLI indicates length of HTTP BROWSER TYPE variable data (not including HBT ID or VLI).

Byte	Length	Format	Field Description	Content
59-104	1-60	A/N & special character s	HTTP BROWSER TYPE Note: Example is 46 bytes.	Customer's HTTP browser type. Example: MOZILLA/4.0~(COMPATIBL E;~MSIE~5.0;~WINDOWS~9 5) Note: ~ = character space.
105- 107	3	A/N	SHIP TO COUNTRY ID (STC ID)	Ship To Country ID is constant "STC" (Ship To Country).
108- 109	2	NUM	VARIABLE LENGTH INDICATOR (STC VLI) Note: Constant value "03".	STC VLI indicates length of SHIP TO COUNTRY variable data. Must be "03".
110- 112	3	A/N	SHIP TO COUNTRY Note: Use three-byte, numeric country code.	Three-byte, numeric country code. Example for USA: 840
113- 115	3	A/N	SHIPPING METHOD ID (SM ID)	Shipping Method ID is constant "SM~" (Shipping Method). Note: ~ = character space.
116- 117	2	NUM	VARIABLE LENGTH INDICATOR (SM VLI) Note: Constant value "02".	SM VLI indicates length of SHIPPING METHOD variable data (not including SM ID or VLI). Must be "02".
118- 119	2	A/N	SHIPPING METHOD	Two-byte, shipment-type code: 01 = Same Day 02 = Overnight / Next Day 03 = Priority, 2-3 days 04 = Ground, 4 or more days 05 = Electronic Delivery 06 = Ship to Store 07-ZZ = Reserved for future use
120- 122	3	A/N	MERCHANT PRODUCT SKU ID (MPS ID)	Merchant Product SKU ID is constant "MPS" (Merchant Product SKU).
123- 124	2	NUM	VARIABLE LENGTH INDICATOR (MPS VLI)	MPS VLI indicates length of MERCHANT PRODUCT SKU variable data (not including MPS ID or VLI).
125- 132	1-15	A/N	MERCHANT PRODUCT SKU Note: Example is 8 bytes.	Unique SKU (Stock Keeping Unit) inventory reference number of product associated with this authorization request. For multiple items, enter the SKU for the single, most expensive item. Example: TKDC315U
133- 147	15	A/N & special character s	CUSTOMER IP	Customer's Internet IP address. Format: nnn.nnn.nnn Example: 127.142.005.056

Byte	Length	Format	Field Description	Content
148- 157	10	A/N & special character s	CUSTOMER ANI	ANI (Automatic Number Identification) specified phone number that customer used to place order with merchant. Example: 6025551212
158- 159	2	A/N	CUSTOMER II DIGITS	Telephone company-provided ANI ii (Information Identifier) coding digits associated with CUSTOMER ANI phone number that correspond to call-type; e.g., cellular, government institution, etc. Example: 00

Card not present (mail, telephone, and internet order) ITD example

The example below corresponds to <u>Table 5.8</u> and illustrates a field entry for mail-, telephone- and Internet-order merchants that submit Card Not Present data (Data Type Code "ITD").

	1	2	3	4	5	6
123456	789012345	678901234	56789012345	678901234	56789012345	67890
AXITDO	E~24CFFRC	ST@EMAILA	DDRESS.COMC	H~14PHX.Q	W.AOL.COMHE	3 T46M 0
				1	1	1
6	7	8	9	0	1	2
123456	789012345	678901234	56789012345	678901234	56789012345	67890
ZILLA/	4.0~(COMP	ATIBLE; ~M	SIE~5.0;~WI	NDOWS~95)	STC03840SM~	02
1	1	1	1	1		
2	3	4	5	6		
123456	789012345	678901234	56789012345	6789012		
02MDG0	8TKDC315T	1127 142 0	05 05660255	5121200		

In the example above, tilde (~) *characters represent character spaces.*

This example represents data for multiple scenarios of a Card Not Present transaction. A typical transaction will probably not include all subfields (e.g., an Internet-order would not include Customer ANI and Customer II Digits, and a phone-order would not include Customer Hostname or Customer IP).

5.15.2 AMEX Airline Passenger Data (APD)

APD format is for merchants that are in the airline industry. These merchants will pass APD format data which include the information listed in <u>Table 5.9</u>.

Table 5.9 Airline Passenger Data (APD) format

Byte	Length	Format	Field Description	Content
1-2	2	A/N	PRIMARY ID	Primary ID (Card Type Code) is constant literal "AX" (American Express).
3-5	3	A/N	SECONDARY ID	Secondary ID (Data Type Code). Valid IDs include: APD = Airline Passenger Data
6-13	8	NUM	DEPARTURE DATE	Departure Date (format CCYYMMDD). Example: 20030101
14-16	3	A/N	AIRLINE PASSENGER NAME ID (APN ID)	Airline Passenger Name ID is constant literal "APN" (Airline Passenger Name).
17-18	2	NUM	VARIABLE LENGTH INDICATOR (APN VLI)	APN VLI indicates length of Airline PASSENGER NAME variable data (not including APN ID or VLI).
19-41	23-40	A/N	PASSENGER NAME Note: Example is 23 bytes.	Passenger Name in format: SURNAME~ FIRSTNAME~MIDDLEINITIAL ~ TITLE Use character space as sub-element separator. Variable data must be 23-bytes minimum, space filled as necessary, 40-bytes maximum. Truncate at 40 bytes, if necessary. Example: FROST~JANE~M~MRS~~~~~ ~~ Note: ~ = character space.
42-44	3	A/N	CARDMEMBER NAME ID (CN ID)	Cardmember Name ID is constant literal "CN~" (Cardmember Name). Note: ~ = character space.
45-46	2	NUM	VARIABLE LENGTH INDICATOR (CN VLI)	CN VLI indicates length of CARDMEMBER NAME variable data (not including CN ID or VLI).

Byte	Length	Format	Field Description	Content
47-69	23-40	A/N	CARDMEMBER NAME Note: Example is 23 bytes.	Cardmember Name in format: SURNAME~ FIRSTNAME~MIDDLEINITIAL ~ TITLE Use character space as sub-element separator. Variable data must be 23-bytes minimum, space filled as necessary, 40-bytes maximum. Truncate at 40 bytes, if necessary. Example: FROST~CHARLES~F~MR~~~ ~~ Note: ~ = character space.
70-74	5	A/N & special characters	ORIGIN (Origin Airport)	First segment travel origination Airport. Note: Five-byte code sequence allows for anticipated expansion of present, three-character Airport Code. If necessary, left justify codes and character space fill each code sequence to five bytes. Example: ABC~~ Note: ~ = character space.
75-79	5	A/N & special characters	DEST (First Segment Travel Destination Airport)	Destination Airport for first travel segment of trip; not necessarily the final destination. For example, if passenger flies from STL to MIA with layover at JFK, Destination Airport for first segment is JFK. Note: Five-byte code sequence allows for anticipated expansion of present, three-character Airport Code. If necessary, left justify codes and character space fill each code sequence to five bytes. Example: XYZ~~ Note: ~ = character space.
80-82	3	A/N	ROUTING ID (RTG ID)	Routing ID is constant literal "RTG" (Routing).
83-84	2	NUM	VARIABLE LENGTH INDICATOR (RTG VLI)	RTG VLI indicates combined length of NUMBER OF CITIES and ROUTING CITIES variable data (not including RTG ID or VLI).
85-86	2	NUM	NUMBER OF CITIES	Number of Airports or Cities on ticket (10 max).

Byte	Length	Format	Field Description	Content
87-145	11-59	A/N	ROUTING CITIES Note: Example is 59 bytes.	Routing Airport or City Codes for each leg on ticket (including ORIGIN and DEST) in five-byte segments with virgule (/) separator. Example: ABC~~/DEF~~/GHI~~/JKL~~/MNO~~/PQR~~/STU~~/V WX~~/YZA~~/XYZ~~
146- 148	3	A/N	AIRLINE CARRIERS ID (ALC ID)	Airline Carriers ID is constant literal "ALC" (Airline Carrier).
149- 150	2	NUM	VARIABLE LENGTH INDICATOR (ALC VLI)	ALC VLI indicates combined length of NUMBER OF AIRLINE CARRIERS and AIRLINE CARRIERS variable data (not including ALC ID or VLI).
151- 152	2	NUM	NUMBER OF AIRLINE CARRIERS	Number of Airline Carriers entered in AIRLINE CARRIERS subfield (9 max). Example: 09
153- 205	5-53	A/N	AIRLINE CARRIERS Note: Example is 53 bytes.	Airline Carrier Code for each leg on ticket (including ORIGIN and DEST) in five-byte segments with virgule (/) separator. Example: AB~~~/XY~~~/BC~~~/CD~ ~~/DE~~~/DE~~~/ CD~~~/BC~~~/AB~~~ Note: Each leg must have Airline Carrier Code entry, even if multiple (or all) legs are on the same Airline.
206- 229	24	A/N	FARE BASIS	Primary and secondary discount codes indicate class of service and fare level associated with ticket. Truncate at 24 bytes, if necessary. Example: ABC123DEF456GHI789JKL012
230- 232	3	NUM	NUMBER OF PASSENGERS	Number of passengers in party. Example: 001
233	1	A/N & special characters	E-TICKET INDICATOR	Indicates if ticket is electronic. E = E-Ticket ~ = Other ticket types (non- electronic ticket) Note: ~ = Character space
234- 236	3	A/N	RESERVATION CODE ID (RES ID)	Reservation Code ID is the constant literal "RES" (Reservation Code).

Byte	Length	Format	Field Description	Content
237- 238	2	NUM	VARIABLE LENGTH INDICATOR (RES VLI)	RES VLI indicates length of Reservation Code variable data (not including RES ID or VLI) Example: 15
239- 253	6-15	A/N	RESERVATION CODE Note: Example is 15 bytes.	Reservation Code (a precursor to a ticket number) corresponds to an airline ticket purchase reservation made by an airline or Global Distribution System (GDS). Example: ABCDE1234567890

5.15.3 Card present Goods Sold Data

This format can be used to identify merchandise such as gift cards, computers, and other electronics that can be resold for cash. This format is used only during Card Present transactions. The Goods Sold value will be evaluated as part of the real-time Authorization process. The merchants will pass Goods Sold data according to the format listed below in Table 4.10.

Table 5.10 Goods Sold Data format

Byte	Length	Format	Field Description	Content
1-2	2	A/N	PRIMARY ID	Primary ID (Card Type Code) is constant literal "AX" (American Express).
3-5	3	A/N	SECONDARY ID	Secondary ID (Data Type Code). Valid IDs include: CPD = Card Present Data
6-7	2	NUM	VERSION NUMBER	Card Present - Goods Sold data version. Valid numbers include: 01 - Version 1
8-10	3	A/N	GOODS SOLD ID (GS ID)	Goods Sold Code is constant literal "GS~" (Goods Sold). Note: ~ = character spaces.
11-12	2	NUM	VARIABLE LENGTH INDICATOR (GS VLI)	GS VLI indicates length of GOODS SOLD variable data (not including GS ID or VLI)
13-16	4	A/N	GOODS SOLD PRODUCT CODE	Four-byte goods product indicator code. Valid codes include:
				1000 = Gift Card

Card Present - Goods Sold Example

The example below corresponds to the Goods Sold Format Table on the preceding pages, and illustrates a data field entry for Goods Sold merchants that submit Card Present Gift Card data.

In the example above, tilde (~) characters represent character spaces.

5.16 Amex merchant name/location data

This field supports oil company cardholder activated terminal (CAT) and aggregator merchant location data for AMEX transactions only. Details are shown here.

For Oil Company CATs the name/location data will have the format:

```
S#ssssssss\\\ppppp~~~~\\
```

S# is a field use indicator.

sssssssss is a variable length (12 bytes max), merchant assigned Station Location Code.

\\\ is 3 delimiters

ppppp~~~~ is the postal code, left justified space filled to 10 characters.

 $\$ is 2 delimiters.

~ indicates a blank space character.

For Aggregators, the name/location data/Telephone Number/Email Address will have the format:

S# is a field use indicator.

vvvvvvvvv is a variable length (16 bytes max), merchant assigned Seller/Vendor Code.

\ is a delimiter.

123~abcdef is the variable length (20 bytes max) seller/vendor street address.

\ is a delimiter.

ccccccc is the variable length (13 bytes max) seller/vendor city.

```
\ is a delimiter.

pppppp~~~~ is the postal code, left justified space filled to 10 characters.

\ is a delimiter

bbbbbbbbb is the seller's business phone number

\ is a delimiter

abc@123 is the seller's email address (19 positions maximum)
```

5.17 Amount actually used from card

The Amount Actually Used from Card represents the actual approved transaction amount when a transaction request is received from a client using the Purchase for Remaining Balance support option (this option is designated on the gift card system and is not requested in the online authorization request). The Amount Actually Used from Card in a Purchase for Remaining Balance amount will be the amount of the transaction amount that was actually covered by the remaining balance on the card when the requested authorization amount exceeds the available card balance (see <u>Table 4.106</u> for record format and version number).

For example, a card may have an available balance of \$7.50 and the cardholder does know their Available Balance. Rather than submit a Balance Inquiry followed by a Purchase/Redemption Request, the retailer can use the Purchase for Remaining Balance transaction option. If a purchase for \$10.00 is attempted on the card with \$7.50 balance, the system will respond with an approval and the Amount Actually Used From Card field will represent the approved amount of \$7.50. In this case, the response code will also be 00 (Approval). The merchant must tender the difference between the requested amount and the approved amount (amount actually used) using another form of payment. If the transaction is fully covered by the balance remaining on the gift card (i.e., Card Balance is greater than the requested Purchase/Redemption) Amount then this field will be zero.

5.18 Application ID

The Application ID provides a unique value to identify the software application (see <u>Table 4.35</u> for record format and version number). This identifier is assigned by TSYS Acquiring Solutions during certification.

5.19 Application interchange profile

This fixed length, 4-character numeric field might be carried in EMV transactions and provides a series of indicators that reflect the specific functions supported by the chip card account, for example, whether cardholder verification is supported.

5.20 Application transaction counter (ATC)

This field contains a counter maintained by the application resident in the integrated chip card and is used to identify each transaction conducted by the chip card (see Table 4.19 for record format and version number). This is a four- character field supplied as ASCII-coded binary data. Refer to 6.8 for information concerning the conversion of Binary to ASCII data.

5.21 Application type

The TSYS Acquiring Solutions authorization system supports a number of communication interface applications (see <u>Table 4.5</u>, <u>Table 4.4</u> for record formats and version numbers). These applications include:

- Single Transaction: a half-duplex, single-threaded interface option where only one authorization is performed per host connection.
- Multi-Transaction: a half-duplex, single-threaded interface option where multiple authorizations can be performed per host connection.
- Interleaved: A full-duplex multi-threaded interface option where multiple transactions are performed per host connection.

Refer to the EIS 1051 (Authorization Link Level Protocol) specification for additional information on these communication applications.

Table 5.11 Application type

Application	Description	
0	Single authorization per connection ("Single-Trans.")	
2	Multiple authorizations per connection, single-threaded ("Multi- Trans.")	
4	Multiple authorizations per connection, full-duplex ("Interleaved")	
1, 3, 5, and 6	Reserved for TSYS Acquiring Solutions Central Data Capture (CDC)	
9	Reserved	
7, 8, A-Z	Reserved for future use	

5.22 Approval code

This six-character field contains an authorization code when a transaction has been approved (see <u>Table 4.23</u>, <u>Table 4.6</u> for record formats and version numbers). If the Response Code (<u>Response code</u>) returned indicates that the transaction is not approved, then the contents of the field should be ignored. The approval code must be stored and submitted in the settlement data capture record.

The last position of the Approval Code will contain the Card Product Value for MasterCard, and Discover only.

Effective October 12, 2012, the Card Product Value in the sixth position of the approval code will no longer be supported by Visa.

For Discover approved transactions on prepaid cards, the approval code will contain the available balance on the prepaid card.

MasterCard supports card product identification at the card-level for U.S. Consumers Credit products.

Table 5.12 Card product values in sixth position of approval code for MasterCard transactions

Value	Account Type	Description
В	MasterCard Enhanced Value Platform	Enhanced (Consumer) Account qualifies for MasterCard Enhanced Value Platform only
С	Core Value Small Business (MCB, MEB, and MPC)	Account qualifies for MasterCard Core Value Small Business
D	Core Value Small Business (MCB, MEB, and MPC) and Product Graduation	Account qualifies for MasterCard Core Value Small Business and MasterCard Product Graduation
Е	Business World (MWB)	Account qualifies for MasterCard Small Business
F	Business World (MWB) and Product Graduation	Account qualifies for MasterCard Small Business and MasterCard Product Graduation
G	Business World Elite (MAB)	Account qualifies for MasterCard Small Business
Н	Business World Elite (MAB) and Product Graduation	Account qualifies for MasterCard Small Business and MasterCard Product Graduation
J	N/A	Account qualifies for MasterCard Small Business
K	N/A	Account qualifies for MasterCard Small Business and MasterCard Product Graduation

Value	Account Type	Description
M	MasterCard Enhanced Value Platform and MasterCard Product Graduation	Account qualifies for MasterCard Enhanced Value Platform and MasterCard Product Graduation
Р	MasterCard Product Graduation Only	Account qualifies for MasterCard Product Graduation Only
S	MasterCard High Value	Account qualifies for MasterCard High Value
Т	MasterCard Product Graduation/ MasterCard High Value	Account qualifies for MasterCard Product Graduation and MasterCard High Value
Z	N/A	MasterCard provided default value indicating that the specific cardholder account found in DE 2 (Primary Account Number [PAN]) of the transaction does not participate in Account Level Management processing for MasterCard Enhanced Value Platform or MasterCard Product Graduation.

Table 5.13 Approval source values in the first position of the approval code for Discover/PayPal transactions

Value	Description
0	Full Positive Authorization
1	Forced Authorization
2	Client
3	Reserved
4	Discover/PayPal Network System
5	Discover/PayPal Network System
6	Discover/PayPal Network System
7	Discover/PayPal Network System
С	Client

Table 5.14 Card product value in the sixth position of the approval code for Discover/PayPal transactions

Value	Card Product	Description
С	Consumer Credit	Core Card
R	Consumer Credit	Rewards Card
P	Consumer Credit	Premium Card

Value	Card Product	Description
Q	Consumer Credit	Premium Plus Card
В	Commercial Credit Card	Commercial Credit Card
Е	Commercial Credit Card	Commercial Executive Business Credit Card
Z	Unspecified Card Product	NA

5.23 Association timestamp

The Association timestamp version supports a specific date/time and other data elements provided by the association for message matching. Currently only valid on MasterCard AFD credit advice messages.

5.24 Authorization indicator

This field defines the type of authorization request and must be included on all MasterCard Authorization Request/0100, Authorization Advice/0120, and Reversal Request/0400 transactions. Please refer to G3v067 (4.2.63).

Table 5.15 Authorization indicator

Code	Description	Description
P	Pre-Authorization	A request for an estimated amount
F	Final Authorization	A request for a final amount that may not be canceled once it is approved
U	Undefined Authorization	This indicator may be used when the intent is unknown, and the transaction is neither a pre-authorization, nor a final authorization

5.25 Authorization request cryptogram (ARQC)

This field contains the Authorization Request Cryptogram (ARQC) received from the integrated chip card (see <u>Section 4.2.51</u>). This is a 16-character field in ASCII-coded binary format. Refer to <u>6.8</u> for instructions on converting binary to ASCII characters.

5.26 Authorization response cryptogram (ARPC)

This field contains the Authorization Response Cryptogram (ARPC) received from the issuer and returned to the chip card during online authorization (see <u>Section 4.2.51</u>). This is a 16-character field in ASCII-coded binary format. Refer to <u>6.8</u> for instructions on converting binary to ASCII characters.

5.27 Authorization response text

This field contains a 16-character response or display text message (see <u>Table 4.6</u> for record format and version number). This message can be used by the terminal to display the authorization result. The display text must not be used to determine the nature of a response message. TSYS Acquiring Solutions translates the responses according to the Language Indicator submitted in the authorization request message. Table 5.163 provides the (U.S.) English message summary.

In the case of Check Guarantee response message, the text message can originate from the service provider and not TSYS Acquiring Solutions. Since TSYS Acquiring Solutions does not control the response text in this instance, it is imperative that the POS system evaluate the response code and not the response text to determine the nature of a response message. Refer to the check service provider for explanation of proprietary error responses. If no error response text is received by TSYS Acquiring Solutions from the check service provider, "ERROR xx" is returned to the terminal.

For a Product Eligibility response message, the text message will contain "Card Type" and the two character Visa code or the four character MasterCard code.

5.28 Authorization source code

This field contains a one-character code indicating the source of the authorization code (see Table 4.6 for record format and version number). The received code must be stored and resubmitted in the data capture settlement record.

Table 5.16 Authorization source code

Code	Description	
1	STIP (Stand-In Processing): time-out response	
2	STIP: amount below issuer limit	
3	STIP: issuer in Suppress Inquiry mode	
4	Direct Connect Issuer Generated Response (MasterCard, American Express), or STIP: issuer unavailable	
5	Issuer Generated Response	
6	Off line approval, POS device generated	
7	Acquirer approval: BASE I unavailable	
8	Acquirer approval of a referral	
9	Use for non-authorized transactions; such as credit card credits	
D	Referral: authorization code manually keyed	
Е	Off line approval: authorization code manually keyed	
F	CAFIS Interface Off Line Post-Auth (currently in use by Japan Acquirer Services, JAS)	
G	Issuer Approval, Post-Auth	

5.29 Available balance

This is a variable length field zero to 12-character numeric in length (see <u>Table 4.24</u> for record format and version number). The Available Balance is returned in the response message for EBT/Food Stamp transactions. This field is optionally returned for EBT/Cash Benefit transactions.

5.29.1 Available balance for Gift card only

The available balance will be the value remaining on the card following the transaction (see <u>Table 4.107</u> for record format and version number). It represents the balance on the card prior to the transaction updated to reflect the results of the transaction. For example, if a card has an Available Balance of \$20.00 prior to a transaction and a \$15.00 Purchase/Redemption Request is received, the Available Balance returned in the "U" Authorization Response record will reflect an Available Balance of \$5.00.

5.30 Bar code format

The bar code format is a value that identifies the format of the bar code customer ID (see <u>Table 4.106</u> for record format and version number). This field is only referenced if the account data source is an "A." The bar code from the card will be in the customer data field.

5.31 Batch number

This three-character numeric field contains a batch sequence number generated by the terminal (see <u>Table 4.7</u> for record format and version number). The number wraps from 999 to 001. This number is also transmitted as the data capture batch number. Batch numbers should not be repeated within five days.

This field should be configured as a parameter.

5.32 Card acceptor data

The following sub-fields are required for direct debit transactions (for example, field 4.68, Record Format = "T"). For all other transactions, the following sub-fields should be configured as parameters within the POS system but need not necessarily contain data (see <u>Table 4.5</u> for record format and version number).

The format of this 40-byte field is:

Table 5.17 Card acceptor data

Sub-field	Byte	Format	Sub-field name	Section
NNNN	1-25	A/N	Merchant Name	<u>5.32.1</u>
LLLL	26-38	A/N	Merchant City	5.32.2

Sub-field	Byte	Format	Sub-field name	Section
SS	39-40	A/N	Merchant State/Province	5.32.3

5.32.1 Merchant name

This 25-character sub-field contains the merchant name provided by the signing member or processor. The name provided must correspond to the name printed on the customer receipt. The name must be left-justified and space-filled. The first character position cannot be a space. This field must contain the same data used in the data capture batch.

For preferred customer/passenger transport transactions, characters 1-12 of this field should contain the shortened name, left-justified and space-filled to 12. Characters 13-25 of this field should contain the ticket number, left-justified and space-filled to 25.

This field should be configured as a parameter.

5.32.2 Merchant city

This 13-character sub-field contains the merchant location/city name provided by the signing member or processor. The name provided must correspond to the location/city name printed on the customer receipt. The name is left-justified and space-filled. The first character position cannot be a space. This field must contain the same data used in the data capture batch.

For Direct Marketing merchants and preferred customer/passenger transport transactions, this field should contain a customer service phone number in XXX-XXXXXXX format. The dash is required. This field can also be used for e-mail or a URL.

This field should be configured as a parameter.

5.32.3 Merchant state/province

This two-character sub-field contains the merchant State/Province Code provided by the signing member or processor. This field must contain the same data used in the data capture batch. Alpha characters must be supplied in upper case form.

This field should be configured as a parameter.

5.33 Card brand token

This field contains the card brand Token issued by the Token Service Provider. The Token is a surrogate value for a PAN that is consistent with ISO 8583 message requirements and is a 13 to 19-digit numeric value that passes basic validation rules of an account number, including the LUHN check.

5.34 Card brand token account range status

This field contains a one-character value that indicates the Visa regulatory status of the actual card number for which the token represents. Valid values are shown below.

Table 5.18 Account status

Code	Description
space	Blank/no value
R	Regulated
N	Non-Regulated

5.35 Card brand token action indicator

This field indicates the action to be taken on the token provided in the Customer Data Field (5.71).

When using an Action Indicator value of '4', the Replacement PAN Expiration Date (5.39) is mandatory.

Use of the 'Suspend Token' Action Indicator is a temporary action that can be reversed with the 'Resume Token' Action Indicator. Use of the 'Deactivate Token' Action Indicator is a permanent action that cannot be reversed.

Table 5.19 Token action indicator

Code	Description
0	Inquiry of the Token Status
1	Suspend Token
2	Deactivate Token
3	Resume Token
4	Update PAN Expiration Date

5.36 Card brand token assurance level

Defined by the token service provider, this Visa or MasterCard value indicates the assigned confidence level of the token-to-PAN/cardholder binding.

5.37 Card brand token expiration date

This field contains the expiration date of the card brand Token issued by the Token Service Provider. The value may or may not be identical to the PAN it represents.

5.38 Card brand token PAN last 4 digits

This field contains 4 characters that represent the last 4 digits of the actual cardholder PAN. This can be used to print on the paper receipt for cardholder reference.

5.39 Card brand token replacement PAN expiration date

This is the expiration date that is replacing the number that is embossed, encoded, or both on the card that represents the cardholder's primary account number. Format is YYMM.

5.40 Card brand token requestor ID

This field contains eleven digits that uniquely identify the pairing of token requestor with the token domain. It is assigned by the token service provider and is unique within the token vault. If present, it should be included in the authorization request.

The Card Brand Token Requestor ID must be included in a reversal message if it was present in the original transaction.

Refer to the EMVCo Payment Tokenization Specification - Technical Framework specification for additional information.

5.41 Card brand token status

This field contains the status of the token.

Table 5.20 Token status valid values

Code	Description
1	Active token
2	Suspended token
3	Deactivated token
4	Expired token

5.42 Card product code

This field contains a two-character code created by Visa during the authorization process.

This field is conditional in the response record. It will only be returned if the values are non-zero. (see Appendix B Card product code table)

5.43 Card sequence number

This three-character numeric field contains a counter maintained and supplied by the integrated chip card (see <u>Table 4.19</u> for record format and version number). This field identifies the card when multiple chip cards are associated with a single account number. See EMV specifications for additional details. If the chip card does not contain a Card Sequence Number, then this field must be defaulted to "000."

5.44 Card type

The variable length 1-20 character field indicates the type of card sent in the authorization request.

Table 5.21 Valid values for card type

Possible values
Check
Visa
MasterCard
Amex
Discover
PayPal
JCB
Private Label
Gift Card
Debit
EBT

5.45 Card verification results

This eight-character field contains a code used to identify exception conditions detected by the chip card (see <u>Table 4.19</u> for record format and version number). This field is supplied as ASCII-coded binary data. Refer to <u>6.8</u> for information concerning the conversion of binary to ASCII data.

5.46 Cardholder billing amount

This is the transaction amount in the issuer's currency. It is the amount that is billed to the cardholder in the cardholder account currency exclusive of cardholder billing fees.

5.47 Cardholder billing conversion rate

This is the factor used in the conversion from transaction to cardholder billing amount. The leftmost digit must be in the range 0-7 and denotes the number of positions that the decimal point will be moved from the right. For example, a value of "69972522," the conversion rate is 9.972522.

The transaction amount is multiplied by the value in this field to determine the cardholder billing amount.

5.48 Cardholder billing currency code

This field defines the currency of the cardholder billing amount and the cardholder billing fee amount. This field is provided whenever the cardholder billing amount is present.

5.49 Cardholder certificate serial number

This zero to 32-character field was used to submit a SET cardholder certificate issued by the Issuer's certificate authority (see <u>Table 4.17</u> for record format and version number).

5.50 Cardholder identification code

This one-character field contains a code that specifies the method used to verify the identity the cardholder (see <u>Table 4.5</u> for record format and version number). The values can be used in conjunction with AVS and Recurring and Installment Requested ACI Indicators.

Table 5.22 Cardholder identification code

ID Code	Identification Method
A	Personal Identification Number - 23-character static key (non-USA)
В	PIN at Automated Dispensing Machine - 32-character static key
С	Self-Service Limited Amount Terminal (No ID method available)
D	Self-Service Terminal (No ID method available)
E	Customer Activated Automated Fuel Dispenser (No ID method available)
F	PIN Authentication by ICC (Offline PIN authentication for debit and credit chip card transactions) If F is sent then Cardholder Identification Data does not need to be sent in the transaction
G	Clear Text PIN (Offline PIN authentication for debit and credit chip card transactions)
J	PIN at Automated Dispensing Machine 32-character DUK/PT
K	Personal Identification Number 32-character DUK/PT (Online PIN authentication for debit and credit transactions)
M	Card Present: Unable to read Mag stripe, sending Address Verification Data
N	Card Not Present: Includes e-Commerce and Full Address Verification Data
P	No CVM Required (only valid on EMV contact and EMV mode contactless transactions)
R	Reserved internal use only
S	Personal Identification Number - 32-character static key

ID Code	Identification Method
Т	Reserved internal use only
Z	Cardholder Signature - Terminal has a PIN pad
@	Cardholder Signature - No PIN pad available
1-8	Reserved internal use only
0,9, H, I, L, O, Q, U-Y	Reserved for future use

5.51 Cardholder identification data

This field is 0, 23, 29, 32, 42, or 128-characters in length. The Cardholder ID code specified in section 4.25 indicates the type and format of data to be contained in this field.

NOTE This field should not be included in manually generated reversal messages or when the Cardholder Identification method is F.

Table 5.23 Cardholder identification data

Length	Description	Value(s) from Table 5.22
0	Signature ID used, No PIN Pad present	@
0-29	Signature ID used, no PIN pad present, AVS data may be optionally provided	@
0-29	Signature ID used on a terminal with a PIN pad, AVS data may be optionally provided	Z
0-29		C, D, E
1 - 128	Signature ID used, No PIN Pad present Additional check acceptance data sent for check authorization request	@
0	Signature ID used on a terminal with a PIN pad	Z
1 - 128	Signature ID used, PIN pad present Additional check acceptance data sent for check authorization request	Z
0	No ID method used	C, D, E
23	A PIN was entered on a STATIC key PIN pad	A
32	A PIN was entered on a STATIC key PIN pad	B or S
32, 42	A PIN was entered on a DUK/PT key PIN pad	J or K
1 - 29	Address verification was requested (Retail/Unable to read Magnetic Stripe)	M
1 - 29	Address verification was requested	N

5.51.1 Static key with twenty-three byte cardholder ID

The 32-character static key technology is NOT supported.

5.51.2 Static key with thirty-two byte cardholder ID

NOTE: The 32-character static key technology is NOT supported.

5.51.3 DUK/PT key with thirty-two byte cardholder ID

When a PIN is entered on a PIN pad supporting DUK/PT (Derived Unique Key/Per Transaction) methodology, the terminal forwards the following characters as provided by the PIN pad. TSYS Acquiring Solutions-certified PIN Pads use the first 32 characters. Other PIN pads may use the additional 10 characters.

aaaaaaaaaaaaaakkkkkssssssssss[sssssssss]

Where:

aaaaaaaaaaaaaa Expanded Encrypted PIN Block Data

The encrypted PIN block format consists of 64 bits of data

kkkkk Key Set Identifier (KSID)

Is represented by a unique, Visa assigned, six-character numeric Bank Identification Number.

For TSYS Acquiring Solutions-certified PIN Pads the KSID characters can have the following values:

Character one

Either "4" or "5"

Character two

"A" (TSYS Acquiring Solutions)

"B" (Third Party Injection)

"C" (Travel Money)

"D" (TSYS Acquiring Solutions)

"E" (TSYS Acquiring Solutions)

"F" (TSYS Acquiring Solutions)

Character three

"0" through "9" or "A" through "F"

Character four

"0" through "9" or "A" through "F"

```
Character five "0" through "9" or "A" through "F"
```

Character six "0" through "9" or "A" through "F"

ssssssssss[sssssssss] Expanded TRSM ID (PIN Pad Serial Number) & Expanded Transaction Counter

Table 5.24 Expanded TRSM ID & expanded transaction counter

KSID	TRSM Length	Formation of TRSM ID & Expanded Transaction Counter
TSYS Acquiring Solutions KSID (4A0000-5FFFFF)	10 characters	The PIN pad serial number is stored as five hex digits minus one bit for a total of 19 bits of data. The transaction counter is stored as five hex digits plus one bit for a total of 21 bits of data. These two fields concatenated together contain 40 bits.
Example of other clients	20 characters	Expanded TRSM ID and Expanded Transaction Counter (Visa and Discover
KSID	CHATACTCIS	only)

5.51.4 Address verification data

Address verification is allowed in two instances to assist in authentication of the cardholder.

- When the card is not physically present.
- In a Retail environment that is capable of reading a magnetic stripe, but the stripe is unreadable.
- AVS data should not be sent in manually generated reversal messages.

Address verification is currently supported for Visa, MasterCard, American Express, and Discover cards. If address verification is requested on an American Express transaction, Group 3 Version 29 should be used. Group 3 Version 29 should also be used as a supplement for Discover Address Verification Service Enhancement.

When address verification is requested, the Account Data Source field (Account data source code) must indicate that the transaction was manually entered. When address verification is requested, this field contains the mailing address and ZIP Code of the cardholder's monthly statement. This field cannot exceed 29 characters in length, and the format for this field is:

```
<street address><apt no.><Space><Zip Code>
or
<post office box number><Space><Zip Code>
```

If any of the address fields are not available or not applicable, they can be omitted. If available, the last five or nine digits, without embedded spaces, should be the ZIP Code. If the ZIP Code is sent along with an address, the zip code must always be preceded by a <Space>. In the address, numbers are not spelled out. "First Street" becomes "1ST Street," "Second" becomes "2ND," and so on.

There must be a <Space> between consecutive data elements that are only numeric.

For example:

1234 56th Street 40404 is equivalent to: 1234 56Street 40404

1391 ELM STREET 40404 is equivalent to: 1391ELMSTREET 40404 P.O. BOX 24356 55555 is not equivalent to: P.O.BOX2435655555

NOTE When AVS is requested on card present, unreadable magnetic stripe transactions, only the ZIP Code is required. In this case, no <Space> is required before the ZIP Code.

On Card Not Present, ZIP code only validation requests, the postal code may be sent with the appropriate space or without for Canadian and UK postal codes.

Examples:

Canadian postal code ANA NAN or ANANAN (no space)

UK Postal code AN NAA or ANNAA (no space)

UK Postal code AANN NAA or AANNNAA (no space)

UK Postal code AAN NAA or AANNAA (no space)

UK Postal code AANN NAA or AANNNAA (no space)

UK Postal code ANA NAA or ANANAA (no space)

UK Postal code AANA NAA or AANANAA (no space)

NOTE Terminals using Device Code 'Q' can receive a valid Address Verification Result Code with any authorization response code.

5.52 Cardholder verification method

This one character field is used by MasterCard in auth advice request/0120, reversal request/0400, and reversal advice/0420 transactions. Valid values are shown here. Please refer to G3v039 (4.2.35).

Value	Description
P	Online PIN Verification

Value	Description
S	Can signify:
	• Signature
	Offline PIN Verification (for chip transactions)
	M-PIN for Mobile Device with PIN entry capability
	No CVM used
	Auto-fuel dispensing advice

5.53 Cardholder Verification Method (CVM) results

This field is optionally carried in MasterCard EMV transactions and indicates the results of the most recent CVM performed.

5.54 Cardholder verification results

For American Express (Amex) transactions, Amex will respond to an authorization request with verification results for cardholder identification data. This data is arranged in order of 5 bytes, one for each result of a cardholder identification data element, and 4 bytes reserved for future use. Bytes 1 - 5 will contain a result value for a cardholder data element. Bytes 6-9 will be spaced filled. Please refer to G3v048 (4.2.44).

Table 5.25 Ccrdholder verification results

	Description	Possible values for each byte
Byte 1	Billing ZIP Code	Y=Data Matches
Byte 2	Billing Street Match Code	U=Data Unchecked
Byte 3	Billing Name Match Code	N=No Match
Byte 4	Telephone Number Match Code	S=Service not allowed
Byte 5	E-mail Address Match Code	R=Retry
Byte 6-9	Reserved	Space=Data not sent

For Discover transactions, only Byte 3 will be populated because Discover only sends a response for Cardholder First and Last Name match. Please refer to G3v048 (4.2.44). This service is available for Authorization Request/0100 or Authorization Advice/0120 transactions.

Table 5.26 Discover response values for cardholder name verification - Byte 3 ONLY

Code	Description
В	No response due to blank input

Code	Description
K	Unknown
P	Not processed
M	First Name and Last Name match
F	First Name Matches, Last Name does not match
L	First Name does not match, Last Name matches
N	Nothing matches
W	No data from Issuer/Authorization system
U	Retry, system unable to process

5.55 CAVV (Card Authentication Verification Value)

This 40-character field contains a data value generated by the issuer Access Control Server (ACS) to enable cardholder validation for 3-D Secure transactions (see <u>Table 4.29</u> for record format and version number). This field contains a 40-character ASCII representation of a 20-character numeric binary field. Refer to <u>6.8</u> for instructions on performing the necessary binary to ASCII data conversion.

5.56 CAVV results code

The CAVV Results Code indicates whether the authentication value submitted by the merchant can be validated by the Card Brand or the issuer (see <u>Table 4.29</u> for record format and version number).

Table 5.27 CAVV results code

Code	Description
Blank or not present	CAVV not validated
0	CAVV not validated because erroneous data was submitted
1	CAVV failed validation
2	CAVV passed validation
3	CAVV validation could not be performed; Issuer attempt incomplete
4	CAVV validation could not be performed; Issuer system error
5	Reserved for future use
6	Reserved for future use
7	CAVV attempt - failed validation - issuer available (US issued card/non-US acquirer)

Code	Description
8	CAVV attempt - passed validation - issuer available (US issued card/non-US acquirer)
9	CAVV attempt - failed validation - issuer unavailable (US issued card/non-US acquirer)
A	CAVV attempt - passed validation - issuer unavailable (US issued card/non-US acquirer)
В	CAVV passed validation, information only, no liability shift
С	CAVV was not validated - attempted
D	CAVV was not validated - authentication
U	CAVV Unchecked [AX]

5.57 Check acceptance data

If a Check Authorization transaction is being performed, this field can contain data to be validated. This field can support data up to 128 bytes in length and frequently contain raw Check MICR information. TSYS Acquiring Solutions forwards this information on to the check acceptance vendor. Please contact the check acceptance vendor for information on the content or format of the data.

<u>Table 5.28</u> provides currently defined state codes required to perform check validation using a driver's license as identification.

Table 5.28 State codes/driver's license check validation

State	Equifa	IX	TeleCl	neck	S
Alabama	41	AL	25	AL	Ν
Alaska	42	AK	55	LK	N
Arizona	43	AZ	20	AZ	N
Arkansas	45	AR	27	AR	N H
California	46	CA	23	CF	N
Colorado	47	CO	26	CO	N
Connecticut	48	СТ	28	СТ	N
Delaware	77	DE	33	DE	N
Dist. of Columbia	91	DC	93	WD	N
Florida	49	FL	35	FL	C
Georgia	50	GA	42	GA	C
Hawaii	51	HI	44	HI	C
Idaho	52	ID	43	ID	Р

State	Equifa	X	TeleCh	neck
Montana	68	МТ	68	MT
Nebraska	69	NE	63	NE
Nevada	70	NV	38	EV
New Hampshire	71	NH	47	HP
New Jersey	66	NJ	53	JE
New Mexico	72	NM	39	EX
New York	55	NY	69	NY
North Carolina	73	NC	75	RL
North Dakota	74	ND	36	DN
Ohio	75	ОН	60	OZ
Oklahoma	76	OK	65	OK
Oregon	78	OR	67	OR
Pennsylvania	44	PA	78	PV

State	Equifa	ax	TeleCheck	
Illinois	53	IL	45	IL
Indiana	54	IN	46	IN
Iowa	56	IA	49	IW
Kansas	57	KS	57	KS
Kentucky	58	KY	59	KY
Louisiana	59	LA	52	LA
Maine	60	ME	56	LO
Maryland	61	MD	79	RY
Massachusetts	62	MA	87	RY
Michigan	63	MI	40	GZ
Minnesota	64	MN	64	MI
Mississippi	65	MS	77	SS
Missouri	67	МО	66	МО

State	Equifax		TeleCh	neck
Rhode Island	79	RI		RI
South Carolina	80	SC	75	SC
South Dakota	81	SD	73	SD
Tennessee	82	TN	86	TN
Texas	83	TX	89	TX
Utah	84	UT	88	UT
Vermont	85	VT	83	VE
Virginia	86	VA	82	VA
Washington	87	WA	92	WA
West Virginia	88	WV	98	WV
Wisconsin	89	WI	94	WI
Wyoming	90	WY	99	WY

Province	Equifa	ax	TeleC	heck	Province	Equifa	ax	TeleCl	neck
Alberta	28	AB	21	AB	NW Territories	33	NT	37	NW
British Columbia	29	ВС	54	ВС	Nova Scotia	34	NS	41	NS
Manitoba	30	MB	61	MB	Prince Edward Is.	36	PE	81	PE
New Brunswick	31	NB	61	NB	Saskatchewan	38	SK	58	SK
Newfoundland	32	NF	31	NF	Yukon Territory	39	YT	91	YU

5.58 Chip condition code

This one-character field provides information about magnetic stripe read transactions using chip capable cards at chip capable POS devices.

Table 5.29 Chip condition code

Value	Description
0	Service code does not begin with a two or six or fill for subsequent positions that are present.
1	Service code begins with two or six; last CCPS read at the chip capable terminal was successful, or was not a chip transaction, or unknown.
2	Service code begins with two or six; last transaction at the chip capable terminal was unsuccessful chip read.

5.59 City code

This field contains the nine-character code used to further identify the merchant location (see <u>Table 4.5</u> for record format and version number). This field is left-justified and space-filled.

Within the United States, the five or nine-character numeric ZIP Code of the address of the store location is used. Outside of the United States, this field is assigned by the signing member or processor.

The formatting should be:

Usage	Format
U.S. ZIP Code	5 character numeric, left-justified, space-filled.
U.S. ZIP Code + Extension	9 character numeric.
Canadian Postal Code	6 character "AnAnAn" format, left-justified, space-filled.

This field should be configured as a parameter.

5.60 Commercial card request indicator

This four-character field is utilized to request that TSYS Acquiring Solutions systems return a value in the authorization response message identifying whether the card type being presented was a Commercial Card (see <u>Table 4.11</u> for record format and version number). This field is currently defaulted to **! 010**, and is supported for Visa and MasterCard transactions only.

5.61 Commercial card response indicator

If the Commercial Card Request Indicator (Section 5.60) was supplied in the authorization request, the host responds with one of the following response indicators identifying the card being processed (see <u>Table 4.12</u> for record format and version number). Currently defined values include:

Table 5.30 Commercial card response indicator

Value	Description
В	Business Card
D	Visa Commerce (reserved for future use)
L	Card eligible for B2B settlement match edits
R	Corporate Card
S	Purchasing Card
0	Non-commercial Card
<space></space>	Invalid Request Indicator Received

When a response indicator has been received indicating that the approved card is a Business, Corporate, or Purchasing Card, the POS device should prompt for addendum data elements as needed for settlement. Please refer to EIS 1081 Specifications for data capture record format requirements.

5.62 Conversion date

This is the month and day that the conversion rate is effective to convert the transaction amount from the original currency into the settlement and cardholder billing currency.

5.63 Country code

This field contains a three-character numeric assigned by the signing member or processor to identify the merchant's location country (see <u>Table 4.5</u> for record format and version number). For the United States, use "840."

This field should be configured as a parameter.

5.64 Cryptogram amount

This fixed length, 12-character numeric field is carried in EMV transactions and contains the transaction amount used by the chip when calculating the cryptogram. It must contain numeric right-justified data with leading zeros. If the transaction is a purchase with cashback transaction, this field contains the purchase amount plus the cashback amount. If this is a cashback transaction, the message must also contain the Cryptogram Cashback Amount field.

5.65 Cryptogram cashback amount

This fixed length, 12-character numeric field might be carried in EMV transactions and contains the cashback amount that the chip uses when calculating the cryptogram. If the transaction does not include cashback, this field can either not be sent or be sent zero filled.

5.66 Cryptogram currency code

This fixed length, 3-character numeric field is carried in EMV transactions and contains the currency code used by the chip when calculating the cryptogram. A leading zero is required to pad the first unused half-byte of this field. The zero is filler and is not part of the code.

5.67 Cryptogram information data

This fixed length, 2-character numeric field carries a series of bit switches that indicate the following: type of cryptogram generated; a limited set of status codes that provide information about why the stated cryptogram was generated; and actions that the EMV chip card instructs the terminal to perform.

5.68 Cryptogram transaction type

This fixed length, 2-character numeric field is carried in EMV transactions and indicates the type of financial transaction provided by the terminal. It usually corresponds to the first two digits of the Processing Code. Field 144 is carried in the message to ensure that the issuer and the card are using the same value to compute the cryptogram.

5.69 Cryptogram version number

This two-character field contains a code used to indicate which version of the cryptogram was used by the application for ARQC, TC, and AAC generation (see <u>Table 4.19</u> for record format and version number). This binary field is passed to the POS device in the Issuer Application Data field supplied by the integrated chip card. This field is supplied as ASCII-coded binary data. Refer to <u>6.8</u> for information concerning the conversion of binary to ASCII data.

5.70 Currency code

This field contains the three digit currency code that designates the currency in which the transaction will be processed. For U.S. currency, use 840. Other values may be used when processing multi-currency.

This field should be configured as a parameter.

5.71 Customer data field

This is a variable length field containing the customer account or check acceptance ID data in one of three formats (see <u>Table 4.5</u> for record format and version number). The cardholder account information can be read from one of two magnetic stripes on the card or it can contain data which has been entered manually. Most frequently supported card ranges include:

Table 5.31 Customer data field

Card type	Range	Length
Visa	400000-499999	13, 16, 19
MasterCard	510000-559999 222100-272099 675920-675923	16, 19
American Express	340000-349999 370000-379999	15
PayPal	601104-601104	16

Card type	Range	Length
Discover Network	360000-369999	14
	300000-305999 309500-309599 380000-399999 601100-601103 601105-601199 622126-622925 624000-626999 628200-628899	16,19
	644000-659999	
JCB Card	352800-358999	16

Please refer to Section 4.1.1 for information on how this field may change if encryption is used in the transaction

5.71.1 Track one data

This is a variable length field with a maximum data length of 76 characters.

The Track One data read from the cardholder's card is checked for parity and LRC errors and then converted from the six-bit characters encoded on the card to seven bit characters as defined in ANSI X3.4. The character set definitions are provided in 6.1 for reference. As part of the conversion, the terminal must remove the framing characters (start sentinel, end sentinel, and LRC characters). The separators must be converted to either an ASCII "^" (HEX 5E) or ASCII <US> (HEX 1F) characters. The entire UNALTERED Track (excluding framing characters) must be provided in the authorization request and debit pre-authorization messages or an error condition results. It must not be included in responses, completions or reversals.

For American Express cards, any spaces in the card account number field of Track One must be removed before the application executes a Mod-10 check of the card account number. However, any spaces in the card account number field should be present when the application transmits the Track One data to the host for authorization. In other words, the card account number field of Track One should be sent to the authorization host unmodified.

5.71.2 Track two data

This is a variable length field with a maximum data length of 37-characters.

The Track Two data read from the cardholder's card is checked for Parity and LRC errors and then converted from the four-bit characters encoded on the card to seven bit characters as defined in ANSI X3.4. The character set definitions are provided in <u>6.1</u> for reference. As part of the conversion, the terminal must remove the start sentinel, end sentinel, and LRC characters. The separators must be converted to either an ASCII "=" (HEX 3D) or ASCII "D" (HEX 44) characters. The entire UNALTERED Track (excluding framing characters) must be provided in the authorization request and debit pre-authorization messages or an error message is generated. It must not be included in responses, completions or reversals.

5.71.3 Manually entered data

The customer credit card data can be key entered when the card magnetic stripe cannot be read, the card is not physically present, or when a card reader is not available. Debit cards cannot be manually entered. A manual entry is allowed for Electronic Benefits Transfer. For manually entered data, there will be three data items present (defined below) and a field separator (5.90) will show between each item.

• Manually entered account data

This is a variable length field consisting of 5 to 28 alphanumeric characters and contains manually entered information to be validated. For credit card transactions, this field contains the cardholder account number.

Manually entered expiration date

This 4-character numeric field contains the card expiration date in the form MMYY (month-month-year-year). EBT/Electronic Voucher transactions can utilize this field in MMYY format.

Manually entered verification code

This 3 or 4-character numeric field contains the verification code (CVV2, CVC2, CID) used in authenticating the physical presence of the credit card.

5.71.4 Check acceptance information

The customer data can be card read or manually key entered for check acceptance transactions. There will be two data items present and a field separator (5.90) will show between each item.

• Check acceptance information

This field is a variable length field consisting of 1 to 28-characters alphanumeric. The check acceptance vendor provides the data format and validation rules to be used by the terminal. Typically, the ID consists of a 2-character numeric state code and an ID which could be the customer's driver's license number or checking account number.

Check acceptance date

This optional field consists of either zero, or three to six alphanumeric characters and can contain the customer birth date or a control code in the form specified by the check acceptance processor.

5.71.5 Encrypted track data

If the field contains track one or track two encrypted with Voltage, the Track Encryption Protocol (TEP) used must be structure preserving encryption (TEP2). Track one will contain up to 79 ASCII characters corresponding to the ISO 7813 64-character alphabet. Track two data contains up to 40 ASCII characters corresponding to the ANSI/ISO BCD 16-character alphabet.

5.71.6 Encrypted manually entered data

The customer credit card data can be key entered when the card magnetic stripe cannot be read, the card is not physically present, or when a card reader is not available. Debit cards cannot be manually entered. A manual entry is allowed for Electronic Benefits Transfer. For manually entered data, there will be three data items present and a field separator (5.90) will show between each item. This data noted as encrypted is done so with Voltage encryption.

Manually entered encrypted account number

This is a variable length field consisting of 13-19 alphanumeric characters and contains manually entered information to be validated. For credit card transactions, this field contains the encrypted cardholder account number that is encrypted with Voltage encryption.

• Manually entered expiration date

This 4-character numeric field contains the card expiration date in the form MMYY (month-month-year-year). This data is not encrypted.

• Manually entered encrypted verification code

When the verification code (CVV2, CVC2, CID) is Voltage encrypted, the 3 or 4-digit code is transformed into a 7-digit number. When decrypted, it will be used in authenticating the physical presence of the credit card.

5.72 Derivation key index

This two-character field contains a code reflecting a value extracted from the integrated chip card that is used to identify the Issuer's unique derivation key (see <u>Table 4.19</u> for record format and version number). This field is supplied as ASCII-coded binary data. Refer to <u>6.8</u> for information concerning the conversion of binary to ASCII data.

5.73 Developer ID

The Developer ID provides a unique value to identify transactions originated by the Developer (see <u>Table 4.35</u> for record format and version number). This number is provided by TSYS Acquiring Solutions during certification.

5.74 Device code

This one-character field is used to identify the device type of the merchant submitting the authorization request (see <u>Table 4.5</u> for record format and version number). <u>Table 5.32</u> provides a summary of the currently defined codes. This field should be configured as a parameter.

Table 5.32 Device code

Code	Device type
О	Unknown or Unsure
A	TSYS Secur-ePayment (TSEP)
В	Automated Teller Machine (ATM)
С	P.C.
D	Dial Terminal
Е	Electronic Cash Register
G	Mobile Payment Acceptance
Н	TSYS Hosted Payment
I	In-store Promotion
J	Multi Payment Acceptance
M	Main Frame
Р	POS-port
Q	Reserved for Third-Party Developers
R	POS Port
S	POS-partner
Т	Counter Payment Acceptance
W	Web Payment Acceptance
X	EMV Mode Contact and/or Contactless terminal (Must be used on all EMV mode chip card transactions)
Z	Suppress PS2000/Merit response fields

5.75 Digital entity identifier

A unique identifier that is assigned by Visa at the time of authorization that identifies transactions that originate from Visa Checkout.

5.76 Electro magnetic signature

This field contains the digital value of the magnetic signature from the card if it is captured when the card is swiped. This data will not be returned in the response, and it must not be stored after authorization. This must not be submitted in contactless or chip transactions. (see <u>Table 4.72</u> for record format and version number).

5.77 Electronic commerce security level indicator

The Electronic Commerce Security Level Indicator, for MasterCard Credit transactions only, contains the electronic commerce indicators representing the security level and cardholder authentication associated with the transaction. This is currently a response-only value and will be present, when requested, for all MasterCard SecureCode electronic commerce transactions.

MasterCard's processing rules allow merchants to gain a liability shift and interchange benefit if they submit their electronic commerce transactions for cardholder authentication. Effective November 8, 2016, if merchants do not pass the appropriate authentication detail in UCAF Authentication Data (G3v019), demonstrating they actually authenticated or attempted to authenticate the cardholder, MasterCard will downgrade the Authorization Request/0100 and send it to the Issuer. The correct values will be returned in the response message in G3v072, whether downgraded or not. It is critical to have the proper indicators during settlement

MasterCard will also reject clearing/settlement records if the indicators do not match the authorization indicators. This field will contain the correct values needed for settlement, whether the transaction was downgraded or not.

This field is not supported for MasterCard Full Financial/0200 (Debit) transactions.

Table 5.33 Valid values for electronic commerce security level indicator

Position	Title	Description	
1 and 2	Security Protocol / Cardholder Authentication	Valid val 21 -	Channel encryption; cardholder certificate not used (preferred value for MasterCard SecureCode)
		22 -	MasterPass-generated transaction
		24 -	Digital Secure Remote Payment transaction
		91 -	No security protocol; cardholder certificate not used

Position	Title	Description	on
3	UCAF Collection Indicator	Valid values:	
		0 -	UCAF data is not supported by the merchant or the merchant has chosen not to send the indicator
		1-	UCAF data collection is supported by the merchant and UCAF data was present and contained an attempted AAV for MasterCard SecureCode
		2 -	UCAF data collection is supported by the merchant and UCAF data was present and contained a fully authenticated AAV
		5 -	Issuer Risk-Based Decisioning
		6 -	Merchant Risk-Based Decisioning
		7 -	Partial shipment, incremental, or recurring payment. Liability will depend on the original UCAF values provided and matching with the initial transaction.

Valid Values for the three positions as they relate to DSRP:

- The value 242 indicates an Issuer-Authenticated DSRP transactions
- The value 246 indicates a Non-Issuer Authenticated DSRP transactions
- The value 247 must continue to be used for incremental authorization, partial shipments, and recurring payments regardless of the Security Level Indicator value used in the initial transaction.

Valid Values for the three positions as they relate to SecureCode:

- The value 212 indicates the UCAF data contained a correctly formatted SecureCode AAV
- The value 217 indicates incremental authorizations, partial shipments, or recurring payments

NOTE Any tokenized SecureCode transactions with an ECI value other than 212 will not be supported and will be rejected. The values must be submitted with the original DSRP Cryptogram and appropriate DSRP ECI.

5.78 Electronic voucher serial number

This 1-15 character alphanumeric field contains the Electronic Voucher Serial Number provided by the Electronic Benefits Transfer (EBT) voice authorization system because of a POS System or EBT Network unavailable condition (see <u>Table 4.23</u> for record format and version number).

NOTE:	Cash benefits transactions do not use the Electronic Voucher Serial	
	Number, FCS ID, and Voucher Approval Code fields; food stamp	
	transactions must use the FCS ID; and Electronic voucher transactions	
	require Electronic Voucher Serial Number, FCS ID, and Voucher Approval	
	Code fields.	

5.79 EMS additional information

This field indicates if the merchant's acquirer is enrolled for EMS and if the service was provided.

Table 5.34 EMS additional information

Value	Description
N	Not qualified for EMS scoring
(blank)	No value present

5.80 EMS results code

This field indicates the results of the EMS scoring performed by MasterCard.

Table 5.35 EMS results code

Value	Description
С	EMS scoring was successful
I	Invalid request, transaction does not qualify for EMS scoring due to:
	Transaction is card presnt, or
	Card was issued outside of valid issuing region
U	Scoring was not successfully performed

5.81 EMS risk score

This field contains the risk score provided by the MaterCard EMS service. Score values range from 001 through 999 where 001 indicates the least likely fraudulent transaction and 999 indicates the most likely fraudulent transaction.

5.82 EMS risk score reason code

This field indicates the key factors that influenced the EMS score. Only the reason code value is provided. (Participating merchants may contact their acquirer for a list of reason codes.)

5.83 EMS scoring response indicator

This field indicates whether EMS scored the transaction. If the transaction was not scored by EMS, no response is received.

Table 5.36 EMS scoring response indicator

Value	Description
90	EMS scoring was performed

5.84 EMS service request indicator

This field indicates whether the merchant is requesting the transaction be scored by MasterCard.

Table 5.37 EMS service request indicator

Value	Description	
0	No action required	
1	Transaction to be scored	

5.85 Encryption Transmission Block (ETB)

This is the Encryption Transmission Block (ETB) TSYS uses to decrypt encrypted data. See 4.1.1 for record format and version number. The ETB must be Base-64 encoded before transmission to TSYS Acquiring Solutions.

5.86 Encryption type

This describes the type of encryption used in the transaction. The following provides a listing of encryption types accepted.

Table 5.38 Encryption type

Value	Description
V	Voltage TEP2 Encryption

5.87 Existing debt indicator

A value of nine indicates a payment on an existing debt transaction (see <u>Table 4.31</u> for record format and version number).

5.88 Extended AVS data

5.88.1 Cardholder billing postal code

This is the nine-character, cardholder billing postal code (see Table 4.54 for record format and version number). For addresses in the USA, this is a numeric 5+4 ZIP; or a five-digit ZIP, left justified and character space filled to nine characters.

For international addresses, the postal code may vary in length and contain alpha characters. International postal codes must be padded with character spaces to nine characters. Alpha characters must be upper case.

5.88.2 Cardholder billing address

This is the first 20 characters of the cardholder billing address (including the unit, apartment, flat, or suite number), left justified and character space filled, if necessary. Alpha characters must be upper case (see Table 4.54 for record format and version number). Leading or trailing zeros and/or virgules (/) are not permitted. Other special characters are allowed.

5.88.3 Cardholder billing city

Reserved for future use (see <u>Table 4.54</u> for record format and version number).

5.88.4 Cardholder billing state/province

Reserved for future use (see <u>Table 4.54</u> for record format and version number).

5.88.5 Cardholder billing country code

Reserved for future use (see <u>Table 4.54</u> for record format and version number).

5.88.6 Cardholder billing first name

This is the 35-character, cardholder first name (as it appears on the card), left justified and character space filled, if necessary (see Table 4.54 for record format and version number) For American Express transactions, this field should be a maximum of 15 characters.

Alpha characters must be upper case. Leading or trailing zeros and/or virgules (/) are not permitted. If a cardholder first and last name are not entered, this subfield must be character space filled. Other special characters are allowed

5.88.7 Cardholder billing last name

This is the 35-character, cardholder last name (as it appears on the card), left justified and character space filled, if necessary (see Table 4.54 for record format and version number). For American Express transactions, this field should be a maximum of 30 characters.

Alpha characters must be upper case. Leading or trailing zeros and/or virgules (/) are not permitted. Other special characters are allowed. If a cardholder first and last name are not entered, this subfield must be character space filled.

5.88.8 Cardholder billing phone number

This is the 10-digit, cardholder phone number (see <u>Table 4.54</u> for record format and version number).

Format is XXXXXXXXXX

5.88.9 Ship-to postal code

This is the nine-character, ship-to postal code (see <u>Table 4.54</u> for record format and version number). For addresses in the USA, this is a numeric 5+4 ZIP; or a five-digit ZIP, left justified and character space filled to nine characters.

For international addresses, the postal code may vary in length and contain alpha characters. International postal codes must be padded with character spaces to nine characters. Alpha characters must be upper case.

5.88.10 Ship-to address

This is the 50-character, ship-to address, left justified and character space filled, if necessary (see <u>Table 4.54</u> for record format and version number). Alpha characters must be upper case. Leading or trailing zeros and/or virgules (/) are not permitted.

5.88.11 Ship-to city

Reserved for future use (see <u>Table 4.54</u> for record format and version number).

5.88.12 Ship-to state/province

Reserved for future use (see <u>Table 4.54</u> for record format and version number).

5.88.13 Ship-to country code

This is the three-digit, numeric, ship-to country code (see <u>Table 4.54</u> for record format and version number).

5.88.14 Ship-to first name

This is the first 15 characters of the ship-to first name, left justified and character space filled, if necessary (see <u>Table 4.54</u> for record format and version number).

Alpha characters must be upper case. Leading or trailing zeros and/or virgules (/) are not permitted. If a ship-to first name is not entered, this subfield must be character space filled.

5.88.15 Ship-to last name

This is the first 30 characters of the ship-to last name, left justified and character space filled, if necessary (see <u>Table 4.54</u> for record format and version number).

Alpha characters must be upper case. Leading or trailing zeros and/or virgules (/) are not permitted. If a ship-to last name is not entered, this subfield must be character space filled.

5.88.16 Ship-to phone number

This is the 10-digit, ship-to phone number (see <u>Table 4.54</u> for record format and version number). Leading or trailing zeros and/or virgules (/) are not permitted. Format is XXXXXXXXXX

5.89 FCS ID

This zero or seven-character field contains the Food and Consumer Identifier (see Table 4.23 for record format and version number). The FCS ID identifies the Merchant as being certified and approved to accept Food Stamps.

NOTE:

Cash benefits transactions do not use the Electronic Voucher Serial Number, FCS ID, and Voucher Approval Code fields; food stamp transactions must use the FCS ID. Electronic voucher transactions require Electronic Voucher Serial Number, FCS ID, and Voucher Approval Code fields.

5.90 Field separator

TSYS Acquiring Solutions utilizes a field separator to define the presence of a variable-length field. A field separator <FS> is defined as a Hex 1C or Decimal 28-character.

5.91 Filler (spaces)

This field is defined as containing spaces.

5.92 Filler (zeros)

This field is defined as containing zeros.

5.93 Gateway ID

The Gateway ID provides a unique value to identify a Gateway or Aggregator. This number is provided by TSYS Acquiring Solutions during the certification process.

5.94 Gen2 terminal authentication

5.94.1 Authentication code

An alphanumeric code provided to the POS user for input when authenticating a POS device during the POS device authentication process.

5.94.2 Authentication factor 1

Authentication factor 1 (AF1) is the merchant's 5 digit US zip code or 6 character postal code.

5.94.3 Authentication factor 2

Authentication factor 2 is the Merchant Phone Number. Left zero fill to 7 digits if the phone number is shorter than 7 digits. If phone number is longer than 10 digits, send the right-most 10 digits. North American phone numbers should include the area code.

5.94.4 GenKey

A randomly generated string of alphanumeric characters that will be returned in the POS device authentication response and associated with the terminal hierarchy. The Genkey must be stored in the POS device, must be sent with every request to the TSYS Acquiring Solutions host after authentication, and will be checked against the terminal hierarchy.

5.95 Group III version number

This field must contain a valid three-character numeric version number whenever an optional addendum Group III is appended to an authorization request message. This field is required to properly identify the addendum data group being provided.

Table 5.39 Group III version number

Value	Description		
000	No Addendum Data		
001	Commercial Card Request Indicator		
002 - 006	Reserved		
007	Card Verification Value (CVV2/CVC2)		
008	Fleet Fueling Card		
009	Set e-Commerce		
010	CCPS		
011	Chip Condition Code		
012	Commercial Card - IGOTS Large Ticket Transaction		
013	Electronic Benefits Transfer (EBT)		
014	MOTO/e-Commerce Indicator		
015	Service Development Indicator		
017	3-D Secure E-Commerce		
018	Existing Debt Indicator		
019	Universal Cardholder Authentication Field (MasterCard Only)		
020	Developer Information		
021	Merchant Verification Value		
022	Additional Amounts Participant		
023	MasterCard or Discover Member Defined Data		
024	Merchant Advice Code (MAC)		

Value	Description		
025	Transaction Fee Amount		
026	Product Participation Group		
027	POS Data Code		
028	AMEX ITD/APD Data		
029	Extended AVS data		
030	AMEX merchant name/location data		
031	Agent Identification Service		
032	Currency Conversion Data		
033	Reversal Request Code		
034	Card Product Code		
035	Promotion Code		
036	Payment Transaction Identifier		
037	Real Time Substantiation		
038	Electro Magnetic Signature		
039	Cardholder Verification Method		
040	Visa ISA Charge Indicator		
041	NTLA UPC/SKU Data		
042	Visa Contactless		
043	Network ID		
044	Automated Teller Machine (ATM)		
045	Integrated Chip Card EMV		
046	Card Type Response group		
047	TSYS Internal Use Only		
048	Amex Cardholder Verification Results		
049	Gen 2 Terminal Authentication		
050	Association Timestamp		
051	MasterCard EMS Fraud Scoring		
052	Voltage Encryption Transmission Block (ETB)		
053	Token Request/Response		
054	Transit Program		
055	Integrated Chip Card EMV TLV		
056	Message Reason Code		
057	Additional Response Data (Discover /PayPal Only)		
058	Alternate Account ID 1		
059	MasterCard PayPass Mapping Service		

Value	Description	
060	PayPass Mobile	
200	Gift Card	

5.96 Group separator

TSYS Acquiring Solutions utilizes a Group Separator to designate the presence of multiple addendum data groups in authorization request and response messages and is defined as a Hex 1D or Decimal 29-character.

5.97 Healthcare, MasterCard or Discover member defined data

5.97.1 MasterCard and Discover free form

This field consists of zero through 99 alphanumeric characters and space (see <u>Table 4.42</u>, <u>Table 4.43</u> for record formats and version numbers). This data can be sent in the request and different data may be received in the response.

5.97.2 Healthcare

If this field contains health care data, it may contain up to 199 alphanumeric characters. For the purpose of Healthcare Eligibility inquiry transactions, MasterCard has defined the following subelements and subfields:

- Subelement 1: Healthcare Service 1
- Subelement 2: Healthcare Service 2
- Subelement 3: Healthcare Service 3
- Subelement 4: Healthcare Service 4
- Subelement 5: Healthcare Service 5

Each subelement may contain up to four subfields:

- Subfield 1: Healthcare Provider ID
- Subfield 2: Service Type Code
- Subfield 3: Payer ID/Carrier ID
- Subfield 4: Approval or Reject Reason Code

Each subelement will represent a single prescribed healthcare service or treatment. Endpoints may request eligibility information for up to five healthcare services within a single Authorization Request/0100 message.

- For each subelement, endpoints must provide subfields 1 and 2 only in the Authorization Request/0100 message.
- For each subelement provided by the endpoint in the endpoint's Authorization Request/0100 message, issuers will respond with subfields 3 and 4 in the Authorization Request Response/0110 message. Subfields 1 and 2 are optional in the issuer Authorization Request Response/0110 message.

5.98 Host message identifier

This eight-character field contains a unique host message identifier assigned by the authorizing system and returned in debit card response messages (see Table 4.7, Table 4.8 for record formats and version numbers). This field is reserved for future use and will most likely contain spaces. This value must be recorded and submitted in the debit confirmation record.

5.99 Identification number

This 17-character field contains either a Driver ID, Vehicle ID, or other Identification number to be used in the authorization of a Visa Fleet Fueling Card. Visa cards issued in the range 448460 - 448699 contain instructions for customized prompts in the last position of the magnetic stripe (before the end sentinel character) (see Table 4.15 for record format and version number). Prompting should occur as defined in Table 5.40.

Table 5.40 Fleet fueling prompting criteria

Value	Description		
1	ID Number and Odometer Reading		
2	Vehicle Number		
3	Driver ID and Odometer Reading		
4	Odometer Reading		
5	No Prompting		
6	ID Number		
0, 7-9	Reserved		

5.100 IFD serial number

This fixed length, 8 character (EBCDIC) field is carried in EMV transactions and contains a unique identification number of the terminal assigned by the manufacturer. It is used to track devices regardless of their location.

5.101 Independent Sales Organization (ISO) identifier

This 11-digit field, assigned by MasterCard, is assigned during registration via MasterCard Connect for a Service Provider designated as an "Independent Sales Organization". This value must be provided on all MasterCard transactions where the merchant has a relationship with an ISO, and should be right justified with leading zeroes. For example, if the Identifier is '123456', the value would be '00000123456'.

5.102 Industry code

This one-character field is used to identify the industry type of the merchant submitting the authorization request. <u>Table 5.41</u> provides a summary of the currently defined codes. This field should be configured as a parameter (see <u>Table 4.5</u> for record format and version number).

Table 5.41 Industry code

Code	Industry Type		
0	Unknown or Unsure		
A	Auto Rental		
В	Bank/Financial Institution		
D	Direct Marketing		
F	Food/Restaurant		
G	Grocery Store/Supermarket		
Н	Hotel		
L	Limited Amount Terminal		
О	Oil Company/Automated Fueling System		
P	Passenger Transport		
R	Retail		

5.103 Interface device serial number

This optional eight-character numeric field contains the serial number of the peripheral interface device that reads chip cards or allows for entry of a customer PIN (see <u>Table 4.19</u> for record format and version number).

5.104 ISA charge indicator

The Visa International Service Assessment (ISA) charge is payable by the U.S. acquirers. The new Acquirer ISA applies to single currency and multicurrency transactions that are submitted by acquirers in the U.S. region. The merchant must be in the U.S. and the issuer country is non US. (See <u>Table 4.76</u> for record format and version number).

С	Single currency ISA assessed
S	Multicurrency ISA assessed

5.105 Issuer application data

This field content is defined by the issuer and contains the entire IAD to be transmitted in online messages for use by the issuer in online processing. This field can be up to 64 characters in length and is required if it is present on the chip card.

5.106 Issuer discretionary data

This field is passed to the terminal from the integrated chip card in the Issuer Discretionary Data (see Table 4.19 for record format and version number). This field can be zero or 16characters in length. This field is supplied as ASCII-coded binary data. Refer to 6.8 for information concerning the conversion of binary to ASCII data.

5.107 Issuer script

This field is used by an issuer to send dynamic changes to the chip card without reissuing the card (see Table 4.20 for record format and version number). This field is variable length with a maximum allowable length of 512 bytes. This field is supplied as ASCII-coded binary data. Refer to <u>6.8</u> for information concerning the conversion of binary to ASCII data.

5.108 Issuer script results

This variable length, 1 byte binary + up to 40 hexadecimal digit, maximum 21 byte field is carried in EMV transactions. During online processing, the issuer has the option to send commands to the card in the authorization response. These commands instruct the card to update the card parameters. The card records the success or failure of the updates in the Issuer Script Results field. The field contains a length indicator followed by 5 bytes to indicate the results of script processing.

5.109 Key Set Identifier (KSID)

The Key Set Identifier (KSID) is a unique six-character bank identification code used in processing direct debit transactions. The KSID is supplied to the POS device by a properly injected and certified TSYS Acquiring Solutions PIN Pad.

5.110 Lane ID

This field uniquely identifies a terminal at the card acceptor location of acquiring institutions or merchant POS systems. The Terminal ID may be printed on all POS transactions where the terminal is capable of generating customer receipts. This is an eight digit numeric field.

NOTE This field is currently used for MasterCard but can be sent for any card brand.

5.111 Language indicator

This field contains a two-character numeric language indicator (see Table 4.5 for record format and version number). This value designates the language to be used in formatting the authorization response text message. This field could changed from transaction to transaction. <u>Table 5.42</u> provides a summary of the languages currently supported.

Table 5.42 Language indicator

Indicator	Language	
00	English	
01	Spanish	
02	Portuguese	
03	Reserved for Irish	
04	Reserved for French	
05	Reserved for German	
06	Reserved for Italian	
07	Reserved for Dutch	

5.112 Local transaction date

This six-character numeric field contains a Local Transaction Date (MMDDYY) calculated by the authorization center using the time zone differential (see <u>Table 4.6</u> for record format and version number). This field can be used as the transaction date printed on the receipt and as input for the data capture settlement record. For authorization Reversals and AFD Completion Advices, use the Transaction Date of the original purchase.

5.113 Local transaction time

This six-character numeric field contains the Local Transaction Time returned by the authorizing system (HHMMSS). For direct debit, the transaction time should be printed on the receipt. The Settlement Time should be recorded and submitted in the transaction data capture settlement record. For authorization Reversals and AFD Completion Advices, use the Transaction Time of the original purchase (see <u>Table 4.6</u> for record format and version number).

5.114 Mapped Card Expiration Date

This conditional four-character field identifies the expiration date of the mapped card and comes in the Group 3, version 59 response message. The characters represent MMYY (two-digit month and two-digit year). When used, this field will likely be combined with the Alternate Account ID 1 value in Group3, version 58.

5.115 Mapped PAN indicator

This conditional one-character field maps to MasterCard Account Number Indicator and indicates the type of mapping account used and comes in the Group 3, version 59 response message for the MasterCard mapping service. When used, this field will be combined with the Alternate Account ID 1 value in Group 3, version 58.

5.116 Mapped product code

This conditional three-character field represents the product code for the mapped account used and comes in the Group 3, version 59 response message for the MasterCard PayPass mapping service. When used, this field will likely be combined with the Alternate Account ID 1 field found in Group 3, Version 58.

5.117 Market specific data identifier

The following sub-fields contain market specific data for hotel and auto rental transactions (see <u>Table 4.5</u> for record format and version number). The market specific data sub-fields need not be supplied for incremental authorization or authorization reversal transactions. The format of this four-character field is: "PIDD."

NOTE:	If the Market specific data identifier sub-field (Section 5.117.2) is a space do not use this field.
	do not use this neid.

Table 5.43 provides a summary of the four-character market specific data field.

Table 5.43 Market specific data identifier

Sub-field	Byte	Format	Sub-field name	Selection
Р	1	A/N	Prestigious Indicator	<u>5.117.1</u>
I	2	A/N	Market Specific Data Identifier	5.117.2
DD	3-4	NUM	Stay or Rental Duration	5.117.3

5.117.1 Prestigious property indicator

This indicator is used by participants in Visa's Prestigious Lodging Program. <u>Table 5.44</u> provides a summary of the Prestigious Property Indicators. A transaction amount of \$1 should be entered in the request if the merchant wishes the transaction to participate in the Visa Prestigious Property Program.

When this sub-field is supplied in an incremental transaction, it must contain the value submitted in the original authorization transaction.

Auto rental and non-participating properties should put a "space" in this sub-field.

Table 5.44 Prestigious property indicator

Value	Description
<space></space>	Auto Rental or Non-Participating Property

Value	Description
D	Prestigious Property with \$500 Limit
В	Prestigious Property with \$1000 Limit
S	Prestigious Property with \$1500 Limit

5.117.2 Market specific data identifier

The market specific data identifier is used to indicate which industry data is being submitted. Table 5.45 provides a summary of the currently defined Market Specific Data Identifiers.

When this sub-field is supplied in an incremental transaction, it should use the same value that was requested in the original authorization transaction.

Table 5.45 Market specific data identifier

Value	Description
A	Auto Rental
В	Bill Payment Transaction
Е	eCommerce Transaction Aggregation
Н	Hotel/Lodging
J	B2B Invoice Payments
N	Failed Market-Specific Data
M	Healthcare
Т	Transit
<space></space>	Other Industries

5.117.3 Stay or rental duration

The value of this sub-field is the anticipated length of the hotel stay or auto rental.

When the market specific data is supplied in an incremental transaction, this sub-field represents the number of additional days for the hotel stay or auto rental.

This sub-field must be in the range of "01" to "99" for all original authorization requests. For incremental authorization requests, the range for this sub-field is "01" to "99." For No Show Authorizations, this sub-field should be set to "01." For Advanced Lodging Deposits and Auto Rental PrePays, this sub-field should reflect the number of days being paid for in the advanced payment.

For Bill Payment, Healthcare, and Transit Transactions this sub-field should be set to "00."

5.118 MasterCard wallet identifier

This is a MasterCard value that is generated by the MasterPass online platform. This value is passed to the merchant at the time of consumer checkout for ecommerce transactions, and is included in the authorization request transaction.

5.119 Merchant ABA number

This field is zero or nine-character numeric in length and identifies the merchant to a direct debit switch (see Table 4.7 for record format and version number). This field must be supplied for all direct debit request transactions except for the Interlink Debit Cancel (Transaction Code 95). This number is provided by the signing member or processor.

This field should be configured as a parameter.

5.120 Merchant advice code

This field contains the Merchant Advice Code returned by MasterCard MIP (see Table 4.45 for record format and version number).

- 01 =New account information
- 02 = Try again later
- 03 = Do not try again for recurring payment transaction
- 21 = Recurring payment cancellation

5.121 Merchant category code

This four-character numeric field contains a number assigned by the signing member or processor to identify a merchant industry classification (see Table 4.5 for record format and version number). This value is similar to the Standard Industry Code (SIC). This field should be configured as a parameter.

5.122 Merchant certificate serial number

This one to 32-character field contains a value assigned to a SET merchant certificate issued by the Acquirer's certificate authority (see Table 4.17 for record format and version number).

5.123 Merchant city

This field contains the city of the Merchant. It is required for Amex transactions that originate from an Aggregator, Payment Service Provider, or Facilitator. The value should be spelled out completely and truncated, if necessary, rather than abbreviated.

5.124 Merchant country code

This field contains the Country Code of the Merchant. It is required for Amex transactions that originate from an Aggregator, Payment Service Provider, or Facilitator. The value must correspond to the Region Code used.

5.125 Merchant region code

This field contains the Region/State/Province Code of the Merchant. It is required for Amex transactions that originate from an Aggregator, Payment Service Provider, or Facilitator. The value must correspond to the Country Code used.

5.126 Merchant DBA name

This is the first 30 characters of the merchant's business name that appears on the storefront and/or customer receipts. It is commonly referred to as the DBA (Doing Business As) name. If applicable, spaces should be included and the field should be truncated, if necessary, rather than abbreviated. This field is required for transactions that arrive via an Aggregator/Payment Service Provider. It should not be included for Oil Co. CATs.

5.127 Merchant email

This field contains the first 20 characters of the e-mail address of the seller/vendor referenced in Merchant ID Code (5.128). The value should be left-justified. It should be truncated, if necessary, rather than abbreviated. This field is required for Aggregator Merchants. It should not be included for Oil Co. CATs.

5.128 Merchant ID code

This field contains the Seller ID, a maximum 20-byte, numeric code that uniquely identifies an American Express Payment Service Provider's (Aggregator's) seller or vendor code. It can also represent the merchant-assigned, station location code for Oil Company Customer Activated Terminal's (CAT). This field is required for Aggregator Merchants and for Oil Co. CATs.

5.129 Merchant number

This 12-character numeric field contains a unique number, assigned by the signing merchant's bank or processor (see <u>Table 4.5</u> for record format and version number). This field is used to identify the merchant within the TSYS Acquiring Solutions system. This number should be right-justified and zero-filled. This field should be configured as a parameter.

5.130 Merchant phone

This field contains the Phone Number of the seller/vendor referenced in Merchant ID Code (5.128). The value should include the area code. This field is required for Aggregator Merchants. It should not be included for Oil Co. CATs.

5.131 Merchant postal code

This field contains the postal code of the seller/vendor referenced in Merchant ID Code (5.128). The value should be uppercase, left justified, and character-space filled. This field is required for Aggregator Merchants and Oil Co. CATs.

5.132 Merchant settlement agent number

This zero or four-character field identifies the merchant settling agent (see Table 4.7 for record format and version number). This number is provided by the signing member or processor.

This field should be configured as a parameter.

5.133 Merchant street address

This field contains the first 20 characters of the street address of the seller/vendor referenced in Merchant ID Code (5.128). The value should be left-justified and include spaces if applicable. The value should be truncated, if necessary, rather than abbreviated. This field is required for Aggregator Merchants. It should not be included for Oil Co. CATs

5.134 Merchant Verification Value (MVV)

This is a 10-character fixed-length field (see <u>Table 4.37</u> for record format and version number). Merchant Verification Value (MVV) is used by Visa to determine a merchant's eligibility to participate in a Select Merchant Fee (SMF) program. The characters in the field can only be zero through nine and A-F.

The MVV is required in all debit financial request messages and their reversals; and optional in credit card authorization requests and reversals.

5.135 Message reason code

This field is required in all 0400 chip card reversal messages and in all 0420 reversal messages. It is not used in responses. If no message reason code is required, then this field and its group three version must be omitted.

This field is required in AFD advice messages. Use Reason Code 2104, Acquirer Authorization Advice.

Visa Merchant Initiated Transactions

The Message Reason Code field will be used to identify Merchant Initiated Transactions [MIT] for Visa. A MIT is any transaction that relates to the previous consumer-initiated transaction but is conducted without the consumer being present, and without any cardholder validation performed.

MIT	Definition
Incremental	This is a continuation of the consumer purchase where the original approved amount can be modified to reflect the scope of the consumer and merchant agreement. Incremental authorization transactions are common in the hotel and car rental industries.
Resubmission	This is an event that occurs when the original purchase occurred, but the merchant was not able to obtain authorization at the time the goods or services were provided. A resubmission is only valid when the original authorization was declined for insufficient funds. There are a limited number of merchant categories approved to utilize this type of MIT, and resubmission is only valid for a limited number of days after the consumer purchase.
Delayed Charges	A delayed charge is an account charge associated with an agreement between a cardholder and a merchant for services rendered. Delayed charges are typical in hotel and car rental industries.
Reauthorization	A reauthorization is a purchase made after the original purchase and can reflect a number of specific conditions. A split shipment is the most common type of reauthorization. A split shipment occurs when the goods are not available for shipment at the time of the consumer's purchase. A separate authorization is conducted to ensure that the consumer funds are available when the goods become available to ship. A reauthorization is also used when an estimated amount is presented and the merchant wants to authorize the final amount.
No Show	A no show transaction is where the merchant is able to charge for service that the consumer entered into an agreement to purchase, but did not meet the terms of the agreement, typically used by hotels for a single night's stay.

Message Re	eason Code	
Category	Code Definition	
Reversals	2501	Transaction voided by customer
	2502	Transaction has not completed (Request timed out or POS device malfunctioned)
	2503	No confirmation from the point of sale
	2504	POS partial reversal
	2516	Premature chip card removal (after online request sent – before response received)
	2517	Chip declined transaction after online issuer approved

Message Reason Code				
Adjustments	2001	Transaction voided by customer		
	2002	Wrong Amount		
	2003	Partial Return		
	2007	Debit or Credit adjustment - no previous transaction		
		NOTE This message reason is valid only through Networks 2 (Visa) and 3 (Interlink)		
	2009	Debit or Credit adjustment - for previous transaction		
		NOTE Adjustments with this reason code must also include Field 90 - Original transaction information		
	2104	Acquirer Authorization Advice		
	2140	Account Funding transaction - debit or credit adjustment		
EBT	5201	EBT voucher		
Visa	3900	Incremental Authorization		
Merchant Initiated Transactions	3901	Resubmission		
	3902	Delayed Charges		
	3903	Reauthorization		
	3904	No Show		

5.136 Message delimiter

The message delimiter separates the record format and application type designators from the body of the message (see <u>Table 4.5</u>, <u>Table 4.4</u>, <u>Table 4.6</u> for record formats and version numbers). The message delimiter is defined as a "." (Hex 2E or Decimal 46-character).

5.137 MOTO/e-Commerce indicator

This field contains a one-character transaction indicator identifying the type of transaction being authorized (see <u>Table 4.25</u> for record format and version number).

Table 5.46 MOTO/e-Commerce indicator

Indicator	Description
SPACE	Not a Mail/Telephone Order Transaction
1	One Time Occurrence of a Mail/Telephone Order Transaction
2	Recurring Mail/Telephone Order Transaction
3	Installment Payment of a Mail/Telephone Order Transaction
4	Unknown Classification

Indicator	Description
5	This is used for fully authenticated CAVV Verification transactions for Visa 3-D Secure, MasterCard Online Checkout Service, Amex SafeKey and Discover Protect Buy.
6	This is used for non-authenticated security transactions at a 3-D Secure-capable merchant. The merchant attempted to authenticate the cardholder using 3-D Secure.
7	Non-authenticated Security Transaction, such as a Channel - Encrypted Transaction (for example, SSL, DES, or RSA)
8	Non-secure e-Commerce Transaction
A	In-App Authentication (Discover and MasterCard usage only)
R	First recurring SecureCode Phone Order transaction
Т	Single nonrecurring SecureCode Phone Order transaction

NOTE: Do not use this field in conjunction with Transaction Code 58.

5.138 Network ID

Contains a code that specifies the network to be used for transmission of the message and determines the program rules that apply to the transaction. See <u>Table 5.47</u> for a full listing of Network IDs.

Table 5.47 Network identification and sharing group codes

Network ID ISO F63.1	Shared group code ISO F63.12	Network
0003	G	Interlink
0004	В	Plus ATM
0006	О	Cirrus ATM
0007	J	MasterCard ATM
0008	N	STAR
0009	S	PULSE
0010	W	STAR SE
0011	Z	STAR NE
0012	Q	STAR W
0013	U	AFFN
0015	M	STAR
0016	8	Maestro

0017	L	Pulse
0018	Y	NYCE
0019	Н	PULSE
0020	E	Accel
0023	P	NETS
0024	С	CU24
0027	F	NYCE
0028	7	ITS Shazam
0029	K	EBT
0030	Т	EBT ATM
0040	A	Amex ATM
0041	D	Discover ATM
0042	1	AFFN ATM
0777	5	Visa Check Card II
1001	!	ATH/Evertec

5.139 Network identification code

This one-character field contains the identification code of the network on which the transaction was authorized. The Network ID must be printed on the receipt. Reference <u>Table 5.47</u> for a listing of available Network ID codes.

It is important to note that a value of "V" or "5" in this field returned in the response indicates that the transaction was processed as a credit card purchase transaction (Transaction Code 54) even though it was originally submitted as a debit transaction. When these values ("V" or "5") are returned, the transaction must be processed and settled as a credit card (non-debit) transaction. Please note that this does not apply to "R3" type transactions.

5.140 NTIA UPC/SKU data

This variable length field is used for UPC/SKU data used in conjunction National Telecommunications and Information Administration (NTIA) issued coupons. These coupons are used for the purchase of a digital-to-analog converter box.

5.141 Operator/clerk ID

The operator/clerk ID identifies the operator initiating this transaction and should be a unique value defined for each employee within the client (see <u>Table 4.107</u> for record format and version number). This field is only required if the merchant participates in a program where operator level reporting is performed.

5.142 Original purchase data

This field is either zero, four, six, eight, 10, or 12-characters in length (see <u>Table 4.7</u> for record format and version number). It is broadly defined to accommodate other date-related requirements in the future. The length of the field determines how the host interprets it. At this time, it is used in the Interlink Merchandise Credit transaction where the date/time of the original purchase transaction is required. It is also used in the reversal of an Interlink Merchandise Credit Transaction. Currently, the only valid value for EBT Transactions is zero. <u>Table 5.48</u> provides a summary of the formats and uses of the various lengths defined within this field.

Table 5.48 Original purchase data

Length	Date and time format
0	Not in use (or EBT)
4	MMDD
6	YYMMDD (Visa International Standard)
8	MMDDhhmm (Interlink Return Transaction)
10	YYMMDDhhmm
12	YYMMDDhhmmss

5.143 PAN reference identifier

The PAN Reference Identifier [PRI] is a value assigned by Discover at the time of token provisioning and is associated with a specific mobile wallet.

5.144 Partial authorization indicator

This field contains a group of single character flags (see <u>Table 4.48</u> for record format and version number). This value indicates the merchant's level of participation in partial authorization transactions.

Table 5.49 Partial authorization indicator

Code	Description	
Visa, MasterCard, Discover, PayPal and American Express (merchandise only)		
A	Partial Approval Supported	

Code	Description	
Discover only (mercha	Discover only (merchandise & cash over)	
A	Merchandise can be partially approved Cash Over can be partially approved	
В	Merchandise can be partially approved Cash Over must be fully approved or declined	
С	Merchandise must be fully approved or declined Cash Over can be partially approved (only if merchandise fully approved)	
D	Merchandise must be fully approved or declined Cash Over must be fully approved (if merchandise is approved) or declined	
Visa only (estimated amount)		
Е	Estimated Amount	
F	Estimated Amount (partial approval supported)	

5.145 Payment account reference

The Payment Account Reference [PAR] is a value assigned by the issuer and is associated directly with the cardholder's account. The PAR is considered a non-financial value that cannot be used to initiate a financial transaction.

This value is valid for Visa and Discover.

5.146 Payment facilitator identifier

This 11-digit value, assigned by MasterCard, is assigned during registration via MasterCard Connect for the Service Provider designated as a "Payment Facilitator". This value must be present on all MasterCard transactions that originate from a Payment Facilitator, and should be right justified with leading zeroes. For example, if the Identifier is '123456', the value would be '00000123456'.

5.147 Payment facilitator name*sub-merchant name

This 25-character field is a concatenation of two fields separated by an asterisk (*). The Payment Facilitator Name is three characters in length and is followed by the asterisk. The remainder of the field consists of the Sub-Merchant name. This field is required on all MasterCard transactions that originate from a Payment Facilitator.

5.148 Payment service provider name

This is the name of the Payment Service Provider, Aggregator, or Facilitator. This field is required for Amex transactions that originate from an Aggregator, Payment Service Provider, or Facilitator.

It must contain no spaces. For example, if the aggregator name is 'Monster PSP', the value sent should be 'Monster PSP'.

5.149 Payment transaction type identifier

This MasterCard field indicates the type of Funding/Payment Transaction taking place. It can be used for the following message types.

- Auth Request/0100
- Response/0110
- Auth Advice/0120
- Reversal Request/0400
- Response/0410
- Reversal Advice/0420

It should be set only for transactions with Transaction Code (5.201) set to '5G'. Please refer to G3v036 (4.2.32).

Table 5.50 Payment transaction identifier

Code	Description
C01	Person to person
C02	MasterCard Rebate
C03	rePower Load Value
C04	Gaming Repay
C05	Other payment transaction
C06	Payment Credit Card Balance with Cash or Check

5.150 PayPass mobile device type

This two-character, MasterCard only field is required for PayPass (contactless) transactions. It identifies the type of PayPass device used by the cardholder to initiate the transaction. This is applicable in Authorization Request/0100, Authorization Advice/0120, and Reversal Request/0400 MTIs.

This field is also known as Form Factor. Where practicable, the new codes with values 20-33 must be used.

Table 5.51 Mobile device type

Device type value	Device description	Example
00	Card (default)	

Device type value	Device description	Example
01	Mobile Network Operator (MNO) controlled removable secure element (SIM or UICC) personalized for use with a mobile phone or smartphone	
02	Key Fob	
03	Watch using a contactless chip or a fixed (non-removable) secure element not controlled by the MNO	
04	Mobile Tag	
05	Wristband	
06	Mobile Phone Case or Sleeve	
07	Mobile Phone or Smartphone with a fixed (non-removable) secure element controlled by the MNO (such as CDMA)	
08	Removable secure element not controlled by the MNO, for example, memory card personalized for use with a mobile phone or smartphone	
09	Mobile Phone or Smartphone with a fixed (non-removable) secure element not controlled by the MNO	
10	MNO controlled removable secure element (SIM or UICC) personalized for use with a tablet or e-book	
11	Tablet or E-Book with a fixed (non-removable) secure element controlled by the MNO	
12	Removable secure element not controlled by the MNO (such as memory card personalized for use with a tablet or e-book)	
13	Tablet or E-Book with fixed (non-removable) secure element not controlled by the MNO	
14	Mobile Phone or Smartphone with a payment application running in a host processor	

Device type value	Device description	Example
15	Tablet or E-Book with a payment application running in a host processor	
16	Mobile Phone or Smartphone with a payment application running in the TEE of a host processor	
17	Tablet or E-Book with a payment application running in the TEE of a host processor	
18	Watch with a payment application running in the TEE of a host processor	
19	Watch with a payment application running in a host processor	
20	Card	
21	Phone	Mobile phone
22	Tablet/e-reader	Tablet computer or e-reader
23	Watch/Wristband	Watch or wristband, including a fitness band, smart strap, disposabl band, watch add-on, and security/ID band
24	Sticker	
25	PC	PC or laptop
26	Device Peripheral	Mobile phone case or sleeve
27	Tag	Key fob or mobile tag
28	Jewelry	Ring, bracelet, necklace, and cuff links
29	Fashion Accessory	Handbag, bag charm, and glasses
30	Garment	Dress
31	Domestic Appliance	Refrigerator, washing machine
32	Vehicle	Vehicle, including vehicle attached devices
33	Media/Gaming Device	Media or gaming device, including set top box, media player, and television
34-99	These values reserved for future for may occur within form factors and	rm factors. Any value in this range transaction data without prior notice

5.151 PayPass mobile domain server

This MasterCard only field indicates the Service Manager or program initiator of the MasterCard Mobile Remote Payments Program. It is applicable in Auth Request/0100 and Auth Advice/0120 MTIs.

Table 5.52 PayPass mobile domain server

Domain value	Domain server
0	No domain
1	Issuer domain
2	Acquirer domain

5.152 POS data code

The POS data code is a fixed string of 12 characters, representing Subfields 1 through 12, that indicate the condition, or state, of the POS device at the time of the transaction (see <u>Table 4.50</u> for record format and version number).

The information in the POS data code takes precedence over the values in the Account Data Source (ADSC) and the Cardholder Identification Code (CID) fields. Information in the POS data code should accurately indicate the condition of the POS device at the time of transaction. Even though the POS data code has precedence over the ADSC and CID fields, the ADSC and CID fields still need to be populated to match the condition of the transaction as closely as possible.

Group 3 Version 27 is mandatory for all transactions.

The fields come in two types, static or dynamic.

Static Fields:

Static fields have the same value for every transaction. They do not typically change once the software and hardware are considered together in the environment in which they are deployed.

Example:

In Subfield 1 (Terminal Card Data Input Capability), say a terminal, its software, and the environment in which it is deployed have the value set at 2 - Magnetic stripe reader capability. For most cardholders, the magnetic stripe will work just fine. However, for a scenario where a cardholder's magnetic stripe is damaged and it will not swipe properly, the merchant has to enter it manually. This does not change the capability of the terminal, software, and environment.

Dynamic Values:

Dynamic fields can change based on the transaction scenario.

Example:

In Subfield 5 (Cardholder Present Data), for one transaction, the cardholder may be present (value 0), and for the next, the transaction is initiated by phone (value 3).

The definitions of subfields 1 through 12 and the allowed values are provided in the following subparagraphs.

5.152.1 Subfield 1 - Terminal card data input capability

This subfield indicates the highest-level capability of the device and its software used to originate this transaction. The value is static depending on the card data input capabilities in the environment in which it is deployed.

Table 5.53 Subfield 1: Terminal data - card data input capability

Value	Description
0	Unspecified, data not available (INVALID-Internal Use Only)
1	Manual; no terminal; Voice auth/ARU only
2	Magnetic stripe reader capability only
3	Bar code/ Payment code
4	Optical character reader (OCR) capability, [MC]
5	Integrated circuit card (ICC) capability
6	Key entry only capability
A	PAN auto-entry via contactless magnetic stripe
В	Magnetic stripe reader and key entry capability
С	Magnetic stripe reader, ICC, and key entry capability
D	Magnetic stripe reader and ICC capability
E	ICC and key entry capability
Н	ICC Reader and Contactless Capability; Magnetic stripe & manual entry implied
M	PAN auto-entry via contactless chip
V	Other capability, [MC]
X	Reserved for private use

5.152.2 Subfield 2 - Terminal cardholder authentication capability

This subfield indicates the highest-level capability of the device and its software used to verify the Cardholder's identity at this terminal. The value is static depending on the terminal cardholder-authentication capabilities in the environment in which it is deployed.

Table 5.54 Subfield 2: terminal data - cardholder authentication capability

Value	Description
0	No electronic authentication capability
1	PIN entry capability
2	Electronic signature analysis capability
5	Electronic authentication capability is inoperative
6	Other
9	Unspecified, data not available (INVALID - Internal Use Only)

5.152.3 Subfield 3 - Terminal card-capture capability

This subfield indicates if the terminal is capable of pulling the card into the device while the transaction is taking place. The value is static depending on the terminal card-capture capabilities in the environment in which it is deployed.

Table 5.55 Subfield 3: terminal data - card capture capability

Value	Description
0	No capture capability
1	Card capture capability
9	Unspecified, data not available (INVALID - Internal Use Only)

5.152.4 Subfield 4 - Terminal operating environment

This subfield indicates the terminal's location and indicates whether it is attended by the card acceptor. The value is static depending on the terminal's operating capabilities in the environment in which it is deployed

Table 5.56 Subfield 4: terminal operating environment

Value	Description
0	No terminal used; Voice auth/ARU only
1	On card acceptor premises; attended terminal
2	On card acceptor premises; unattended terminal
3	Off card acceptor premises; attended
4	Off card acceptor premises; unattended
5	On cardholder premises; unattended
6	Off cardholder premises; unattended
9	Unspecified, data not available (INVALID - Internal Use Only)

Value	Description
M	Off card acceptor premises; merchant mobile POS environment, including mPOS [V, MC]
Р	On card acceptor premises; merchant mobile POS environment, including mPOS [V, MC]
Q	Off card acceptor premises; cardholder mobile environment, including home PC, mobile phone, PDA [V, MC]
R	On card acceptor premises; cardholder mobile environment, including home PC, mobile phone, PDA [V, MC]
S	Electronic delivery of product, [AX]
Т	Physical delivery of product, [AX]

5.152.5 Subfield 5 - Cardholder present data

This subfield indicates if the Cardholder is present at the point of service and if not, the reason why. The value is dynamic based on the Cardholder presence at the time of the transaction.

Table 5.57 Subfield 5: cardholder present data

Value	Description
0	Cardholder present
1	Cardholder not present; unspecified reason
2	Cardholder not present; mail transaction
3	Cardholder not present; phone transaction
4	Cardholder not present; standing (recurring) transaction such as a subscription
5	Cardholder not present; electronic commerce
8	Cardholder not present; recurrent billing such as a loan or installment payment
A	Reauthorization for full amount (original transaction was token-based with a valid cryptogram; Discover only)
Р	Partial shipment purchase transaction (original transaction was token-based with valid cryptogram)
R	Recurring purchase transaction (original transaction was token-based with valid cryptogram)

5.152.6 Subfield 6 - Card present data

This subfield indicates if the card is present at the point of service. The value is dynamic based on the card presence at the time of the transaction.

Table 5.58 Subfield 6: card present data

Value	Description
0	Card not present
1	Card present
W	Transponder, [AX]
X	Contactless Transactions, including AMEX Expresspay
Z	Digital Wallet [AX]

5.152.7 Subfield 7 - Card data input mode

This subfield indicates the method used to capture information from the card. The value is dynamic based on the input mode at the time of the transaction.

Table 5.59 Subfield 7: card data - input mode

Value	Description
0	Unspecified, data not available (INVALID - Internal Use Only)
1	Manual input; no terminal; Voice auth/ARU only
2	Magnetic stripe reader input
3	Bar code/Payment code
6	Key entered input
A	PAN auto-entry via contactless magnetic stripe
В	Magnetic stripe reader input; track data captured and passed unaltered
С	Online Chip
F	Offline Chip
M	PAN auto-entry via contactless Chip Card (EMV Mode)
N	Track data read and sent unaltered, chip capable terminal, chip data could not be read
Р	Empty candidate list fallback
R	PAN Entry via electronic commerce, including remote chip
S	Electronic commerce, no security, channel encrypted, or SET without cardholder certificate, [MC]
V	Manually entered with keyed CID, [AX, JCB Canada]
W	Swiped transaction with keyed CID, [AX, JCB Canada]
X	Reserved for private use

Value	Description
Y	Reserved for private use
Z	Contactless Interface Change Identifies when a Chip Card Transaction with a dual- interface card switches from a contactless to a contact chip card transaction. [Discover]

5.152.8 Subfield 8 - Cardholder authentication method

This subfield indicates the method used for verifying the Cardholder's identity. The value is dynamic based on the Cardholder Authentication Method at the time of the transaction.

Table 5.60 Subfield 8: cardholder authentication method

Value	Description
0	Not authenticated
1	PIN
2	Electronic signature analysis
5	Manual signature verification
6	Other manual verification (such as a driver's license number)
9	Unspecified, data not available (INVALID - Internal Use Only)
S	Other systematic verification
Т	Electronic ticket environment, [AX]

5.152.9 Subfield 9 - Cardholder authentication entity

This subfield indicates the component or person who verified Cardholder Identity reported in Cardholder Authentication (Subfield 8). The value is dynamic based on the Entity that performed the Authentication at the time of the transaction.

Table 5.61 Subfield 9: cardholder authentication entity

Value	Description
0	Not authenticated
1	ICC – Offline PIN
2	Card acceptance device (CAD)
3	Authorizing agent – Online PIN
4	Merchant/card acceptor - signature
5	Other
9	Unspecified, data not available (INVALID - Internal Use Only)

5.152.10 Subfield 10 - Card data output capability

This subfield indicates the ability of the terminal and software to update or change the card. The value is static depending on the terminal and software capabilities in the environment in which it is deployed.

Table 5.62 Subfield 10: card data output capability

Value	Description
0	Unspecified, data not available (INVALID - Internal Use Only)
1	None
2	Magnetic stripe write
3	ICC
S	Other

5.152.11 Subfield 11 - Terminal data output capability

This subfield indicates the ability of the terminal and/or software to print and/or display messages. This value is static depending on the terminal and/or software capabilities in the environment in which it is deployed.

Table 5.63 Subfield 11: terminal data output capability

Value	Description
0	Unspecified, data not available (INVALID - Internal Use Only)
1	None
2	Printing capability only
3	Display capability only
4	Printing and display capability

5.152.12 Subfield 12 - PIN capture capability

This subfield indicates the length of the PIN that the terminal is capable of capturing. The value is static depending on the capability of the terminal in the environment in which it is deployed.

Table 5.64 Subfield 12: PIN capture capability

Value	Description
0	No PIN capture capability
1	Unspecified, data not available (INVALID - Internal Use Only)
2	Reserved
3	Reserved
4	PIN capture capability four characters maximum
5	PIN capture capability five characters maximum
6	PIN capture capability six characters maximum
7	PIN capture capability seven characters maximum
8	PIN capture capability eight characters maximum
9	PIN capture capability nine characters maximum
A	PIN capture capability 10 characters maximum
В	PIN capture capability 11 characters maximum
С	PIN capture capability 12 characters maximum

5.153 POS environment indicator

The POS Environment Indicator provides additional information about the transaction.

Format	Description	Definition
С	Card on File	This value identifies transactions where the cardholder's payment credentials are being placed on file for the first time
I	Installment Payment	This value indicates the transaction is an installment payment
R	Recurring Payment	This value indicates that the cardholder and merchant have agreed to periodic billing for goods and services, such as utility bill or magazine subscription

5.154 Promotional code

The Discover/PayPal Network may establish promotional relationships with merchants. This field indicates the promotion to be used by the merchant for rewarding the cardholder at the point of service. The value sent in the authorization request will be echoed back in the authorization response.

5.155 Real time substantiation indicator

This one character MasterCard only field is used to indicate whether the merchant terminal verified the purchased items against an Inventory Information Approval System (IIAS). Please refer to G3v037 (4.2.33). This field is used for Authorization Request/0100 and Authorization Advice/0120 transactions only.

Table 5.65 Real time substantiation

Value	Description
	Merchant terminal did not verify the purchased items against an IIAS
1	Merchant terminal verified the purchased items against an IIAS
2	Merchant claims exemption from IIAS based on the 90 percent rule

5.156 Receiving Institution Identification (RIID)

This field is used to contain a secondary network routing identifier (see Table 4.5 for record format and version number). When performing a Check Authorization transaction, this field is always populated with the corresponding six-character numeric value of the desired service provider. This field can also be utilized for Private Label (Private Issue Card) transactions particularly when the issuers account range conflicts with one assigned to a major issuer. The field should be configured as a parameter.

Table 5.66 RIID values

Services Currently Supported	RIID
ICS/CBS/NPC	810000
TeleCheck	861400
Certegy/Equifax East	894400
Certegy/Equifax West	894300
Scan	813500
Fifth Third Gift Card	444500

5.157 Record format

This one-character field identifies the message format with the TSYS Acquiring Solutions system (see Table 4.5, Table 4.4, Table 4.6 for record formats and version numbers). The second-generation authorization format is specified by placing one of the defined values in the record format field. Table 5.67 provides a brief summary of the current formats.

Table 5.67 Record format

Format	Description
D	Credit Card Authorization request messages (Groups I and III)
W	Encrypted Credit Card Authorization request messages (Group I and III)
Y	Tokenized Credit Card Authorization request messages (Groups I and III)
E	Credit Card authorization response messages (Groups I and III)
Т	Debit/Electronic Benefits Transfer - EBT request messages (Groups I, II, and III)
X	Encrypted Debit/Electronic Benefits Transfer - EBT request messages (Groups I, II, and III)
Z	Tokenized Debit/Electronic Benefits Transfer - EBT request non-confirm messages (Groups I, II, and III)
U	Debit/Electronic Benefits Transfer - EBT response messages (Groups I, II, and III)
V	Debit/Electronic Benefits Transfer - EBT confirmation message

5.158 Registered user indicator

This field indicates if the cardholder is a registered user on a merchant's website (Discover transactions only).

Table 5.68 Registered user indicator

Code	Description
Y	The cardholder is a registered user with an online profile and login credentials
N	The cardholder is not a registered user, and may shop only as a guest

5.159 Registered user last profile date change

This field defines the date when the cardholder last voluntarily changed his or her registered profile (Discover transactions only). This field is used with Registered User Indicator (5.158). Format: DDMMYYYY.

Please refer to Fraud Enhanced Data G3v068 (4.2.64)

5.160 Reimbursement attribute

This one-character field contains the reimbursement attribute assigned by the signing member or processor (see Table 4.7 for record format and version number). This field designates the Reimbursement Fee applicable to a transaction. The following values are valid for debit and EBT.

Table 5.69 Reimbursement attribute

Value	Description
0	EBT, Non-debit, or Non-INTERLINK Debit
W	Pre-existing Qualified INTERLINK Super Market Merchant
X	Pre-existing Qualified INTERLINK Retail Merchant
Y	Qualified INTERLINK Super Market Merchant
Z	Standard INTERLINK Retail Merchant

5.161 Requested Authorization Characteristics Indicator (ACI)

This one-character field contains the Requested ACI used to identify an authorization request as potentially qualifying for CPS (Custom Payment Services) and MasterCard Merit programs (see Table 4.5 for record format and version number). If a merchant chooses not to participate in CPS, the Requested ACI value should default to an "N." Table 5.70 and Table 5.71 provide a summary of the codes currently supported by both Visa and MasterCard.

Table 5.70 Requested Authorization Characteristics Indicator (ACI)

Value	Description
N	Device is not CPS capable
Y	Device is CPS capable
Р	CPS Capable - Manually Keyed Hotel/Lodging transaction or Preferred Customer Authorization Request for Hotel, Auto Rental, and Passenger Transport Industries.
I	CPS Capable - Incremental Authorization Request
R	Recurring Payment. No AVS required
NOTE:	This field is not valid for Visa Account Funding Transactions.

Table 5.71 MasterCard requested authorization characteristics indicator

Value	Description
N	Device is not Merit capable
Y	Device is Merit capable
Р	MasterCard TIPS (Travel Industries Premiere Service)

Value	Description
R	MasterCard SIIP (Recurring payment)

5.162 Response code

This field contains a two-character response code indicating the status of the authorization request (see <u>Table 4.6</u> for record format and version number). The POS system must evaluate the response code and *NOT* the response text to determine the nature of a response message. <u>Table 5.72</u> provides a listing of currently defined response codes. **Do NOT** interpret all nonapproved response codes as "DECLINED."

AFD Completion Advice messages must include the Response Code returned in the AFD preauthorization response message.

Table 5.72 Response code

Response code	Authorization response message	Response definition
00	Approval	Approved and completed
01	Call	Refer to issuer
02	Call	Refer to issuer-Special condition
03	Term ID Error	Invalid Merchant ID
04	Hold-call or Pick Up Card	Pick up card (no fraud)
05	Decline	Do not honor
06	Error XXXX	General error
06*	(Check Service Custom Text)	Error response text from check service
07	Hold-call or Pick Up Card	Pick up card, special condition (fraud account)
08	Approval	Honor MasterCard with ID
10	Partial Approval	Partial approval for the authorized amount returned in Group III version 022
11	Approval	VIP approval
12	Invalid Trans	Invalid transaction
13	Amount Error	Invalid amount
14	Card No. Error	Invalid card number
15	No Such Issuer	No such issuer
19	RE Enter	Re-enter transaction
21	No Action Taken	Unable to back out transaction
28	No Reply	File is temporarily unavailable
34	Transaction Cancelled	MasterCard use only, Transaction Cancelled; Fraud Concern (Used in reversal requests only)
39	No Credit Acct	No credit account
41	Hold-call or Pick Up Card	Lost card, pick up (fraud account)
43	Hold-call or Pick Up Card	Stolen card, pick up (fraud account)
51	Decline	Insufficient funds

52	No Check Account	No checking account
53	No Save Account	No savings account
54	Expired Card	Expired card
55	Wrong PIN	Incorrect PIN
57	Serv not allowed	Transaction not permitted-Card
58	Serv not allowed	Transaction not permitted-Card Transaction not permitted-Terminal
59	Serv not allowed	
Response	Authorization response	Transaction not permitted-Merchant Response definition
code	message	Response definition
61	Declined	Exceeds withdrawal limit
62	Declined	Invalid service code, restricted
63	Sec Violation	Security violation
65	Declined	Activity limit exceeded
75	PIN Exceeded	PIN tried exceeded
76	Unsolicated Reversal	Unable to locate, no match
77	No Action Taken	Inconsistant data, reversed, or repeat
78	No Account	No account
79	Already Reversed	Already reversed at switch
80	No Impact	No Financial impact (used in reversal
	1	responses to declined originals).
81	Encryption Error	Cryptographic error
82	Incorrect CVV	CVV data is not correct
83	Cannot Verify PIN	Cannot verify PIN
85	Card OK	No reason to decline
86	Cannot Verify PIN	Cannot verify PIN
91	No Reply	Issuer or switch is unavailable
92	Invalid Routing	Destination not found
93	Decline	Violation, cannot complete
94	Duplicate Trans	Unable to locate, no match
96	System Error	System malfunction
A1	Activated	POS device authentication successful
A2	Not Activated	POS device authentication not successful
A3	Deactivated	POS device deactivation successful
B1	SRCHG Not Allowed	Surcharge amount not permitted on debit cards or EBT food stamps
B2	SRCHG Not Allowed	Surcharge amount not supported by debit network issuer
CV	Failure CV	Card Type Verification Error
D3	3D - Secure Cryptogram Failure	Transaction failure due to missing or invalid 3D-Secure cryptogram
E1	ENCR NOT CONFIGD	
E2	TERM NOT AUTHENT	
E3	DECRYPT FAILURE	Data could not be decrypted
EA		7.1
EB		
96 A1 A2 A3 B1 B2 CV D3 E1 E2 E3 EA	System Error Activated Not Activated Deactivated SRCHG Not Allowed SRCHG Not Allowed Failure CV 3D - Secure Cryptogram Failure ENCR NOT CONFIGD TERM NOT AUTHENT	System malfunction POS device authentication successful POS device authentication not successful POS device deactivation successful Surcharge amount not permitted on debit cards or EBT food stamps Surcharge amount not supported by debit network issuer Card Type Verification Error Transaction failure due to missing or invalid 3D-Secure cryptogram Encryption is not configured Terminal is not authenticated

EC	CID Format Error	Verification error
HV	Failure HV	Hierarchy Verification Error
K0	TOKEN RESPONSE	Token request was processed
K1	TOKEN NOT CONFIG	Tokenization is not configured
K2	TERM NOT AUTHENT	Terminal is not authenticated
K3	TOKEN FAILURE	Data could not be de-tokenized
N3	Cashback Not Avl	Cash back service not available
N4	Decline	Exceeds issuer withdrawal limit
N7	CCV2 Mismatch	CVV2 Value supplied is invalid
R0	Stop recurring	Customer requested stop of specific
		recurring payment

Response	Authorization response	Response definition
code	message	
R1	Stop recurring	Customer requested stop of all recurring payments from specific merchant
T0	Approval	First check is OK and has been converted
T1	Cannot Convert	Check is OK but cannot be converted
		This is a declined transaction
T2	Invalid ABA	Invalid ABA number, not an ACH
		participant
T3	Amount Error	Amount greater than the limit
T4	Unpaid Items	Unpaid items, failed negative file check
T5	Duplicate Number	Duplicate check number
T6	MICR Error	MICR error
T7	Too Many Checks	Too many checks (over merchant or bank limit)
V1	Failure VM	Daily threshold exceeded

5.163 Retrieval reference number

This field contains a 12-character value reflecting the transaction Retrieval Reference Number returned by the authorizing system (see <u>Table 4.5</u> for record format and version number). The POS system should record the retrieval reference number received in the original authorization response. The Retrieval Reference Number from the original response is required when submitting AFD Completion Advice messages and when submitting incremental authorizations, or authorization reversal requests that must be settled for direct debit transactions.

5.164 Returned Authorization Characteristics Indicator (ACI)

This one-character field contains the Returned Authorization Characteristics Indicator (ACI). This value provides information concerning the transactions' CPS qualification status. It is not recommended that the POS system attempt to interpret the meaning of this value. Instead, the

POS system should extract whatever value is returned in this field and submit it in the data capture settlement record. The POS system should not interpret any relationship between this field and the presence of data in either the Transaction Identifier or Validation Code fields.

Table 5.73 Returned Authorization Characteristics Indicator (ACI)

Value	Description
A	CPS qualified
В	Tokenized e-commerce with mobile device
Е	CPS qualified and Card Acceptor Data was supplied in the authorization request
F	CPS qualified for Visa Account Funding Transactions
I	CPS qualified incremental authorization request
J	Card Not Present, Recurring Bill Payment
С	CPS qualified for a self-service automated fuel dispense
К	CPS qualified and included an address verification request in the authorization request (Unable to read magnetic stripe)
M	Meets national payment service requirements with no address verification: Direct Marketing
N	Not CPS qualified
Р	CPS qualified and accepted for Preferred Customer qualification or 3D Secure validation failure for T&E transaction
R	Recurring or Installment Payments
S	CPS attempted for Preferred e-Commerce (3D Secure)
Т	Transaction cannot participate in CPS
U	CPS qualified for Preferred e-Commerce (3D Secure)
V	CPS qualified and included an address verification request in the authorization request
W	CPS qualified for Basic e-Commerce (Non-3D Secure)
<space></space>	If "Y" sent and transaction not qualified (VAS downgrade)

5.165 Reversal and cancel data I

The following sub-fields are required when performing an ATM or Debit Non-Confirm Authorization request, or when performing an Authorization Reversal request, a Debit Reversal/Cancel request, or a AFD Completion Advice message (see <u>Table 4.5</u> for record format and version number). For all other transaction types, this field should be submitted without data.

5.165.1 Approval code

This field contains the six-character fixed approval code returned in the original authorization response record. This is the authorization code for the completed AFD transaction, or the transaction to be either partially or completely reversed. For a debit non-confirm purchase or ATM authorization transactions, the approval code will be space filled.

5.165.2 Local transaction date

This field contains a six-character numeric value reflecting the local transaction date (in MMDDYY format) returned in the original authorization response record for the AFD sale or the transaction to be canceled or reversed. For a debit non-confirm purchase or ATM authorization transactions, this field will contain the local transaction date.

5.165.3 Local transaction time

This field contains the local transaction time of the original authorization request for the AFD sale or the transaction to be either partially or fully reversed. The Local Transaction Time must be submitted in HHMMSS format. For a debit non-confirm purchase or ATM authorization transactions, this field will contain the local transaction time.

5.165.4 Response code

Response code 34, must be sent in an authorization reversal request to indicate when a merchant has decided not to complete an approved MasterCard Card Not Present transaction because of high fraud-risk.

5.165.5 Retrieval reference number

In AFD Completion Advice messages and reversal transactions, this field must contain the 12-character numeric Retrieval Reference Number returned in the original authorization response. For debit non-confirm purchase or ATM authorization transactions, this field contains two parts. The first four characters are a yddd date (Julian date) format. The last eight characters are a numeric transaction identification number.

5.166 Reversal and cancel data II

The following sub-fields are required when requesting any of the following Authorization Transaction Codes: A3, A4, B1, B2, B3, B4, C1, C3, C4 and 5C (see <u>Table 4.7</u> for record format and version number).

This field does not contain data for any other transaction types.

5.166.1 System trace audit number

This field must contain the six-character numeric System Trace Audit Number returned in the confirmation data field of the debit authorization response record for the transaction to be canceled or reversed. For a debit non-confirm purchase transaction, this number uniquely identifies a cardholder transaction. The trace number remains unchanged for all messages throughout the life cycle of the transaction. For example, the same trace number is used in an authorization request and response and in a subsequent reversal request and response message.

5.166.2 Network identification code

When returned in a debit authorization response message, this value designates the debit network through which the request was processed.

When performing an Authorization Reversal, this field must contain the one-character Network Identification Code returned in the confirmation data field of the authorization response record for the item to be canceled or reversed. For a debit non-confirm or ATM authorization transactions, the network identification code field will be space-filled.

5.167 Reversal and incremental transaction ID

When performing either an Incremental Authorization or Authorization Reversal request, this 15-character field must contain the Transaction Identifier returned in the original authorization response record (see <u>Table 4.5</u> for record format and version number). For all other transaction types, this field should be submitted without data.

Discover Merchant Initiated Transactions [MIT]

A Discover MIT is any transaction that relates to a previous consumer-initiated transaction that originated from a digital wallet. This field will contain the original transaction identifier for the following types of merchant initiated transactions: partial shipment, recurring, and reauthorization of full amount.

5.168 Reversal request/adjustment response code

This code can be present in the reversal request for MasterCard transactions to signify the reason for the reversal.

Value	Description
17	Valid for MasterCard Non-Debit Reversal Requests Only. This value is used in a reversal message to indicate that the cardholder cancelled the transaction after an authorization request was sent.
32	Partial reversal
34	Card not present Suspect Fraud

For Visa, MasterCard, PayPal and Discover AFD completion advice messages, this field will contain the Response Code value of the original AFD preauthorization message response.

5.169 Secondary amount

This is a variable length field from zero to 12-character numeric in length (see <u>Table 4.5</u> for record format and version number). This field contains a secondary transaction amount related to the transaction type and industry indicated. The transaction amount is to be presented with an implied decimal point. For example, \$.01 could be represented as 1, 01, or 001. The

allowable number of significant digits, as well as the positioning of any implied decimal point, are dictated by the Currency Code designated. In the United States, the allowable number of significant characters is seven with an implied decimal point.

In industries where cash back is permitted on purchase transactions, this field could contain a cash back amount.

For Authorization Reversal transactions, this field must contain the final settlement amount for a partial reversal, and is not used for a full reversal.

5.170 Secondary PIN block

This Visa-usage field contains a new PIN to replace an existing PIN. It is encrypted and formatted as a block of 16 hexadecimal digits. (A new PIN is chosen to replace the current PIN when the cardholder does not remember the current PIN, or the current PIN is compromised, or just wants a new PIN.)

5.171 Service development indicator

The Service Development Indicator indicates merchant participation in a Visa Service Development program (see <u>Table 4.27</u> for record format and version number).

Table 5.74 Service development indicator

Value	Description
5	Transponder Indicator - transactions from participating merchants use radio frequency transponder to exchange information with the terminal (supports both Visa and American Express transponder programs).
6	Relationship Participant Indicator - indicates merchant's participation in the Visa Relationship Manager Service.
7	Deferred Billing Indicator - notifies issuer that transaction being submitted bills the cardholder for merchandise that was received within the past 90 days.

5.172 Settlement amount

When performing an Authorization Reversal transaction, this field must contain a one to 12-character numeric transaction amount to be settled. The Settlement Amount must be less than the Total Authorized Amount (Transaction Amount). The Settlement amount is submitted in the Secondary Amount field (Section 5.169).

5.173 Settlement conversion rate

This is the factor used in the conversion from transaction to settlement amount. The transaction amount is multiplied by the value in this field to determine the settlement amount. The leftmost digit must be in the range 0-7 and denotes the number of positions that the decimal point will be moved from the right. For example, a value of "69972522," the conversion rate is 9.972522.

5.174 Settlement currency code

This field defines the currency of the settlement amount and the settlement fee amount. This field is provided whenever the settlement amount is present.

5.175 Settlement date

This four-character numeric field contains the transaction settlement date returned by the TSYS Acquiring Solutions authorization system and is submitted in MMDD format (see <u>Table 4.8</u> for record format and version number).

5.176 Sharing group

This one to 30-character field contains a listing of direct debit and EBT networks that a POS device can access (see Table 4.7 for record format and version number). This field is provided by the signing member or processor. The values must correspond to one of the Visa assigned direct debit network types. This data is part of the TSYS Acquiring Solutions direct debit data. This field should be configured as a parameter. Table 5.47 shows the currently supported Sharing Groups.

It is important to note that a value of "V" or "5" in this field returned in the response indicates that the transaction was processed as a credit card purchase transaction (Transaction Code 54) even though it was originally submitted as a debit transaction. When these values ("V" or "5") are returned, the transaction must be processed and settled as a credit card (non-debit) transaction. Please note that this does not apply to "R3" type transactions.

5.177 Spend qualified indicator

This value is optionally sent by Visa in an authorization response message. The merchant's interchange rate may be determined by the value of the Spend Qualified Indicator. Valid values are shown below in Table 4.70. (see <u>Table 4.117</u> for record format and version number).

Table 5.75 Spend qualified indicator valid values

Code	Description
В	Base spend assessment threshold has been met.
N	Spend qualification threshold has not been met.
Q	Spend qualification threshold has been met.

5.178 Store number

This four-character numeric field contains a number assigned by the signing member, processor, or merchant to identify a specific merchant store within the TSYS Acquiring Solutions' system (see <u>Table 4.5</u>, <u>Table 4.6</u> for record formats and version numbers). This field must be right-justified and zero-filled.

This field should be configured as a parameter.

5.179 Sub-merchant city

This 13-character field indicates the city of the Sub-Merchant location (not the acquirer location). This field is required on all MasterCard transactions that originate from a Payment Facilitator.

5.180 Sub-merchant country code

This 3-digit field indicates the country of the Sub-Merchant location (not the acquirer location) using ISO-specified numeric codes. This field is required on all MasterCard transactions that originate from a Payment Facilitator.

5.181 Sub-merchant identifier

This 15-digit field, assigned by the Payment Facilitator or the Acquirer, must be provided on all MasterCard transactions and should be left justified with trailing spaces. For example, if the Identifier is '123456', the value would be '123456' '. This field is required on all MasterCard transactions that originate from a Payment Facilitator.

5.182 Sub-merchant postal code

This 9-character field indicates the geographic/postal code of the Sub-Merchant location (not the acquirer's location). This field is required on all MasterCard transactions that originate from a Payment Facilitator.

5.183 Sub-merchant state/province code

This 2-character field indicates the state or province code of the Sub-Merchant location (not the acquirer's location). This field is required on all MasterCard transactions that originate from a Payment Facilitator. If the Sub-Merchant is non-U.S. and non-Canadian, this field should be '00'.

5.184 System trace audit number

This six-character numeric field contains a unique host message identifier assigned by the authorizing system and returned in debit card response messages (see <u>Table 4.4</u>, <u>Table 4.8</u> for record formats and version numbers). This field must be recorded and submitted in the debit confirmation record.

5.185 Terminal capability profile

This six-character field contains a code indicating the card data being supplied and security capabilities of the terminal (see Table 4.19 for record format and version number). This field is supplied as ASCII-coded binary data. Refer to 6.8 for information concerning the conversion of binary to ASCII data.

5.186 Terminal country code

This fixed length, 3-character, 2 byte numeric field is carried in EMV transactions and identifies the country where the merchant terminal is located. A leading zero is required to pad the first unused half-byte of this field. The zero is filler and is not part of the code.

5.187 Terminal number

This four-character numeric field contains a number assigned by the signing member, processor, or merchant to identify a unique terminal within a merchant location (see Table 4.5, Table 4.6 for record formats and version numbers). Because the terminal number submitted in the authorization request is echoed back to the terminal in the authorization response, this field can additionally be used in controller-based environments to assist in the matching and routing of authorization request and response messages at the point of concentration.

This field should be configured as a parameter.

5.188 Terminal transaction date

This fixed length, 6-character numeric field is carried in EMV transactions and contains the local date at the terminal on which the transaction was authorized. This field is used in the calculation of the cryptogram. The format is YYMMDD, where:

YY = 00-99MM = 01-12DD = 01-31

5.189 Terminal transaction time

This fixed length, 6 character numeric field is carried in EMV transactions and contains the local time at the terminal on which the transaction was authorized. This field is used in the calculation of the cryptogram. The format is hhmmss, where:

hh = 00-23mm = 00-59ss = 00-59

5.190 Terminal type

This field is optionally carried in MasterCard EMV transactions and defines the type of transaction for which authorization is being requested.

5.191 Terminal verification results

This 10-character field contains a code providing information concerning chip card verification results (see <u>Table 4.19</u> for record format and version number). This field is supplied as ASCII-coded binary data. Refer to <u>6.8</u> for information concerning the conversion of binary to ASCII data.

5.192 Time zone differential

This field contains a three-character numeric code used to calculate the local time within the TSYS Acquiring Solutions authorization system (see <u>Table 4.5</u> for record format and version number). The differential is calculated by the signing member or processor, providing the standard local time zone differential from Greenwich Mean Time (GMT). The first character numeric specifies the direction of the differential and offset increment as well as whether daylight savings is observed, and the last two-character numeric specify the magnitude of the differential. For example, Virginia would be 705, California would be 708, and Arizona would be 107 (daylight savings not observed). <u>Table 5.76</u> provides a brief summary of the Time Zone Differential codes.

This field should be configured as a parameter.

Table 5.76 Time zone differential

Byte	Length	Format	Contents		
1	1	NUM	Direction		
			0 - Positive offset, in hours, ahead of GMT		
			2 - Positive offset, in 15 minute increments, ahead of GMT		
			4 - Positive offset, in 15 minute increments, ahead of GMT, in cities participating in daylight savings		
			6 - Positive offset, in hours, ahead of GMT, in cities participating in daylight savings		
			1 - Negative offset, in hours, behind GMT		
			3 - Negative offset, in 15 minute increments, behind GMT		
			5 - Negative offset, in 15 minute increments, behind GMT, in cities participating in daylight savings		
			7 - Negative offset, in hours, behind GMT, in cities participating in daylight savings		
			8-9 - Reserved		
2-3	2	NUM	Time Zone		

Byte	Length	Format	Contents	
			For Byte #1 - 0, 1, 6, and 7	
			0 <= Time Zone Region <= 12	
			For Byte #1 - 2 to 5	
			0 <= Time Zone Region <= 48	

5.193 TLV data

This variable length field is composed solely of hexadecimal characters (0-9, A-F or a-f). Each pair of characters represents one byte of information. The string of characters represents a series of TLV data that represent the information passed between the card and the terminal. Each datum has a one or two byte (two or four characters) tag, a one byte (two characters) length, and a one or more byte (two or more characters) value or payload. The length byte always represents the number of bytes following the length byte in the TLV datum.

5.194 Token

This is the Token received from the TSYS Host when a request for token (G3v053) is sent. The token is formatted as a card number, with the last 4 digits preserved. Other characters in the number will be letters rather than numbers.

The token will be sent without card verification with Transaction Code 5T (5.201).

With other Transaction Codes, the token is sent and the usual transaction request is also processed (5.162).

5.195 Token Cryptogram Block A

This 40-character field contains a cryptogram generated from chip data via a mobile application process to enable cardholder validation on American Express 'in-app' purchases with an account token. This field format is a 40-character ASCII representation of Hex to transmit the 20-byte binary cryptogram. Refer to <u>6.8</u> for instructions on performing the necessary binary to ASCII data conversion.

The cryptogram will be submitted to American Express as received by TSYS. The sub-fields in Token Cryptogram Block A comprise several EMV defined data tags submitted in a fixed format. The ordering of the data elements in the cryptogram are included below for reference only. Block B is optionally present when Block A is used.

Token Data Block A (20 bytes Binary)								
Amount, Other	6 bytes	Binary, Numeric	Secondary amount associated with a chip transaction. Currently expected to be zeros. EMV Tag = "9F03"					

Token Data Blo	ock A (20 l	oytes Binary)	
Application Cryptogram	8 bytes	Binary, Hexadecimal	The application Cryptogram associated with a chip transaction. EMV Tag = "9F26"
Application Interchange Profile (AIP)	2 bytes	Binary, Hexadecimal	Application Interchange Profile associated with a chip transaction. EMV Tag = "82"
Application Transaction Counter (ATC)	2 bytes	Binary, Hexadecimal	Application transaction counter associated with a chip transaction EMV Tag = "9F36"
Cryptogram Information Data	1 bytes	Binary, Hexadecimal	Indicates the type of cryptogram and the actions to be performed. EMV Tag = "9F27"
Filler	1 bytes	Binary, Numeric	Constant literal = "00"

5.196 Token Cryptogram Block B

This 40-character field contains a cryptogram generated from chip data via a mobile application process to enable cardholder validation on American Express 'in-app' purchases with an account token. This field format is a 40-character ASCII representation of Hex to transmit the 20-byte binary cryptogram. Refer to <u>6.8</u> for instructions on performing the necessary binary to ASCII data conversion. Block A must be present when Block B is present in the request.

The cryptogram will be submitted to American Express as received by TSYS. The sub-fields in Token Cryptogram Block B comprise several EMV defined data tags submitted in a fixed format. The ordering of the data elements in the cryptogram are included below for reference only.

Token Data Blo	Token Data Block B (20 bytes Binary)				
Issuer	7 bytes	Binary,	The IAD 7 bytes, in order, include:		
Application Data (IAD)		Hexadecimal	Length Field data		
			1 IAD data length		
			1 derivation key index		
			1 Cryptogram version number		
			4 Card Verification results (CVR)		
			EMV Tag = "9F10"		

Token Data Blo	ock B (20 b	ytes Binary)	
Application PAN Sequence Number	1 bytes	Binary, Numeric	Application PAN Sequence Number associated with a chip transaction EMV Tag = "5F34"
Terminal Country Code	2 bytes	Binary, Numeric	ISO country code Example "124" (Canada) is entered as "01 24" in 2-byte BCD format EMV Tag = "9F1A"
Terminal Verification Results (TVR)	5 bytes	Binary, Hexadecimal	Status of various functions. EMV Tag = "95"
Transaction Type	1 bytes	Binary, Numeric	Indicates the type of financial transaction. EMV Tag = "9C"
Unpredictable Number	1 bytes	Binary, Hexadecimal	Value to provide variability and uniqueness to the generation of a cryptogram. EMV Tag = "9F37"

5.197 Token status

This value indicates the status of retrieval of the token. In some cases, the transaction may still be processed even though the request for token was not successful. Values can be as indicated below.

Table 5.77 Token status

Value	Description
0	Token retrieval was successful and is included
1	Terminal not configured to receive a token
2	Terminal was not authenticated
3	System failure

5.198 Total authorized amount

When performing an Authorization Reversal transaction, this field is to contain the total sum of all amounts authorized for this transaction (including any and all incremental authorizations). The Total Authorized Amount is submitted in the Transaction Amount field (Section 5.199).

5.199 Transaction amount

This is a variable length field one to 12-character numeric in length (see <u>Table 4.5</u> for record format and version number). This field contains the transaction amount to be authorized. The transaction amount is to be presented with implied decimal point. For example, \$.01 could be represented as 1, 01, or 001. The allowable number of significant digits as well as the positioning of any implied decimal point, are dictated by the designated Currency Code. In the United States, the allowable number of significant character numeric is seven (implied decimal point).

Please note that for all Authorization Reversal transactions, this field contains the Total Authorization Amount (the total of all previous authorizations performed for a particular transaction or associated with a single Transaction ID).

Effective June 25, 2011, for account verification requests, including Account Status Inquiry Service requests and recurring payment status inquiry requests, the amount must be zero (0).

For AFD Completion Advice messages, this field contains the final AFD sale amount.

MasterCard Authorization Chargeback Protection: MasterCard authorizations originally coded as a preauthorization may require a longer chargeback protection period. To increase the effective duration of the chargeback protection period, the merchant may submit incremental preauthorization requests for the same transaction on later dates. Incremental preauthorizations for an additional amount may be used to increase the authorized amount held against the card account and to extend the chargeback protection period associated with the original preauthorization. Incremental preauthorizations for a zero amount may be used to extend only the chargeback protection period associated with the original preauthorization. When the chargeback protection period of a preauthorization is extended because of an incremental preauthorization, it is extended for 30 days from the date of the latest approved incremental preauthorization. Please refer to the MasterCard Customer Interface Specification for complete information.

5.200 Transaction category code

This field is optionally carried in MasterCard EMV transactions and defines the authorization transaction type being requested.

5.201 Transaction code

This field contains a two-character code identifying the type of authorization or function being requested (see <u>Table 4.5</u> for record format and version number).

In conditions where an authorization request has been submitted to the host but no response was ever received, the transaction code should be converted to its corresponding "Repeat" value and resubmitted for authorization.

If the transaction request is made using a TSYS token rather than an account number, the 'Token Purchase' column below specifies whether the transaction code can be used with Record Format 'Y' or 'Z'. Please refer to Section 4.1.1 for more details. This applies to TSYS Tokens only and not Card Brand Tokens.

Table 5.78 Transaction code

Transaction code	Repeat code	Transaction type	Comments	Token purchase	
54	64	Purchase	Standard Authorization Request	N	
59	69	Online Authorization Reversal	Used to reverse a completed credit authorization prior to batch settlement.	Y	
5A	6A	Store and Forward Authorization Reversal	Same as code "59," except the reversal is being submitted after batch settlement occurred	Y	
5B	6B	Bill Payment Transaction	By Credit Card	Y	
5C		Credit Advice	Advice message for an AFD final sale amount (Visa and MasterCard only)	Y	
5D		Token Request	This indicates a request for a card brand Token or Token maintenance. Group III, Version 062 is needed.		
5G	6G	Credit Account Funding Transaction (Visa), Credit Payment Transaction (MC)	Credit card used for payment of account to account transactions	N	
5H	6Н	Card-not-present Credit Account Funding Transaction (Visa), Credit Payment Transaction (MC)	Card-not-present credit payment of account to account transactions		
5J	6J	Card-present Credit Cardholder funds Transfer (Visa)			
5K	6K	Card-not-present Credit Cardholder Funds Transfer (Visa)	Card-not-present credit payment of cardholder funds transfer		
5L	6L	Credit /Stored Value Balance Inquiry	Balance Inquiry	Y	
5M	6M	Healthcare Eligibility Inquiry	Visa only Y		
5N	6N	Balance Inquiry Reversal	Used to reverse a balance inquiry transaction (MasterCard only)	Y	

Transaction code	Repeat code	Transaction type	Comments	Token purchase
5P	Product Eligibility Visa and MasterCard only Inquiry		Y	
5T	5T Token Request		This indicates a request for TSYS Token only. No card verification will be performed. (Group III version 053 is needed)	N
70		Check Guarantee	Must specify check service in RIID Field	N
84		Private Label: Purchase	Private Issue Card	N
85		Private Label: Cash Advance	Private Issue Card	N
86		Private Label: Card Not Present	Private Issue Card	Y
87		Private Label: Quasi- Cash	Private Issue Card	N
88		Private Label: Card Authentication	Private Issue Card	Y
92		Food Stamps: Return	Electronic Benefits Transfer	N
93		Direct Debit: Purchase	Standard Debit Authorization Request	N
94		Direct Debit: Purchase Return	Debit Refund Transaction (Full or Partial Amount)	N
96		Cash Benefits: Cash Withdrawal	Electronic Benefits Transfer N	
98		Food Stamp: Purchase	e Electronic Benefits Transfer N	
9A		Direct Debit: Balance Inquiry	e Debit Balance Inquiry	
9B		Bill Payment Transaction	By Debit Card	
9C		PINless Debit Bill Payment	Debit transactions without a PIN. The Network ID of 0000 can not be used.	
9E		Food Stamps: Electronic Voucher	Electronic Benefits Transfer N	
9F		Cash Benefits: Purchase or Purchase with Cash Back	Electronic Benefits Transfer	
9G		Debit Account Funding Transaction (Visa), Debit Payment Transaction (MC)	Debit card used for payment of account to account transactions	N

Transaction code	Repeat code	Transaction type	Comments	Token purchase
9Н		Debit Account Funding Transaction Return (Visa), Debit Payment Transaction Return (MC)	Debit card return for account to account transactions	N
9J		Debit Cardholder Funds Transfer (Visa)	Debit card used for payment of cardholder funds transfer	N
9K		Debit Cardholder Funds Transfer Return (Visa)	Debit card return for cardholder funds transfer	N
9L		EBT Food Stamp Balance Inquiry	Balance Inquiry (Group III version 022 needed)	N
9M		EBT Cash Benefits Balance Inquiry	Balance Inquiry (Group III version 022 needed)	N
A3		Automatic Reversal: Direct Debit Purchase (for use in limited availability)	rsal: Used in Controller-based N echase environments only (optional)	
A4		Automatic Reversal: Direct Debit Purchase Return (for use in limited availability)	Pebit Purchase environments only (optional) for use in	
B1		ATM Cash Disbursement	Cash disbursement from the specified account type	
B2		ATM Balance Inquiry	7 75	
В3		ATM Deposit	ATM deposit to the specified N account type	
B4		ATM Cardholder Account Transfer	ATM transfer funds from one cardholder account to another cardholder account. Only Domestic U.S. transactions.	
C1		ATM Cash Disbursement reversal	Reversal of cash disbursement N request	
С3		ATM Deposit Reversal	Reversal of ATM deposit request	N
C4		ATM Cardholder Account Transfer Reversal	Reversal of ATM account transfer N requests	
C8		ATM Adjustment Up (Credit)	Used in ATM messages to request a positive (credit) financial adjustment to the original transaction amount.	N

Transaction code	Repeat code	Transaction type	Comments	Token purchase
C9		ATM Adjustment Down (Debit)		
G1		Reserved for future use		N
G2		Gift Card Close Card NOTE For use with Fifth Third Gift Card only	Closes a gift card	N
G3		Gift Card Balance Inquiry NOTE For use with Fifth Third Gift Card only	Remaining balance on a gift card	N
G4	· ·		N	
G5		Gift Card Return/Refund NOTE For use with Fifth Third Gift Card only		
G6	Gift Card Add Value/Load Card Add or load value to a gift card balance NOTE For use with Fifth Third Gift Card only		N	
G7		Gift Card Decrease Value/Unload Card NOTE For use with Fifth Third Gift Card only	e Decrease or unload value from a gift card balance	
G8		Reserved for future use		N
G9		Reserved for future use		N
GA		Reserved for future use		N
GB		Gift Card Stand Alone Tip		
GC		Gift Card Issue Gift Card	Issue a gift card N	
GD		Gift Card Issue Virtual Gift Card	al Issue a virtual gift card N	
GE		Gift Card Merchant Initiated Cancel	Merchant initiated cancel	N

Transaction code	Repeat code	Transaction type	Comments	Token purchase
GF		Gift Card Merchant Initiated Reversal	Merchant initiated reversal	N
GG		Gift Card Cash Back	Cash back	N
P1	Q1	Prepaid Card Activation	Credit Type	N
P2	Q2	Prepaid Card Activation Reversal	Credit Type	N
Р3	Q3	Prepaid Card Load	Credit Type	N
P4	Q4	Prepaid Card Load Reversal	Credit Type	N
R1		Prepaid Card Activation	Debit Type	N
R2		Prepaid Card Activation Reversal	Debit Type	N
R3		Prepaid Card Load	Debit Type	N
R4		Prepaid Card Load Reversal	Debit Type	N
TA	N/A	Terminal Authentication	Used to authenticate a device using Group III version 49.	N
TD	N/A	Terminal Deactivation	Deactivates a device previously authenticated; authenticate again after deactivation.	N

5.202 Transaction date

This six-character numeric field contains the date in the terminal when the transaction is performed (see Table 4.19 for record format and version number). This field must be provided in YYMMDD format.

5.203 Transaction fee amount

Transaction Fee Amount is used in PIN POS and credit transactions to carry the acquirerassessed surcharge for informational purposes only (see Table 4.46 for record format and version number). This field can be zero length or nine alphanumeric characters in length. The format of the nine characters is "annnnnnn" where "a" is either "D" for debit or "C" for credit and where "nnnnnnn" is the numeric fee amount with the decimal implied. Example: "D00000150" is a \$1.50 transaction fee amount debited to the cardholder's account.

This field must also be present in advice and reversal messages.

5.204 Transaction identifier

This 15-character field can contain a Transaction Identifier (Visa, American Express, PayPal or Discover) or Reference Number (MasterCard) (see <u>Table 4.6</u> for record format and version number). The POS device does not attempt to interpret the meaning of any data appearing in this field. Data returned in this field is recorded and submitted as part of the data capture settlement format.

For incremental authorization requests, the Transaction ID must be the same Transaction ID returned in the original authorization response.

If "MAV" is in positions 5-7 of this field, the transaction should not be submitted for capture.

5.205 Transaction sequence number

This four-character numeric field contains a terminal-generated transaction sequence number to be submitted in all authorization request messages (see <u>Table 4.5</u>, <u>Table 4.6</u> for record formats and version numbers). This number is echoed back to the terminal for purposes of assisting in the matching of authorization request and response messages. This value must be in the range of 0001 - 9999 and is incremented on each authorization request message. This number is automatically incremented from 9999 to 0001.

5.206 Transit transaction type indicator

This field contains a two-character numeric value to identify the type of transit transaction.

<i>Table 5.79</i>	Trancit	transaction	tuto	indicator
1 avie 5./ 9	1 Tansu	wansacion	LVDE.	manaior

Value	Description
01	Prefunded
02	Real-time Authorized
03	Post-Authorized Aggregated
04	Authorized Aggregated Split Clearing
05	Other
07	Debt Recovery
06, 08-99	Reserved for future use

5.207 Transportation mode indicator

This MasterCard field used in Auth Request/0100 and Auth Advice/0120 transactions only, contains a two digit value to identify the mode of transportation used. Please refer to G3v054 (4.2.50).

Table 5.80 Transportation mode indicator

Value	Description
00	Unknown
01	Urban Bus
02	Interurban Bus
03	Light Train Mass Transit (Underground Metro, LTR)
04	Train
05	Commuter Train
06	Water Borne Vehicle
07	Toll
08	Parking
09	Taxi
10	High Speed Train
11	Rural Bus
12	Express Cummuter Train
13	Para Transit
14	Self Drive Vehicle
15	Coach
16	Locomotive
17	Powered Motor Vehicle
18	Trailer
19	Regional Train
20	Inter City
21	Funicular Trailer
22	Cable Car
23-99	Reserved for future use

5.208 Transtain

This 40-character field contains a unique value calculated by applying a secure hash algorithm to the XID (see <u>Table 4.17</u> for record format and version number). This value must be unique for every transaction request. This field contains a 40-character ASCII representation of a 20-character numeric binary field. Refer to <u>6.8</u> for instructions on performing the necessary binary to ASCII data conversion.

5.209 UCAF authentication data

This MasterCard only, variable length issuer generated security field is up to 32 bytes in length. Please refer to G3v019 (4.2.15). It contains the encoded MasterCard SecureCode issuer or cardholder-generated authentication data (collected by the merchant) resulting from all SecureCode fully authenticated or attempts transactions, and any data associated with the 3-D Secure Electronic Commerce Verification Service.

5.210 UCAF collection indicator

This MasterCard only field indicates the merchant's support and usage of UCAF (see <u>Table 4.33</u> for record format and version number). The UCAF Collection Indicator is required on all MasterCard SecureCode ecommerce credit transactions.

MasterCard's processing rules allow merchants to gain a liability shift and interchange benefit if they submit their electronic commerce transactions for cardholder authentication. Effective November 8, 2016, if merchants do not pass the appropriate authentication detail in UCAF Authentication Data (5.209), demonstrating they actually authenticated or attempted to authenticate the cardholder, MasterCard will downgrade the Authorization Request/0100 message and forward it to the Issuer. The correct values will be returned in the response message in the Electronic Commerce Security Level Indicator in G3v072 (5.77), whether downgraded or not. It is critical to have the proper indicators during settlement.

The SecureCode functionality is not applicable for Full Financial/0200 Transactions.

Table 5.81 UCAF collection indicator

Value	Description
0	UCAF data is not supported by the merchant or the merchant has chosen not to send the indicator
1	UCAF data collection is supported by the merchant and UCAF data was present and contained an attempted AAV for MasterCard SecureCode
2	UCAF data collection is supported by the merchant and UCAF data was present and contained a fully authenticated AAV
5	Issuer Risk-Based Decisioning
6	Merchant Risk-Based Decisioning
7	Partial Shipment, Incremental or Recurring Payment

5.211 Unpredictable number

This field contains an eight-character code that is used as a variable factor to provide variability and uniqueness to the cryptogram (see <u>Table 4.19</u> for record format and version number). This field is supplied as ASCII-coded binary data. Refer to 6.8 for information concerning the conversion of binary to ASCII data.

5.212 Validation code

5.212.1 Discover usage

This field is used to indicate the magnetic stripe condition and the vulnerability for fraud in Discover Network Card Transactions.

Table 5.82 Track 1 Data Indicator

Positions	Description
1-2	Track Data Condition Code
3-4	Space filled

Track 1 Data Indicator:

This position indicates the condition of track 1 data in the request Code Definition (position 1).

Code	Description
0	Track 1 data is not present, or invalid or missing CAVV or Cryptogram
1	Track 1 data is present but CVV/DCVV/iCVV is not provided
2	Track 1 data is present using CVV/DCVV/iCVV without blanks or spaces
3	Track 1 data present with CVV/DCVV/iCVV is set to all zeros
4	Track 1 data present with CVV/DCVV/iCVV containing some or all blanks
5	Track 1 data present but CVV/DCVV/iCVV location was not disclosed by issuer
6	No Track 1 data is present, valid CAVV present

Table 5.83 Track 2 Data Indicator

Track 2 Data Indicator:

This position indicates the condition of track 2 data in the request Code Definition (position 2).

Code	Description
0	Track 2 data not present
1	Track 2 data present with CVV/DCVV/iCVV is not provided
2	Track 2 data present using CVV/DCVV/iCVV without blanks or spaces
3	Track 2 data present with CVV/DCVV/iCVV is set to all zeros
4	Track 2 data present with CVV/DCVV/iCVV containing some or all blanks
5	Track 2 data present but CVV/DCVV/iCVV location not disclosed by issuer

5.212.2 Non-Discover usage

This optional four-character field can contain specific information generated by the card issuer (see <u>Table 4.6</u> for record format and version number). The POS device should not attempt to interpret the meaning of any data appearing in this field. Data returned in this field is recorded and submitted as part of the data capture settlement format.

5.213 Verification code (CVV2, CVC2, CID)

This six-character field is used in assigning a value that assists in authenticating the physical presence of a Visa, MasterCard, Discover, PayPal or American Express credit card (see Table 4.13 for record format and version number). Card Verification is not contained in the magnetic stripe information nor does it appear on sales receipts; it is an additional three to four-character value, printed on the front or back of Visa, MasterCard, Discover, PayPal and American Express cards. This field is used to support the following card verification programs.

- Visa Card Verification Value 2 (CVV2)
- MasterCard Card Validation Code 2 (CVC2)
- American Express Cardholder Identification Code (CID)
- Discover/PayPal Cardholder Identification Code (CID)

Table 5.84 Verification code (CVV2, CVC2, CID)

Position	Code	Description
1	0	Verification Code is intentionally not provided
	1	Verification Code is present
	2	Verification Code is present but illegible
	9	Cardholder states that no Verification Code is present on the card
2	0	Only the normal Response Code should be returned
	1	Response code and the Verification Code result code should be returned
3-6		Verification Code as printed on the card, right- justify/space-fill entry
		If Position 1 = 0, 2, or 9, positions 3-6 should be space-filled
		If the Verification Code is part of an encrypted (Record Format = 'W') transaction, positions 3-6 should be space-filled.

If Verification Code is sent as part of an encrypted transaction (Record Format = 'W'), Positions 1 and 2 still need to be present even though the Verification Code is sent in the Customer Data field.

NOTE:

- If Position 1 = 1, then Position 2 should be set to 0 or 1.
- If Position 1 = 0, 2, or 9, then Position 2 should be set to 0.

5.214 Verification code result code

This zero or one-character field contains the host returned CVV2/CVC2/CID Result Code as requested in Field 4.22 (see Table 4.14 for record format and version number). Table 5.85 provides a listing of current CVV2/CVC2/CID Result Codes:

Table 5.85 Verification code result code

Code	Description
M	CVV2/CVC2/CID - Match
N	CVV2/CVC2/CID - No Match
Р	Not Processed

Code	Description
S	Merchant has indicated that Verification Code is not present on card
U	Issuer is not certified and/or has not provided Visa encryption keys

5.215 Visa contactless

This field contains data from Visa Contactless 'payWave' cards. The group has 7 subfields separated by field separators. If a subfield is absent, the field separator must be present with no data in that subfield. (see <u>Table 4.81</u> for record format and version number).

Data element	Description					
Amount Authorized	This field contains the amount of the transaction (cryptogram amount) used by the card to generate the cryptogram. For U.S. processors, the expected amount value is 0.					
Application Cryptogram	This field contains the cryptogram used for authentication of the transaction.					
Application Transaction Counter	This field contains a count of the transactions performed within the card application. The count is incremented by one each time a transaction is initiated.					
Customer Exclusive Data	Description of this field will be included in the program documentation.					
Form Factor Indicator	This field contains indicators about the attributes of cardholder's device and the technology used for communication between the cardholder's device and the acquiring POS device.					
Issuer Application	This field contains the issuer application data transmitted from the card to the issuer and is updated by the issuer in the response messages.					
Unpredictable Number	This field contains the number used in the generation of the cryptogram for contactless transactions.					
Card Sequence Number	This field contains a sequence number that distinguishes between separate cards having the same primary account number.					

5.216 Voucher approval code (EBT)

This zero or six alphanumeric character field contains the Voice Authorization Approval Code sent in the Request message for EBT/Electronic Voucher transactions (see <u>Table 4.23</u> for record format and version number). Please note that the Approval Code (Section 5.22) returned in the Response message is to be stored and submitted in the settlement data capture record.

NO	
	н.

Cash benefits transactions do not use the Electronic Voucher Serial Number, FCS ID, and Voucher Approval Code fields; food stamp transactions must use the FCS ID; and Electronic voucher transactions require Electronic Voucher Serial Number, FCS ID, and Voucher Approval Code fields.

5.217 XID

This 40-character field contains a value assigned to a SET or 3-D Secure transaction as a unique transaction identifier (see <u>Table 4.17</u>, <u>Table 4.29</u> for record formats and version numbers). If an Acquirer has opted not to return the card account number to its merchants for SET or 3-D Secure transactions, the Acquirer can utilize the XID field to identify the transaction for queries or dispute resolution without divulging the credit card account number. This field contains a 40-character ASCII representation of a 20-character numeric binary field. Refer to 6.8 for instructions on performing the necessary binary to ASCII data conversion.

Chapter 6 Control and character sets

6.1 Introduction

The following subsections define the authorization request record character set and the character sets used for Track one and Track two data encoded on the magnetic stripes.

The authorization request records are generated with characters defined by ANSI X3.4-1986. The data stored on the cardholder's card in magnetic or optical form must be converted to the ANSI X3.4 character set before transmission to TSYS Acquiring Solutions. Section 6.2 provides Track One character set definition. Section 6.3 provides Track Two character set definition. Section 6.4 provides the ANSI X3.4-1986 and ISO 646 character set definitions. Section 6.5 provides a cross-reference between the Track one, Track two, and ANSI X3.4 character sets. Section 6.6 describes the method for generating and checking the Mod-10 Luhn check digit for credit card account numbers. Section 6.7 describes the method for generating the LRC byte for the authorization request message and for testing the magnetic stripe LRC byte.

The POS device must perform the following operations on Track read data before it can be used in an authorization request message.

- 1. The LRC must be calculated for the data read from the Track and compared to the LRC read from the Track. The Track data is assumed to be read without errors when no character parity errors are detected and the calculated and read LRCs match.
- **2.** The starting sentinel, ending sentinel, and LRC are discarded.
- 3. The character codes read from the magnetic stripe must be converted from the encoded character set to the set used for the authorization request message. The characters encoded on Track One are six bit plus parity codes and the characters encoded on Track Two are four bit plus parity codes, with the character set used for the request message defined as seven bit plus parity code.

All characters read from a Track must be converted to the request message character set and transmitted as part of the request. The converted Track data cannot be modified by adding or deleting non-framing characters and must be a one for one representation of the characters read from the Track.

6.2 Track one character definition

<u>Table 6.1</u> provides the ISO 7811-2 Track One character encoding definitions. This "standards" format is a sample guideline for expected credit card Track encoding. Private issue cards can differ in the way they are encoded.

Each character is defined by the six bit codes listed in <u>Table 6.1</u>.

Track One can be encoded with up to 79 characters as shown in Figure 6.1.

Table 6.1 ISO 7811-2 track one character encoding definitions

SS	FC	PAN	FS	Name	FS	Date	Discretionary Data	ES	LRC
----	----	-----	----	------	----	------	--------------------	----	-----

Track One Character Definition:

Field	Description	Length	Format
SS	Start Sentinel "%"	1	A/N
FC	Format Code ("B" for credit cards) "B"	1	A/N
PAN	Primary Account Number	19 max	NUM
FS	Field Separator "^"	1	A/N
Name	Card Holder Name	2-26 max	A/N
FS	Field Separator "^"	1	A/N
Date	Expiration Date (YYMM)	4	NUM
SVC CD	Service Code	3	A/N
Discretionary Data	Optional Issuer Data	variable	A/N
ES	End Sentinel "?"	1	A/N
LRC	Longitudinal Redundancy Check	1	
	Total cannot exceed 79 bytes	79 max	

					1		1				7		
					b6		0	0	1	1			
BI	BIT NUMBER 1			b5		0	1	0	1				
							ı				(a) These character positions		
b4	b3	b2	b 1	I	ROW/COL		0	1	2	3	are for hardware use only		
				-			<u> </u>				1		
0	0	0	0		0		SP	0	(a)	P	(b) These characters are for		
0	0	0	1		1		(a)	1	A	Q	country use only, not for		
0	0	1	0		2	.'	(a)	2	В	R	international use		
0	0	1	1		3		(c)	3	С	S			
0	1	0	0		4		\$	4	D	Т	(c) These characters are		
0	1	0	1		5	.'	(%)	5	Е	U	reserved for added		
0	1	1	0		6	.'	(a)	6	F	V	graphic use		
0	1	1	1		7	.'	(a)	7	G	W			
1	0	0	0		8		(8	Н	X	(%) Start sentinel		
1	0	0	1		9)	9	I	Y	(?) End sentinel		
1	0	1	0		A		(a)	(a)	J	Z	(^) Field Separator		
1	0	1	1		В		(a)	(a)	K	(b)	/ Surname separator		
1	1	0	0		С		(a)	(a)	L	(b)	. Title separator		
1	1	0	1		D		-	(a)	M	(b)	SP Space		
1	1	1	0		Е	•		(a)	N	(^)			
1	1	1	1		F		/	(?)	О	(a)	PAR MSB B5 B4		
	•	•	•	. L		•		•			Most Significant Bi		
											Parity Bit (ODD)		
											Read LSB first		

Figure 6.1 Track one character set

6.3 Track two character definition

Table 6.2 provides the ISO 7811-2 Track Two character encoding definitions. This "standards" format is a sample guideline for expected credit card Track encoding. Private issue cards can differ in the way they are encoded.

Each character is defined by the four bit codes listed in <u>Table 6.2</u>.

Track Two can be encoded with up to 40-characters as shown in Figure 6.2.

Table 6.2 ISO 7811-2 Track Two encoding definition

SS	PAN FS	Date	SVC CD	Discretionary Data	ES	LRC
----	--------	------	--------	--------------------	----	-----

Track Two Character Definition:

Field	Description	Length	Format
SS	Start Sentinel ";"	1	A/N
PAN	Primary Account Number	19 max	NUM
FS	Field Separator "="	1	A/N
Date	Expiration Date (YYMM)	4	NUM
SVC CD	Service Code	3	NUM
Discretionary Data	Optional Issuer Data	variable	NUM
ES	End Sentinel "?"	1	A/N
LRC	Longitudinal Redundancy Check	1	A/N
	Total cannot exceed 40 bytes	40 max	

b4	b3	b2	b1	COL		(a	ı) T	hes	se cha	aracte	rs are	for
0	0	0	0	0	0		1	naro	dware	use	only	
0	0	0	1	1	1							
0	0	1	0	2	2	(E	3) S	tar	ting S	Sentin	el	
0	0	1	1	3	3							
0	1	0	0	4	4	(Γ) F	ielo	d Sep	arato	r	
0	1	0	1	5	5							
0	1	1	0	6	6	(F	F) E	End	ing S	entine	el	
0	1	1	1	7	7							
1	0	0	0	8	8							
1	0	0	1	9	9		PAR	N	1SB	b3	b2	LSB
1	0	1	0	A	(a)							
1	0	1	1	В	(B)				Mo	st Sig	nifica	nt Bit
1	1	0	0	С	(a)				Pari	ity Bi	t (OD	D)
1	1	0	1	D	(D)				_			
1	1	1	0	Е	(a)		F	Rea	d LSI	B firs	t	
1	1	1	1	F	(F)							

Figure 6.2 Track Two character set

6.4 Authorization message character set

<u>Table 6.3</u> and <u>Table 6.4</u> provide authorization request message character set definitions for the second generation message formats.

Table 6.3 ANSI X3.4-1986 character set

				b7	0	0	0	0	1	1	1	1
В	ITN	UME	BER	b6	0	0	1	1	0	0	1	1
				b5	0	1	0	1	0	1	0	1
						1	1	1		,	1	
b4	b3	b2	b1	ROWCOL	0	1	2	3	4	5	6	7
						1	ı	ı		ı	1	1 1
0	0	0	0	0	NUL	DLE	SP	0	@	P	`	p
0	0	0	1	1	SOH	DC1	!	1	A	Q	a	q
0	0	1	0	2	STX	DC2	"	2	В	R	b	r
0	0	1	1	3	ETX	DC3	#	3	C	S	с	S
0	1	0	0	4	EOT	DC4	\$	4	D	Т	d	t
0	1	0	1	5	ENQ	NAK	%	5	Е	U	e	u
0	1	1	0	6	ACK	SYN	&	6	F	V	f	v
0	1	1	1	7	BEL	ETB	'	7	G	W	g	w
1	0	0	0	8	BS	CAN	(8	Н	X	h	Х
1	0	0	1	9	НТ	EM)	9	I	Y	i	y
1	0	1	0	A	LF	SUB	*	:	J	Z	j	Z
1	0	1	1	В	VT	ESC	+	;	K	[k	{
1	1	0	0	С	FF	FS	,	<	L	\	1	
1	1	0	1	D	CR	GS	-	=	M]	m	}
1	1	1	0	Е	SO	RS		>	N	^	n	~
1	1	1	1	F	SI	US	/	?	О	_	0	DEL

Table 6.4 ISO 646-1983 character set

				b7	0	0	0	0	1	1	1	1
BI	T NI	JME	BER	b6	0	0	1	1	0	0	1	1
			_	b5	0	1	0	1	0	1	(1
b4	b3	b2	b1	ROW(COL	0	1	2	3	4	5	6	7
0	0	0	0	0	NUL	DLE	SP	0	@	P	`	р
0	0	0	1	1	SOH	DC1	!	1	A	Q	a	q
0	0	1	0	2	STX	DC2	"	2	В	R	b	r
0	0	1	1	3	ETX	DC3	#	3	C	S	c	S
0	1	0	0	4	EOT	DC4		4	D	T	d	t
0	1	0	1	5	ENQ	NAK	%	5	Е	U	e	u
0	1	1	0	6	ACK	SYN	&	6	F	V	f	V
0	1	1	1	7	BEL	ETB	•	7	G	W	g	w
1	0	0	0	8	BS	CAN	(8	Н	X	h	X
1	0	0	1	9	HT	EM)	9	I	Y	i	y
1	0	1	0	A	LF	SUB	*	:	J	Z	j	Z
1	0	1	1	В	VT	ESC	+	;	K	[k	{
1	1	0	0	С	FF	IS4	,	<	L	\	1	
1	1	0	1	D	CR	IS3	-	=	M]	m	}
1	1	1	0	E	SO	IS2	•	>	N	۸	n	~
1	1	1	1	F	SI	IS1	/	?	О	_	О	DEL

6.5 Character conversion summary

Table 6.5 provides authorization request message character set definition for second generation authorization request messages cross referenced to the Track One and Track Two character set.

Table 6.5 Character conversion summary.

EBCDIC	X3.4-1	.986			TR	ACK 1		TRA	CK 2		
HEX	HEX	DEC		_	HEX		_	HEX		_	
1C	1C	28	FS								
1F	1F	31	US								
40	20	32	SP		00	SP					
4F	21	33	!		01	(a)					
7F	22	34	"		02	(a)					(a) Hardware use
7B	23	35	#		03	(c)					only
5B	24	36	\$		04	\$					(c) Reserved
6C	25	37	%		05	(%)					
50	26	38	&		06	(a)					(%) Starting Sentinel
7D	27	39	,		07	(a)					Track 1
4D	28	40	(08	(
5D	29	41)		09)					
5C	2A	42	*		0A	(a)					
4E	2B	43	+		0B	(a)					
6B	2C	44	,		0C	(a)					
60	2D	45	-		0D	-					
4B	2E	46			0E						
61	2F	47	/		0F	/					
F0	30	48	0		10	0		0	0		
F1	31	49	1		11	1		1	1		
F2	32	50	2		12	2		2	2		

EBCDIC	X3.4-	1986		TRACK	[]	TRA	.CK 2	
HEX	HEX			HEX		HEX		
F3	33	51	3	13	3	3	3	
F4	34	52	4	14	4	4	4	
F5	35	53	5	15	5	5	5	
F6	36	54	6	16	6	6	6	
F7	37	55	7	17	7	7	7	
F8	38	56	8	18	8	8	8	
F9	39	57	9	19	9	9	9	(a) Hardware use
7A	3A	58	:	1A	(a)	A	(a)	only
5E	3B	59	;	1B	(a)	В	(B)	(B) Starting sentinel
4C	3C	60	<	1C	(a)	С	(a)	Track 2
7E	3D	61	=	1D	(a)	D	(D)	(D) Field Separator
6E	3E	62	>	1E	(a)	Е	(a)	Track 2
6F	3F	63	?	1F	(?)	F	(F)	(F) Ending sentinel
7C	40	64	@	20	(a)			Track 2
C1	41	65	A	21	A			(?) Ending sentinel
C2	42	66	В	22	В			Track 1
C3	43	67	C	23	C			
C4	44	68	D	24	D			
C5	45	69	Е	25	Е			
C6	46	70	F	26	F			
C7	47	71	G	27	G			
C8	48	72	Н	28	Н			
С9	49	73	I	29	I			
D1	4A	74	J	2A	J			
D2	4B	75	K	2B	K			
D3	4C	76	L	2C	L			

EBCDI	C X3.	.4-1986		Т	TRACK 1		TRACK 2
HEX	HEX	DEC			HEX		HEX
D4	4D	77	M		2D	M	
D5	4E	78	N		2E	N	
D6	4F	79	О		2F	О	
D7	50	80	P		30	P	
D8	51	81	Q		31	Q	
D9	52	82	R		32	R	
E2	53	83	S		33	S	
ЕЗ	54	84	Т		34	Т	
E4	55	85	U		35	U	
E5	56	86	V		36	V	
E6	57	87	W		37	W	
E7	58	88	X		38	X	
E8	59	89	Y		39	Y	
E9	5A	90	Z		3A	Z	
A4	5B	91]		3B	(b)	
E0	5C	92	\		3C	(b)	
5A	5D	93]		3D	(b)	
5F	5E	94	^		3E	(^)	
6D	5F	95	_		3F	(a)	
79	60	96	`			•	
81	60	97	a				

- (a) Hardware use only
- (b) Reserved for Country use Track 1
- (^) Field Separator
 Track 1

6.6 MOD-10 check-digit algorithm

Credit card account numbers should be checked for validity using the Luhn check digit algorithm. The following procedure must be followed in order to calculate the correct check-digit for given account number.

NOTE: Please note that some Private Label (Private Issue) and Debit cards cannot utilize an account check-digit.

- 1 Exclude the right-most digit from the calculation because this is the actual check digit to be examined for validity.
- **2.** Starting with the second to the last digit, and moving right to left, alternately multiply each successive digit by two and one respectively.
- **3.** Sum the integers comprising the product obtained from each of the calculations.
- **4.** Subtract the resulting sum from the next higher multiple of ten (10). The resulting value is the desired account number check digit.

Assuming an account number of: 4287 9478:

Step 1. Example account number	4	2	8	7	9	4	7	(8)	
Step 2. Multiplier	2	1	2	1	2	1	2		
Step 3. Products	8	2	16	7	18	4	14		
Step 4. Sum the integers	8+	2+	1+6+	7+	1+8+	4+	1+4		=42
Step 5. Derive the Check Digit	50 -	42 =	8						

6.7 Longitudinal Redundancy Check (LRC)

The Longitudinal Redundancy Check is used to ensure the data integrity of information packets exchanged through the TSYS Acquiring Solutions system. An LRC character is generated and appended to all data packets in order to detect and recover from transmission errors which might result of line interference. An LRC is the 8-bit EXCLUSIVE-OR (Binary ADD with no Carry) of all bytes starting with the byte AFTER the <STX> and including the final <ETX> of the message.

STX Message	ETX	LRC
-------------	-----	-----

Range of LRC calculation

6.8 Conversion of binary to ASCII characters

TSYS Acquiring Solutions' Second Generation message formats allow only printable characters to appear in transaction data fields. To represent binary data, each byte of binary data is expanded into two hexadecimal characters. The upper four bits of a byte are represented by the first hexadecimal character, and the lower four bits are represented by a second hexadecimal character. Hexadecimal characters are to be encoded in ASCII. See table 6.6 below. For example, to represent a 20-byte binary field, 40 hexadecimal characters are used to define it.

Table 6.6 Byte to 2-Hex character conversion table

Byte			Byte i	s comp	osed of	8 bits		
Bits in byte	7	6	5	4	3	2	1	0
Hexadecimal Character	First 00 00 00 00 01 010	hexadeo 00 = '0' 01 = '1' 10 = '2' 11 = '3' 00 = '4' 01 = '5'	1000 = 1001 = 1010 = 1011 = 1100 = 1101 = 1101 =	= '8' = '9' = 'A' = 'B' = 'C'	Second 000 000 001 001 010 010		cimal cl 1000 = 1001 = 1010 = 1011 = 1100 = 1101 =	naracter = '8' = '9' - 'A' = 'B' = 'C' - 'D'
	01	11 = '7'	1111 =	= 'F'	011	1 = '7'	1111 =	: 'F'

Chapter 7 Message format examples

NOTE:

Tables provided in this chapter are for example only. Reference the sections provided for a complete description of all applicable values. For the Acquirer BIN, Merchant Number, Store, and Terminal number in development usage, please contact the TSYS Acquiring Solutions development lab for specific values on these fields. For production development, please contact the Acquiring bank of the merchant for these and other applicable values.

7.1 Card present examples

7.1.1 Credit

7.1.1.1 Retail/restaurant - request

Table 7.1 Retail/restaurant - request

	1-		t Authorization Request Me		1
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	<u>5.157</u>
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	B, F, G, P, R	<u>5.101</u>
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	<u>5.110</u>
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192

		D-Format Authorization Request Message (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section		
52-55	4	NUM	Merchant Category Code		5.121		
56	1	A/N	Requested ACI	Y	5.161		
57-60	4	NUM	Tran. Sequence Number	0001	5.205		
61-62	2	A/N	Transaction Code	54 - Purchase	5.201		
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50		
64	1	A/N	Account Data Source	 @ - No Card reader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable 	5.1		
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct# <fs>ExpDate<fs></fs></fs>	5.71		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1-12	NUM	Transaction Amount		5.199		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	25	A/N	Merchant Name		5.32.1		
-	13	A/N	Merchant Location/City		5.32.2		
_	2	A/N	Merchant State		5.32.3		
_	1	A/N	Field Separator <fs></fs>		5.90		
_	1	A/N	Field Separator <fs></fs>		5.90		
_	1	A/N	Field Separator <fs></fs>		5.90		
_	3	NUM	Group III Version Number	020	5.95		
-	6	A/N	Developer ID		<u>5.73</u>		
_	4	A/N	Version ID		<u>5.215</u>		
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
_	1	ASCII	Group Separator <gs></gs>		<u>5.96</u>		
_	3	NUM	Group III Version Number	025	<u>5.95</u>		
-	0 or 9	A/N	Transaction Fee Amount		5.203		
	1	ASCII	Field Separator <fs></fs>		5.90		

7.1.1.2 Retail/restaurant - manual AVS- request

Table 7.2 Retail/restaurant - manual AVS- request

Byte	Byte Length Format Field description Content					
1	1	A/N	Record Format	D	Section 5.157	
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21	
3	1	A/N	Message Delimiter		5.136	
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4	
10-21	12	NUM	Merchant Number		5.129	
22-25	4	NUM	Store Number		5.177	
26-29	4	NUM	Terminal Number		5.187	
30	1	A/N	Device Code	C, D, E, I, M, Q	<u>5.74</u>	
31	1	A/N	Industry Code	B, F, G, P, R	5.101	
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70	
35-37	3	NUM	Country Code	840 - United States	5.63	
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59	
47-48	2	NUM	Language Indicator	00 - English	5.110	
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192	
52-55	4	NUM	Merchant Category Code		5.121	
56	1	A/N	Requested ACI	Y	5.161	
57-60	4	NUM	Tran. Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	54 - Purchase	5.201	
63	1	A/N	Cardholder ID Code	M - AVS-Bad Mag. read	5.50	
64	1	A/N	Account Data Source	@ - No Cardreader T- Keyed/Track 2 Capable X- Keyed/Track 1 Capable	5.1	
_	5-76	A/N	Customer Data Field	Acct# <fs>ExpDate<fs></fs></fs>	5.71	
_	1	A/N	Field Separator <fs></fs>	Hex 1C	5.90	
-	0-29	A/N	Address Verification Data (If Cardholder ID - "M")	Street Address <sp>Zip Code</sp>	5.51.4	
-	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	

	D-Format Authorization Request Message (Retail/Restaurant - Manual AVS)					
Byte	Length	Format	Field description	Content	Section	
_	1-12	NUM	Transaction Amount		5.199	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
_	25	A/N	Merchant Name		5.32.1	
_	13	A/N	Merchant Location/City		5.32.2	
-	2	A/N	Merchant State		5.32.3	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	
_	3	NUM	Group III Version Number	020	<u>5.95</u>	
_	6	A/N	Developer ID		5.73	
-	4	A/N	Version ID		5.215	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	

7.1.1.3 Hotel/lodging - manual AVS - request

Table 7.3 Hotel/lodging - manual AVS - request

	D-Format Authorization Request Message (Hotel/Lodging - Manual AVS)						
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	D	5.157		
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer BIN		5.4		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74		
31	1	A/N	Industry Code	Н	5.101		
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70		
35-37	3	NUM	Country Code	840 - United States	5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59		
47-48	2	NUM	Language Indicator	00 - English	5.110		

D-Format Authorization Request Message (Hotel/Lodging - Manual AVS)					
Byte	Length	Format	Field description	Content	Section
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		<u>5.121</u>
56	1	A/N	Requested ACI	Y - CPS Capable P - Manually Keyed or Preferred Customer	5.161
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	54 - Card Present 56 - Card Not Present	5.201
63	1	A/N	Cardholder ID Code	@ - SignatureN - AVSM - Card Present AVS	5.50
64	1	A/N	Account Data Source	 @ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable 	5.1
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct# <fs>ExpDate<fs></fs></fs>	5.71
=	1	A/N	Field Separator <fs></fs>		5.90
_	0-29	A/N	Address Verification Data (If Cardholder ID - "N" or "M")	Street Address <sp>Zip Code</sp>	5.51.4
=	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Transaction Amount		5.199
-	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Prestigious Property Ind.	<sp> - Not Participating D - \$500 Limit B - \$1000 Limit S - \$1500</sp>	5.117.1
-	1	A/N	Market Specific Data ID	Н	5.117.2
-	2	NUM	Stay of Duration		5.117.3
_	1	A/N	Field Separator <fs></fs>		5.90
_	25	A/N	Merchant Name		5.32.1
	13	A/N	Merchant Location/City		5.32.2

	D-Format Authorization Request Message (Hotel/Lodging - Manual AVS)						
Byte	Length	Format	Field description	Content	Section		
-	2	A/N	Merchant State		5.32.3		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1	A/N	Field Separator <fs></fs>		5.90		
	3	NUM	Group III Version Number	020	5.95		
-	6	A/N	Developer ID		5.73		
-	4	A/N	Version ID		5.215		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1	A/N	Field Separator <fs></fs>		5.90		

7.1.1.4 Auto rental - request

Table 7.4 <u>Auto rental - request</u>

		D-Fori	mat Authorization Request M	essage (Auto Rental)	
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	5.157
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	A	5.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		5.121

Byte	syte Length Format Field description Content					
56	1	A/N	Requested ACI	Y - CPS Capable P - Preferred Customer	5.161	
57-60	4	NUM	Tran. Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	54 - Card Present 56 - Card Not Present	5.201	
63	1	A/N	Cardholder ID Code	@ - Customer Signature N - Address Verification	5.50	
64	1	A/N	Account Data Source	 @ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track2 Capable X - Keyed/Track1 Capable 	5.1	
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct# <fs>ExpDate<fs></fs></fs>	5.71	
-	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	
_	1-12	NUM	Transaction Amount		5.199	
-	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Prestigious Property Ind	Space	5.117.1	
_	1	A/N	Market Specific Data ID	A	5.117.2	
-	2	NUM	Stay of Duration		5.117.3	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	25	A/N	Merchant Name		5.32.1	
=	13	A/N	Merchant Location/City		5.32.2	
-	2	A/N	Merchant State		5.32.3	
_	1	A/N	Field Separator <fs></fs>		5.90	
=	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	3	NUM	Group III Version Number	020	5.95	
_	6	A/N	Developer ID		5.73	
_	4	A/N	Version ID		5.215	
_	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	

7.1.1.5 Automated fueling - request

Table 7.5 <u>Automated fueling - request</u>

	D-Format Authorization Request Message (Automated Fueling)					
Byte	Length	Format	Field description	Contents	Section	
1	1	A/N	Record Format	D	5.157	
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21	
3	1	A/N	Message Delimiter		5.136	
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4	
10-21	12	NUM	Merchant Number		5.129	
22-25	4	NUM	Store Number		5.177	
26-29	4	NUM	Terminal Number		5.187	
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74	
31	1	A/N	Industry Code	О	<u>5.101</u>	
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70	
35-37	3	NUM	Country Code	840 - United States	5.63	
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59	
47-48	2	NUM	Language Indicator	00 - English	5.110	
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192	
52-55	4	NUM	Merchant Category Code		5.121	
56	1	A/N	Requested ACI	Y	5.161	
57-60	4	NUM	Transaction Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	54 - Card Present	5.201	
63	1	A/N	Cardholder ID Code	E - Automated Fueling	5.50	
64	1	A/N	Account Data Source	D - Track 2 Read H - Track 1 Read	<u>5.1</u>	
-	5-76	A/N	Customer Data Field	Full Track 1 or Full Track 2	5.71	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
_	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
_	1-12	NUM	Transaction Amount	100	5.199	

		D-Format	Authorization Request Messa	age (Automated Fuel	ing)
Byte	Length	Format	Field description	Contents	Section
_	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	25	A/N	Merchant Name		5.32.1
_	13	A/N	Merchant Location/City		5.32.2
_	2	A/N	Merchant State		5.32.3
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	3	NUM	Group III Version Number	020	5.95
-	6	A/N	Developer ID		5.73
-	4	A/N	Version ID		5.215
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90

7.1.1.6 AFD completion advice request (Visa, MasterCard, PayPal and Discover)

Table 7.6 AFD completion advice request (Visa, MasterCard, PayPal and Discover)

D-F0	D-FORMAT AFD Credit Completion Advice request (Visa, MasterCard, PayPal and Discover)						
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	D	5.157		
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74		
31	1	A/N	Industry Code	О	5.101		
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70		
35-37	3	NUM	Country Code	840 - United States	5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59		

Byte	Length	Format	Completion Advice request (V Field description	Content	Section
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code	5542	5.121
56	1	A/N	Requested ACI	Y	<u>5.161</u>
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	5C- Credit Advice	5.201
63	1	A/N	Cardholder ID Code	E – Automated Fueling	5.50
64	1	A/N	Account Data Source	D – Track 2 Read H – Track 1 read	5.1
	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2	5.71
	1	A/N	Field Separator	<fs></fs>	5.90
	1	A/N	Field Separator	<fs></fs>	5.90
	1	A/N	Field Separator	<f\$></f\$>	5.90
	1-12	NUM	Transaction Amount	Actual Amount Dispensed	5.199
	1	A/N	Field Separator	<f\$></f\$>	5.90
	1	A/N	Field Separator	<f\$></f\$>	5.90
	1	A/N	Field Separator	<fs></fs>	5.90
	25	A/N	Merchant Name		5.32.1
	13	A/N	Merchant Location/City		5.32.2
	2	A/N	Merchant State		5.32.3
	1	A/N	Field Separator	<fs></fs>	5.90
	1	A/N	Field Separator	<fs></fs>	5.90
	6	A/N	Approval Code	Echo pre-auth response	5.165.1
	6	A/N	Local Transaction Date	Echo pre-auth response	5.165.2
	6	A/N	Local Transaction Time	Echo pre-auth response	5.165.3
	12	NUM	RRN	Echo pre-auth response	5.165.5
	1	A/N	Field Separator	<f\$></f\$>	5.90
	3	NUM	Group III Version Number	020	5.95
	6	A/N	Developer ID		5.73
	4	A/N	Version ID		5.215
	1	A/N	Field Separator	<fs></fs>	5.90

Byte	Length	Format	Field description	Content	Section
	1	A/N	Field Separator	<fs></fs>	5.90
		A/N	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	033	<u>5.95</u>
	2	NUM	Adjustment Response Code	Echo pre-auth original response	5.168
	1	A/N	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	039 (MasterCard Only)	<u>5.95</u>
	1	A/N	Cardholder Verification Method	"S"	5.52
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	050 (MasterCard Only)	<u>5.95</u>
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>
	3	NUM	Group III Version Number	056	<u>5.95</u>
	4	NUM	Message Reason Code		<u>5.135</u>
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	057	<u>5.95</u>
	0-25	A/N/S	Additional Response Data		<u>5.10</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>

7.1.1.7 AFD completion advice response (Visa, MasterCard, PayPal and Discover)

Table 7.7 AFD completion advice response (Visa, MasterCard, PayPal and Discover)

D-FO	D-FORMAT AFD Credit Completion Advice response (Visa, MasterCard, PayPal and Discover)							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	Е	5.157			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4	1	A/N	Returned ACI	space	5.164			
5-8	4	NUM	Store Number		5.177			
9-12	4	NUM	Terminal Number		5.187			
13	1	A/N	Authorization Source Code		5.28			

Byte	Length	Format	ompletion Advice response (\int Field description	Content	Section
-	_		-	Content	
14-17	4	NUM	Transaction Sequence Number		5.205
18-19	2	A/N	Response Code		<u>5.162</u>
20-25	6	A/N	Approval Code		5.22
26-31	6	NUM	Local Transaction Date	MMDDYY	5.112
32-37	6	NUM	Local Transaction Time	HHMMSS	5.113
38-53	16	A/N	Auth. Response Text		5.27
54	1	A/N	AVS Result Code		5.11
55-66	12	A/N	Retrieval Reference Number		5.163
67	1	A/N	Market Data Identifier		5.117
-	0-15	A/N	Transaction Identifier	MC Reference Number	5.204
-	1	A/N	Field Separator	<fs></fs>	5.90
	0-4	A/N	Validation Code		5.212
	1	A/N	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	020	<u>5.95</u>
	1	A/N	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	033	<u>5.95</u>
	1	A/N	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	039 (MasterCard Only)	5.95
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	050 (MasterCard Only)	5.95
	0, 10	NUM	Association Timestamp	mmddhhmmss	5.23
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	056	<u>5.95</u>
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	057	<u>5.95</u>
	0-25	A/N/S	Additional Response Data		5.10
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96

7.1.1.8 Quasi-cash - request

Table 7.8 Quasi-cash - request

	D-Format Authorization Request Message (Quasi-Cash)						
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	D	5.157		
2	1	NUM	Application Type	0 - Single Transaction2 - Multiple Transaction4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74		
31	1	A/N	Industry Code	B, F, G, P, R	<u>5.101</u>		
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>		
35-37	3	NUM	Country Code	840 - United States	5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59		
47-48	2	NUM	Language Indicator	00 - English	<u>5.110</u>		
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192		
52-55	4	NUM	Merchant Category Code		5.121		
56	1	A/N	Requested ACI	Y	5.161		
57-60	4	NUM	Tran. Sequence Number	0001	<u>5.205</u>		
61-62	2	A/N	Transaction Code	57 - Quasi-Cash	5.201		
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50		
64	1	A/N	Account Data Source	 @ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable 	5.1		
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct# <fs>ExpDate<fs></fs></fs>	5.71		
-	1	A/N	Field Separator <fs></fs>		5.90		
_	1	A/N	Field Separator <fs></fs>		5.90		

		D-Forr	mat Authorization Request Mo	essage (Quasi-Cash)	
Byte	Length	Format	Field description	Content	Section
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Transaction Amount		5.199
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
-	1	A/N	Field Separator <fs></fs>		5.90
-	25	A/N	Merchant Name		5.32.1
-	13	A/N	Merchant Location/City		5.32.2
-	2	A/N	Merchant State		5.32.3
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	3	NUM	Group III Version Number	020	5.95
-	6	A/N	Developer ID		5.73
-	4	A/N	Version ID		5.215
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90

7.1.1.9 Incremental authorization - request

Table 7.9 Incremental authorization - request

		D-For	mat Incremental Authorizat	ion Request Message	
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	<u>5.157</u>
2	1	NUM	Application Type	0 - Single Transaction2 - Multiple Transaction4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	A, D, H, P	5.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70

D-Format Incremental Authorization Request Message						
Byte	Length	Format	Field description	Content	Section	
35-37	3	NUM	Country Code	840 - United States	5.63	
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	<u>5.59</u>	
47-48	2	NUM	Language Indicator	00 - English	<u>5.110</u>	
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192	
52-55	4	NUM	Merchant Category Code		5.121	
56	1	A/N	Requested ACI	Ι	<u>5.161</u>	
57-60	4	NUM	Tran. Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	54 - Card Present 56 - Card Not Present	5.201	
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50	
64	1	A/N	Account Data Source	 @ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable 	5.1	
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct# <fs>ExpDate<fs></fs></fs>	5.71	
_	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	
_	1-12	NUM	Transaction Amount		5.199	
_	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
_	25	A/N	Merchant Name		5.32.1	
-	13	A/N	Merchant Location/City		5.32.2	
-	2	A/N	Merchant State		5.32.3	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
_	15	A/N	Transaction Identifier		5.204	
_	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	
-	3	NUM	Group III Version Number	020	<u>5.95</u>	
_	6	A/N	Developer ID		5.73	

	D-Format Incremental Authorization Request Message							
Byte	Length	Format	Field description	Content	Section			
-	4	A/N	Version ID		<u>5.215</u>			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			

7.1.1.10 Credit authorization reversal - request

Table 7.10 Credit authorization reversal - request

	D-Format Authorization Request Message (Reversal)						
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	D	5.157		
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	<u>5.74</u>		
31	1	A/N	Industry Code	A, D, H, P	<u>5.101</u>		
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>		
35-37	3	NUM	Country Code	840 - United States	5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59		
47-48	2	NUM	Language Indicator	00 - English	5.110		
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192		
52-55	4	NUM	Merchant Category Code		5.121		
56	1	A/N	Returned ACI	Value returned in Original Authorization Response	5.164		
57-60	4	NUM	Tran. Sequence Number	0001	5.205		
61-62	2	A/N	Transaction Code	59 - Pre-settlement 5A - Post-settlement 5N - Balance inquiry reversal	5.201		
63	1	A/N	Cardholder ID Code	@ - Customer Signature	<u>5.50</u>		

		D-Fo	rmat Authorization Request I	Message (Reversal)	
Byte	Length	Format	Field description	Content	Section
64	1	A/N	Account Data Source	@, T , or X	<u>5.1</u>
-	5-76	A/N	Customer Data Field	Acct# <fs>ExpDate<fs></fs></fs>	<u>5.71</u>
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Total Authorized Amount		5.198
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Settlement Amount		5.172
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	25	A/N	Merchant Name		5.32.1
-	13	A/N	Merchant Location/City		5.32.2
-	2	A/N	Merchant State		5.32.3
-	1	A/N	Field Separator <fs></fs>		5.90
-	15	A/N	Transaction Identifier		5.204
-	1	A/N	Field Separator <fs></fs>		5.90
-	6	A/N	Approval Code		5.22
-	6	A/N	Local Transaction Date	MMDDYY	5.112
-	6	A/N	Local Transaction Time	HHMMSS	5.113
-	12	A/N	Retrieval Reference Num		5.163
-	1	A/N	Field Separator <fs></fs>		5.90
-	3	NUM	Group III Version Number	020	5.95
-	6	A/N	Developer ID		5.73
-	4	A/N	Version ID		5.215
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90

7.1.1.11 Credit card/base group I - response

Table 7.11 <u>Credit card/base group I - response</u>

	E-Format Authorization Response Message (Credit Card/Base Group I)							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	Е	<u>5.157</u>			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21			

	E-Format Authorization Response Message (Credit Card/Base Group I)						
Byte	Length	Format	Field description	Content	Section		
3	1	A/N	Message Delimiter		5.136		
4	1	A/N	Returned ACI		5.164		
5-8	4	NUM	Store Number		5.177		
9-12	4	NUM	Terminal Number		5.187		
13	1	A/N	Authorization Source Code		5.28		
14-17	4	NUM	Transaction Sequence Number		5.205		
18-19	2	A/N	Response Code	XX	<u>5.162</u>		
20-25	6	A/N	Approval Code		5.22		
26-31	6	NUM	Local Transaction Date	MMDDYY	5.112		
32-37	6	NUM	Local Transaction Time	HHMMSS	5.113		
38-53	16	A/N	Auth. Response Text		5.27		
54	1	A/N	AVS Result Code		5.11		
55-66	12	A/N	Retrieval Reference Number		5.163		
67	1	A/N	Market Data Identifier		5.117		
-	0-15	A/N	Transaction Identifier		5.204		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	0-4	A/N	Validation Code		5.212		
-	1	A/N	Field Separator <fs></fs>		5.90		
	3	NUM	Group III Version Number		5.95		

7.1.1.12 Credit integrated chip card (ICC - EMV format) - request (G3v055)

All group III version 55 alpha-numeric format data elements are hexadecimal values unless otherwise specified.

Table 7.12 Credit integrated chip card (ICC - EMV format) - request (G3v055)

	D-Format EMV Authorization Request Message (credit card)							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	<u>5.157</u>			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transactions 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4			

	1		at EMV Authorization Reques		· ·
Byte	Length	Format	Field description	Content	Section
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		<u>5.177</u>
26-29	4	NUM	Terminal Number		<u>5.187</u>
30	1	A/N	Device Code	X	<u>5.74</u>
31	1	A/N	Industry Code	A, B, F, G, H L, O, P, R	<u>5.101</u>
32-34	3	NUM	Currency Code	840-US Dollars	<u>5.70</u>
35-37	3	NUM	Country Code	840-USA	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	5.192
52-55	4	NUM	Merchant Category Code		<u>5.121</u>
56	1	A/N	Requested ACI	Y	<u>5.161</u>
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	54- Purchase	5.201
63	1	A/N	Cardholder ID Code	F - (Offline PIN authentication for credit chip card transactions) K - Personal identification Number 32-character DUK/PT. (Online PIN authentication for credit transactions) Z - Cardholder Signature-Terminal has a PIN pad @ -Cardholder Signature-No PIN pad available P - No CVM Required	5.50
64	1	A/N	Account Data Source	G - Chip Card Read Data (ICC)	<u>5.1</u>
	5-76	A/N	Customer Data Field	Full Track 2	<u>5.71</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	32	A/N	Cardholder ID Data	Encrypted PIN Block Data. (Present on Credit with PIN Only).	5.51

	D-Format EMV Authorization Request Message (credit card)							
Byte	Length	Format	Field description	Content	Section			
	1	ASCII	Field Separator	<fs></fs>	5.90			
	1	ASCII	Field Separator	<fs></fs>	5.90			
	1-12	NUM	Transaction Amount		5.199			
	1	ASCII	Field Separator	<fs></fs>	5.90			
	0-12	NUM	Secondary Amount		5.169			
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>			
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>			
	40	A/N	Card Acceptor Data		<u>5.32</u>			
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>			
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>			
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>			
	3	NUM	Group III Version Number	020	<u>5.95</u>			
	6	A/N	Developer ID		<u>5.73</u>			
	4	A/N	Version ID		<u>5.215</u>			
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>			
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>			
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>			
	3	NUM	Group III Version Number	027	<u>5.95</u>			
	12	A/N	POS Data Code		<u>5.150</u>			
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>			
	3	NUM	Group III Version Number	055	<u>5.95</u>			
	6-255	ASCII Hex	TLV EMV Tag Data	Send all EMV Data tags that are supported by the card and terminal interaction. Expected tags can be found in Appendix A.	5.193			
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>			
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>			

7.1.1.13 Credit integrated chip card (ICC - EMV format) - response (G3v055)

All group III version 55 alpha-numeric format data elements are hexadecimal values unless otherwise specified.

Table 7.13 Credit contactless using EMV data rules authorization - response

	E-Format EMV Authorization Response Message (credit card)						
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	Е	<u>5.157</u>		
2	1	NUM	Application Type	0 - Single Transaction2 - Multiple Transactions4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4	1	NUM	Return ACI		<u>5.164</u>		
5-8	4	NUM	Store Number		<u>5.177</u>		
9-12	4	NUM	Terminal Number		5.187		
13	1	A/N	Authorization Source Code		<u>5.28</u>		
14-17	4	NUM	Transaction Sequence Number		5.205		
18-19	2	AN	Response Code		<u>5.162</u>		
20-25	6	AN	Approval Code		<u>5.22</u>		
26-31	6	NUM	Local Transaction Date	MMDDYY	<u>5.112</u>		
32-37	6	NUM	Local Transaction Time	HHMMSS	5.113		
38-53	16	A/N	Auth. Response Text		<u>5.27</u>		
54	1	A/N	AVS Result Code		<u>5.11</u>		
55-66	12	A/N	Retrieval Reference Number		5.163		
67	1	A/N	Market Data Identifier		5.117		
	0-15	A/N	Transaction Identifier		5.204		
	1	ASCII	Field Separator	<fs></fs>	5.90		
	0,4	A/N	Validation Code		5.212		
	3	NUM	Group III Version Number	020	<u>5.95</u>		
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>		
	3	NUM	Group III Version Number	027	<u>5.95</u>		
	12	A/N	POS Data Code		5.150		
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>		
	3	NUM	Group III Version Number	055	<u>5.95</u>		
	6-255	ASCII Hex	TLV Data, 2 characters per byte	Typically includes one or more issuer scripts (tag 71 or 72) the response code (tag 8A)and issuer authentication data (tag 91)	5.193		
	1	ASCII	Field Separator	<fs></fs>	5.90		

	E-Format EMV Authorization Response Message (credit card)							
Byte Length Format Field description Content Se								
	1	ASCII	Group Separator	<g\$></g\$>	<u>5.96</u>			

7.1.1.14 Credit contactless using EMV data rules authorization - request

All group III version 55 alpha-numeric format data elements are hexadecimal values unless otherwise specified.

Table 7.14 Credit contactless using EMV data rules authorization - request

	Format D Contactless Using EMV Data Rules Authorization - Request (Credit Card)						
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	D	5.157		
2	1	NUM	Application Type	0 - Single Transaction2 - Multiple Transaction4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer BIN		<u>5.4</u>		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	X	5.74		
31	1	A/N	Industry Code	A, B, F, G, H, L, O, P, R	5.101		
32-34	3	NUM	Currency Code		5.70		
35-37	3	NUM	Country Code		5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59		
47-48	2	NUM	Language Indicator	00 - English	5.110		
49-51	3	NUM	Time Zone Differential	008 (GMT + 8 hours, non-daylight savings)	5.192		
52-55	4	NUM	Merchant Category Code		5.121		
56	1	A/N	Requested ACI	Y	<u>5.161</u>		
57-60	4	NUM	Tran. Sequence Number	0001	5.205		
61-62	2	A/N	Transaction Code	54- Purchase	<u>5.201</u>		

	Format D	Contactles	ss Using EMV Data Rules Aut	horization - Request (Credit C	ard)
Byte	Length	Format	Field description	Content	Section
63	1	A/N	Cardholder ID Code	F - PIN Authentication by ICC (Chip Card) (Offline PIN authentication for credit chip card transactions)	5.50
				K - Personal Identification Number 32-character DUK/PT.(Online PIN authentication for credit transactions)	
				Z - Cardholder Signature - Terminal has a PIN pad	
				@ = Cardholder Signature - No PIN pad available	
				P - No CVM Required	
64	1	A/N	Account Data Source	R - Proximity payment device using EMV chip data rules	5.1
-	5-76	A/N	Customer Data Field	Full Track 2	<u>5.71</u>
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	32	A/N	Cardholder ID Data	Encrypted PIN Block Data.	<u>5.51</u>
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
-	1-12	NUM	Transaction Amount		5.199
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	0-12	NUM	Secondary Amount		5.169
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	40	A/N	Card Acceptor Data		5.32
_	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
_	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
_	3	NUM	Group III Version Number	020	<u>5.95</u>
_	6	A/N	Developer ID		<u>5.73</u>
_	4	A/N	Version ID		5.215
_	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
_	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>

	Format D Contactless Using EMV Data Rules Authorization - Request (Credit Card)							
Byte	Length	Format	Field description	Content	Section			
	3	NUM	Group Separator	<gs></gs>	5.96			
	3	NUM	Group III Version Number	027	<u>5.95</u>			
	12	A/N	POS Data Code		5.150			
	3	NUM	Group Separator	<gs></gs>	<u>5.96</u>			
	3	NUM	Group III Version Number	055	<u>5.95</u>			
	6-255	ASCII Hex	TLV EMV Tag Data	Send all EMV Data tags that are supported by the card and terminal interaction.	5.193			
				Expected tags can be found in Appendix A.				
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>			
	3	NUM	Group Separator	<g\$></g\$>	<u>5.96</u>			

7.1.1.15 Credit contactless using EMV data rules authorization - response

All group III version 55 alpha-numeric format data elements are hexadecimal values unless otherwise specified.

Table 7.15 Credit contactless using EMV data rules authorization - response

	E-Form	at Contact	less Using EMV Data Rules A	uthorization Response Mes	sage
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	Е	<u>5.157</u>
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4	1	NUM	Return ACI		<u>5.164</u>
5-8	4	NUM	Store Number		<u>5.177</u>
9-12	4	NUM	Terminal Number		<u>5.187</u>
13	1	A/N	Authorization Source Code		<u>5.28</u>
14-17	4	NUM	Tran. Sequence Number		<u>5.205</u>
18-19	2	A/N	Response Code		<u>5.162</u>
20-25	6	A/N	Approval Code		<u>5.22</u>
26-31	6	NUM	Local Transaction Date	MMDDYY	<u>5.50</u>
32-37	6	NUM	Local Transaction Time	HHMMSS	5.113
38-53	16	A/N	Auth. Response Text		5.27
54	1	A/N	AVS Result Code		<u>5.11</u>

E-Format Contactless Using EMV Data Rules Authorization Response Message							
Byte	Length	Format	Field description	Content	Section		
55-66	12	A/N	Retrieval Reference Number		5.163		
57	1	A/N	Market Data Identifier		5.117		
	0-15	A/N	Transaction identifier		5.204		
	1	A/N	Field Separator	<fs></fs>	5.90		
	0-4	A/N	Validation Code		5.212		
	1	A/N	Field Separator	<fs></fs>	5.90		
	3	NUM	Group III Version Number	020	<u>5.95</u>		
	3	NUM	Group Separator	<gs></gs>	<u>5.96</u>		
	3	NUM	Group III Version Number	027	<u>5.95</u>		
	3	NUM	Group Separator	<gs></gs>	<u>5.96</u>		
	3	NUM	Group III Version Number	055	<u>5.95</u>		
	6-255	ASCII Hex	TLV Data, 2 characters per byte	Typically includes one or more issuer scripts (tag71 or 72) the response code (tag 8A) and issuer authentication data (tag 91)	5.193		
	1	ASCII	Field Separator	<fs></fs>	5.90		
	3	NUM	Group Separator	<gs></gs>	<u>5.96</u>		

7.1.1.16 Retail/restaurant - Chip Card Fallback- request

Table 7.16 Retail/restaurant - Chip Card Fallback- request

	D-Format Authorization Chip Card Fallback request (Retail/Restaurant)							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	5.157			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer BIN		<u>5.4</u>			
10-21	12	NUM	Merchant Number		5.129			
22-25	4	NUM	Store Number		5.177			
26-29	4	NUM	Terminal Number		5.187			
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74			
31	1	A/N	Industry Code	B, F, G, P, R	<u>5.101</u>			
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70			

D-Format Authorization Chip Card Fallback request (Retail/Restaurant) Byte Length Format Field description Content Sect						
35-37	3	NUM	Country Code	840 - United States	5.63	
	9		,			
38-46		A/N	City Code (ZIP)	Left-justified/space-filled	5.59	
47-48	2	NUM	Language Indicator	00 - English	5.110	
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192	
52-55	4	NUM	Merchant Category Code		<u>5.121</u>	
56	1	A/N	Requested ACI	Y	<u>5.161</u>	
57-60	4	NUM	Tran. Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	54- Purchase	5.201	
63	1	A/N	Cardholder ID Code	@ = Cardholder Signature P - No CVM Required	5.50	
64	1	A/N	Account Data Source	Z - Chip Card transaction processed as magnetic stripe from a chip capable terminal, due to card or terminal failure W - Chip Card transaction processed as magnetic stripe due to the terminal application not having any EMV applications in common with the chip card.	5.1	
-	5-76	A/N	Customer Data Field	Field Full Track 1 Full Track 2 Acct# <fs>ExpDate<fs></fs></fs>	5.71	
_	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>	
-	1	ASCII	Field Separator	<fs></fs>	5.90	
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>	
-	1-12	NUM	Transaction Amount		5.199	
=	1	ASCII	Field Separator	<fs></fs>	5.90	
-	1	ASCII	Field Separator	<fs></fs>	5.90	
-	1	ASCII	Field Separator	<fs></fs>	5.90	
	25	A/N	Merchant Name		5.32.1	
	13	A/N	Merchant Location/City		5.32.2	
	2	A/N	Merchant State		5.32.3	
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>	
	1	ASCII	Field Separator	<fs></fs>	5.90	

Byte	Length	Format	Field description	Content	Section
-	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	011	<u>5.95</u>
	1	A/N	Chip Condition Code	 0 - Service code does not begin with a two or six or fill for subsequent positions that are present. 1 - Service code begins with two or six; last CCPS read at the chip capable terminal was successful, or was not a chip transaction, or unknown. 2 - Service code begins with two or six; last transaction at the chip capable terminal was unsuccessful chip read. 	5.58
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		<u>5.73</u>
	4	A/N	Version ID		<u>5.215</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>
	3	NUM	Group III Version Number	027	<u>5.95</u>
	12	A/N	POS Data Code		<u>5.150</u>
	1	ASCII	Group Separator	<gs></gs>	5.96

7.1.1.17 Retail/restaurant - Chip Card Fallback- response

Table 7.17 Retail/restaurant - Chip Card Fallback- response

	E-Format Authorization Chip Card Fallback response (Retail/Restaurant)								
Byte	Length	Format	Field description	Content	Section				
1	1	A/N	Record Format	Е	5.157				
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21				
3	1	A/N	Message Delimiter		5.136				
4-9	6	NUM	Acquirer BIN		5.4				

	E-Format Authorization Chip Card Fallback response (Retail/Restaurant)						
Byte	Length	Format	Field description	Content	Section		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74		
31	1	A/N	Industry Code	B, F, G, P, R	5.101		
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>		
35-37	3	NUM	Country Code	840 - United States	5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59		
47-48	2	NUM	Language Indicator	00 - English	5.110		
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192		
52-55	4	NUM	Merchant Category Code		5.121		
56	1	A/N	Requested ACI	Y	5.161		
57-60	4	NUM	Tran. Sequence Number	0001	5.205		
61-62	2	A/N	Transaction Code	54- Purchase	5.201		
63	1	A/N	Cardholder ID Code	@ = Cardholder Signature P - No CVM Required	5.50		
64	1	A/N	Account Data Source	Z - Chip Card transaction processed as magnetic stripe from a chip capable terminal, due to card or terminal failure W - Chip Card transaction processed as magnetic stripe due to the terminal application not having any EMV applications in common with the chip card.	5.1		
-	5-76	A/N	Customer Data Field	Field Full Track 1 Full Track 2 Acct# <fs>ExpDate<fs></fs></fs>	5.71		
_	1	ASCII	Field Separator	<fs></fs>	5.90		
-	1	ASCII	Field Separator	<fs></fs>	5.90		
_	1	ASCII	Field Separator	<fs></fs>	5.90		
-	1-12	NUM	Transaction Amount		5.199		
	3	NUM	Group III Version Number	011	<u>5.95</u>		
	3	NUM	Group Separator	<gs></gs>	<u>5.96</u>		

	E-Format Authorization Chip Card Fallback response (Retail/Restaurant)						
Byte	Length	Format	Field description	Content	Section		
	3	NUM	Group III Version Number	020	5.95		
	3	NUM	Group Separator	<gs></gs>	5.96		
	3	NUM	Group III Version Number	027	<u>5.95</u>		
	3	NUM	Group Separator	<gs></gs>	<u>5.96</u>		

7.1.1.18 Credit account funding transaction [Visa] or debit payment transaction [MC])

Table 7.18 Credit integrated chip card (ICC - EMV format) - request (G3v055)

D-Format Authorization Request Message (Credit Account Funding Transaction [Visa] or Debit Payment Transaction [MC])						
Byte	Length	Format	Field description	Content	Section	
1	1	A/N	Record Format	D	5.157	
2	1	NUM	Application Type	0 - Single Transaction2 - Multiple Transaction4 - Interleaved	5.21	
3	1	A/N	Message Delimiter		5.136	
4-9	6	NUM	Acquirer BIN		<u>5.4</u>	
10-21	12	NUM	Merchant Number		5.129	
22-25	4	NUM	Store Number		5.177	
26-29	4	NUM	Terminal Number		<u>5.187</u>	
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74	
31	1	A/N	Industry Code	B, F, G, P, R	<u>5.101</u>	
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70	
35-37	3	NUM	Country Code	840 - United States	5.63	
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59	
47-48	2	NUM	Language Indicator	00 - English	5.110	
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192	
52-55	4	NUM	Merchant Category Code		5.121	
56	1	A/N	Requested ACI	Y	5.161	
57-60	4	NUM	Tran. Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	5G - Account Funding Tran./Payment Trans. 5.201		
63	1	A/N	Cardholder ID Code	N - Cardholder present AVS	<u>5.50</u>	

	D-Format Authorization Request Message (Credit Account Funding Transaction [Visa] or Debit Payment Transaction [MC])						
Byte	Length	Format	Field description	Content	Section		
64	1	A/N	Account Data Source	 @ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable 	5.1		
-	5-76	A/N	Customer Data Field	Acct# <fs>ExpDate<fs></fs></fs>	5.71		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	0-29	A/N	Field Separator <fs></fs>	Hex 1C	5.90		
-	1	A/N	Field Separator <fs></fs>	Hex 1C	<u>5.90</u>		
-	1-12	NUM	Transaction Amount		5.199		
_	1	A/N	Field Separator <fs></fs>	Hex 1C	5.90		
_	1	A/N	Field Separator <fs></fs>	Hex 1C	5.90		
-	1	A/N	Field Separator <fs></fs>	Hex 1C	5.90		
-	25	A/N	Merchant Name		5.32.1		
-	13	A/N	Merchant Location/City		5.32.2		
-	2	A/N	Merchant State		5.32.3		
_	1	A/N	Field Separator <fs></fs>	Hex 1C	5.90		
_	1	A/N	Field Separator <fs></fs>	Hex 1C	5.90		
_	1	A/N	Field Separator <fs></fs>	Hex 1C	5.90		
	3	NUM	Group III Version Number		<u>5.95</u>		
-	3	NUM	Group III Version Number	020	<u>5.95</u>		
-	6	A/N	Developer ID		5.73		
-	4	A/N	Version ID		5.215		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		

7.1.1.19 Cash advance - request

Table 7.19 Credit Cash advance - request

D-Format Authorization Request Message (Cash Advance)							
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	D	5.157		
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		

Byte	Length	Format	Field description	Content	Section
4-9	6	NUM	Acquirer BIN		<u>5.4</u>
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	<u>5.74</u>
31	1	A/N	Industry Code	B, F, G, P, R	<u>5.101</u>
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	<u>5.59</u>
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential		5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	N	5.161
57-60	4	NUM	Tran. Sequence Number		5.205
61-62	2	A/N	Transaction Code	55-Cash Advance	5.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	<u>5.50</u>
64	1	A/N	Account Data Source	D - Track 2 T - Manually keyed, Track two capable	5.1
-	5-76	A/N	Customer Data Field	Full Track 2, or Manually entered data	5.71
-	1	ASCII	Field Separator	<f\$></f\$>	5.90
-	0-29	A/N	Address Verification Data	<street address=""><apt no.><space><zip code=""></zip></space></apt </street>	5.51
-	1	ASCII	Field Separator	<f\$></f\$>	<u>5.90</u>
-	1	ASCII	Field Separator	<fs></fs>	5.90
	1-12	NUM	Transaction Amount		5.199
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	40	A/N	Card Acceptor Data	(Required)	5.32
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	020	5.95

	D-Format Authorization Request Message (Cash Advance)							
Byte	Length	Format	Field description	Content	Section			
	6	A/N	Developer ID		5.73			
	4	A/N	Version ID		5.215			
	1	ASCII	Field Separator	<fs></fs>	5.90			
	1	ASCII	Field Separator	<fs></fs>	5.90			

7.1.2 Debit/EBT

7.1.2.1 Debit non-confirmation - request

Table 7.20 <u>Debit non-confirmation - request</u>

Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	Т	<u>5.157</u>
2	1	NUM	Application Type	4 - Interleaved	<u>5.21</u>
3	1	A/N	Message Delimiter		<u>5.136</u>
4-9	6	NUM	Acquirer BIN		<u>5.4</u>
10-21	12	NUM	Merchant Number		<u>5.129</u>
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		<u>5.187</u>
30	1	A/N	Device Code	C, D, E, I, M, Q	<u>5.74</u>
31	1	A/N	Industry Code	R	<u>5.101</u>
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>
35-37	3	NUM	Country Code	840 - United States	<u>5.63</u>
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	<u>5.110</u>
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		<u>5.121</u>
56	1	A/N	Requested ACI	Y	<u>5.161</u>
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	93 - Purchase 94 - Purchase Return	5.201
63	1	A/N	Cardholder ID Code	K-DUK/PT PIN Entry	5.50
64	1	A/N	Account Data Source	D - Track 2	<u>5.1</u>
	5-76	A/N	Customer Data Field	Full Track 2	<u>5.71</u>

Byte	Length	Format	Field description	Content	Section
	1	A/N	Field Separator <fs></fs>		5.90
	32	A/N	Cardholder identification data	Encrypted PIN Block Data	5.51
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
	1-12	NUM	Transaction Amount		5.199
	1	A/N	Field Separator <fs></fs>		5.90
	0-12	NUM	Cash back amount		
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	25	A/N	Merchant Name	(Required)	5.32.1
	13	A/N	Merchant Location / City	(Required)	5.32.2
	2	A/N	Merchant State	(Required)	5.32.3
	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
	6	A/N	Approval Code	(Required)	5.165.1
	6	A/N	Local Transaction Date	(Required)	5.165.2
	6	A/N	Local Transaction Time	(Required)	5.165.3
	12	NUM	RRN	(Required)	5.165.5
	1	A/N	Field Separator <fs></fs>		5.90
	7	A/N	System Trace Audit Number (STAN) 6 bytes 1 byte SPACE (' ')	(Required)	5.166
	1	A/N	Field Separator <fs></fs>		5.90
	1-30	A/N	Sharing Group		5.176
	1	A/N	Field Separator <fs></fs>		5.90
	0 or 9	NUM	Merchant ABA Number		5.118
	0 or 4	A/N	Merch. Settlement Agent Number		5.132
	1	A/N	Field Separator <fs></fs>		5.90
	6	NUM	Agent Bank Number		5.12
	6	NUM	Agent Chain Number		5.13
	3	NUM	Batch Number		5.31
	1	A/N	Reimbursement Attribute		5.159

T-Format Authorization Request Message (debit non-confirm)								
Byte	Length	Format	Field description	Content	Section			
	0 or 8	NUM	Original Purchase Data	MMDDHHMM (Returns only)	5.142			
	1	A/N	Field Separator <fs></fs>		5.90			
	3	NUM	Group III Version Number	020	<u>5.95</u>			
	6	A/N	Developer ID		5.73			
	4	A/N	Version ID		5.215			
	1	A/N	Field Separator <fs></fs>		5.90			
	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			

7.1.2.2 Debit authorization reversal - request

Table 7.21 <u>Debit authorization reversal - request</u>

		T-Form	at Authorization Request Me	essage (Debit reversal)	
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	Т	5.157
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran. 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	R	<u>5.101</u>
32-34	3	NUM	Currency Code	840 - U.S.	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	<u>5.110</u>
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	N	<u>5.161</u>

Byte	Length	Format	Field description	Content	Section
57-60	4	NUM	Transaction Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	A3, A4	5.201
63	1	A/N	Cardholder ID	@, M or Z	5.50
64	1	A/N	Account Data Source	@, T or X	<u>5.1</u>
	5-76	A/N	Customer Data Field	Acct # <fs> Exp Date <fs></fs></fs>	5.71
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	1-12	NUM	Total Authorized Amount		5.193
	1	A/N	Field Separator <fs></fs>		5.90
	0-12	NUM	Settlement Amount		5.169
	1	A/N	Field Separator <fs></fs>		5.90
	0-4	A/N	Market Specific Data		5.117
	1	A/N	Field Separator <fs></fs>		5.90
	25	A/N	Merchant Name		5.32.1
	13	A/N	Merchant Location/City		5.32.2
	2	A/N	Merchant State		5.32.3
	1	A/N	Field Separator <fs></fs>		5.90
	0-15	A/N	Reversal Transaction ID		5.167
	1	A/N	Field Separator <fs></fs>		5.90
	6	A/N	Approval Code		5.22
	6	NUM	Local Tran Date		5.112
	6	NUM	Local Tran Time		5.113
	12	A/N	Retrieval Reference Number		5.163
	1	A/N	Field Separator <fs></fs>		5.90
	6	A/N	System Trace Audit Number (STAN)		5.179
	1	A/N	Network ID Code		5.139
	1	A/N	Field Separator <fs></fs>		5.90
	1-30	A/N	Sharing Group		5.176
	1	A/N	Field Separator <fs></fs>		5.90
	0 or 9	NUM	Merchant ABA Number		5.118

		T-Form	at Authorization Request Mes	ssage (Debit reversa	l)
Byte	Length	Format	Field description	Content	Section
	0 or 4	A/N	Merchant Settlement Agent Number		5.132
	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
	6	NUM	Agent Bank Number		5.12
	6	NUM	Agent Chain Number		5.13
	3	NUM	Batch Number		5.31
	1	A/N	Reimbursement Attribute		<u>5.158</u>
	1	A/N	Field Separator <fs></fs>		5.90
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		5.73
	4	A/N	Version ID		<u>5.215</u>
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90

7.1.2.3 Debit card/EBT - response

Table 7.22 <u>Debit card/EBT - response</u>

	U-Format Authorization Response Message (Debit Card/EBT)						
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	U	5.157		
2	1	NUM	Application Type		5.21		
3	1	A/N	Message Delimiter		5.136		
4	1	A/N	Returned ACI		5.164		
5-8	4	NUM	Store Number		5.177		
9-12	4	NUM	Terminal Number		5.187		
13	1	A/N	Authorization Source Code		5.28		
14-17	4	NUM	Transaction Sequence Number		5.205		
18-19	2	A/N	Response Code	XX	5.162		
20-25	6	A/N	Approval Code		5.22		
26-31	6	NUM	Local Transaction Date	MMDDYY	5.112		
32-37	6	NUM	Local Transaction Time	HHMMSS	5.113		
38-53	16	A/N	Auth. Response Text		5.27		
54	1	A/N	AVS Result Code		5.11		
55-66	12	A/N	Retrieval Reference Number		5.163		

		U-Forma	t Authorization Response Me	ssage (Debit Card/E	BT)
Byte	Length	Format	Field description	Content	Section
67	1	A/N	Market Specific Data ID		5.117
-	0-15	A/N	Transaction Identifier		5.204
-	1	A/N	Field Separator <fs></fs>		5.90
-	0-4	A/N	Validation Code		5.212
-	1	A/N	Field Separator <fs></fs>		5.90
-	6	NUM	Acquirer BIN		5.4
-	8	A/N	Host Message Identifier		<u>5.98</u>
-	6	NUM	System Trace Audit Number		5.179
-	1	A/N	Network Identification Code		5.139
-	4	NUM	Settlement Date	MMDD	5.175
-	1	A/N	Field Separator <fs></fs>		5.90
	3	NUM	Group III Version Number		5.95

7.1.2.4 Debit account funding transaction [Visa] or debit payment transaction [MC]) - request

Table 7.23 Debit account funding transaction [Visa] or debit payment transaction [MC]) - request

	T-Format Authorization Request Message (Debit Account Funding Transaction [Visa] or Debit Payment Transaction [MC])							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	Т	<u>5.157</u>			
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran. 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4			
10-21	12	NUM	Merchant Number		5.129			
22-25	4	NUM	Store Number		5.177			
26-29	4	NUM	Terminal Number		5.187			
30	1	A/N	Device Code	C, D, E, I, M, Q	<u>5.74</u>			
31	1	A/N	Industry Code	R	<u>5.101</u>			
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>			
35-37	3	NUM	Country Code	840 - United States	<u>5.63</u>			
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59			

Byte Length Format Field description Content Section								
47-48	2	NUM	Language Indicator	00 - English	5.110			
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192			
52-55	4	NUM	Merchant Category Code		5.121			
56	1	A/N	Requested ACI	N	<u>5.161</u>			
57-60	4	NUM	Transaction Sequence Number	0001	5.205			
61-62	2	A/N	Transaction Code	9G - Account Funding Trans./Payment Trans.	5.201			
53	1	A/N	Cardholder ID Code	K - DUK/PT PIN Entry	5.50			
54	1	A/N	Account Data Source	D - Track 2	5.1			
	5-76	A/N	Customer Data Field	Full Track 2	5.71			
	1	A/N	Field Separator <fs></fs>		5.90			
	32	A/N	Cardholder identification data	Encrypted PIN Block Data	5.51			
	1	A/N	Field Separator <fs></fs>		5.90			
	1	A/N	Field Separator <fs></fs>		5.90			
	1-12	NUM	Transaction Amount		5.199			
	1	A/N	Field Separator <fs></fs>		5.90			
-	0-12	NUM	Cash Back Amount					
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	25	A/N	Merchant Name	(Required)	5.32.1			
-	13	A/N	Merchant Location/City	(Required)	5.32.2			
-	2	A/N	Merchant State	(Required)	5.32.3			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	6	A/N	Approval Code	(Required)	5.165.1			
-	6	A/N	Local Transaction Date	(Required)	5.165.2			
-	6	A/N	Local Transaction Time	(Required)	5.165.3			
-	12	NUM	RRN	(Required)	5.165.5			
	1	A/N	Field Separator <fs></fs>		5.90			

	T-Format Authorization Request Message (Debit Account Funding Transaction [Visa] or Debit Payment Transaction [MC])							
Byte	Length	Format	Field description	Content	Section			
-	7	A/N	System Trace Audit Number (STAN) 6 bytes, 1 byte SPACE (' ')	(Required)	5.166.1			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1-30	A/N	Sharing Group		5.176			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	0 or 9	NUM	Merchant ABA Number		5.118			
-	0 or 4	A/N	Merch. Settlement Agent Number		5.132			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	6	NUM	Agent Bank Number		5.12			
-	6	NUM	Agent Chain Number		5.13			
-	3	NUM	Batch Number		<u>5.31</u>			
-	1	A/N	Reimbursement Attribute		5.158			
-	0 or 8	NUM	Original Purchase Data	MMDDHHMM (returns only)	5.142			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	3	NUM	Group III Version Number	020	5.95			
-	6	A/N	Developer ID		5.73			
-	4	A/N	Version ID		5.215			
-	1	A/N	Field Separator <fs></fs>		5.90			
_	1	A/N	Field Separator <fs></fs>		5.90			

7.1.2.5 Debit cardholder funds transfer [Visa] - request

Table 7.24 Debit cardholder funds transfer [Visa] - request

T-Format Authorization Request Message (Debit Cardholder Funds Transfer [Visa])								
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	Т	5.157			
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran. 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer BIN		5.4			
10-21	12	NUM	Merchant Number		5.129			
22-25	4	NUM	Store Number		5.177			

T-Format Authorization Request Message (Debit Cardholder Funds Transfer [Visa])					
Byte	Length	Format	Field description	Content	Section
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	R	<u>5.101</u>
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		<u>5.121</u>
56	1	A/N	Requested ACI	N	<u>5.161</u>
57-60	4	NUM	Transaction Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	9J - Account Funding Tran./Payment Tran.	5.201
63	1	A/N	Cardholder ID Code	K - DUK/PT PIN Entry	5.50
64	1	A/N	Account Data Source	D - Track 2	<u>5.1</u>
-	5-76	A/N	Customer Data Field	Full Track 2	5.71
-	1	A/N	Field Separator <fs></fs>		5.90
-	32	A/N	Cardholder identification data	Encrypted PIN Block Data	5.51
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Transaction Amount		5.199
-	1	A/N	Field Separator <fs></fs>		5.90
-	0-12	NUM	Cash back Amount		
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	25	A/N	Merchant Name	(Required)	5.32.1
-	13	A/N	Merchant Location/City	(Required)	5.32.2
-	2	A/N	Merchant State	(Required)	5.32.3
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90

	T-Format Authorization Request Message (Debit Cardholder Funds Transfer [Visa])					
Byte	Length	Format	Field description	Content	Section	
-	6	A/N	Approval Code	(Required)	5.165.1	
-	6	A/N	Local Transaction Date	(Required)	5.165.2	
-	6	A/N	Local Transaction Time	(Required)	5.165.3	
-	12	NUM	RRN	(Required)	5.165.5	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	7	A/N	System Trace Audit Number (STAN) 6 bytes, 1 byte SPACE (' ')	(Required)	5.166.1	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1-30	A/N	Sharing Group		5.176	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	0 or 9	NUM	Merchant ABA Number		5.118	
-	0 or 4	A/N	Merch Settlement Agent Number		5.132	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	6	NUM	Agent Bank Number		5.12	
-	6	NUM	Agent Chain Number		5.13	
-	3	NUM	Batch Number		<u>5.31</u>	
-	1	A/N	Reimbursement Attribute		5.158	
-	0 or 8	NUM	Original Purchase Data	MMDDHHMM (returns only)	5.142	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	3	NUM	Group III Version Number	020	5.95	
-	6	A/N	Developer ID		5.73	
-	4	A/N	Version ID		5.215	
-	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	

7.1.2.6 Electronic benefits transfer (EBT) - request

Table 7.25 Electronic benefits transfer (EBT) - request

T-Format Authorization Request Message (EBT)						
Byte	Length	Format	Field description	Content	Section	
1	1	A/N	Record Format	T	5.157	

	T-Format Authorization Request Message (EBT)						
Byte	Length	Format	Field description	Content	Section		
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran. 4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74		
31	1	A/N	Industry Code	R	<u>5.101</u>		
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70		
35-37	3	NUM	Country Code	840 - United States	5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59		
47-48	2	NUM	Language Indicator	00 - English	5.110		
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192		
52-55	4	NUM	Merchant Category Code		5.121		
56	1	A/N	Requested ACI	Y	<u>5.161</u>		
57-60	4	NUM	Transaction Sequence Number	0001	5.205		
61-62	2	A/N	Transaction Code	92 - EBT/FS Return 96 - EBT/CD Cash Withdrawal 98 - EBT/FS Purchase 9E - EBT/FS Electronic Voucher 9F - EBT/CD Purchase or Purchase with Cash back			
63	1	A/N	Cardholder ID Code	K - DUK/PT PIN Entry Z - Cardholder Signature - Terminal has a PIN pad	5.50		
64	1	A/N	Account Data Source	D - Track 2 T - Manual Entry/T2 capable X - Manual Entry/T1 capable			
-	5-76	A/N	Customer Data Field	Full Track 2 or manually entered data (EBT)	<u>5.71</u>		

Byte	Length Format		Field description	Content	Section
-	1	A/N	Field Separator <fs></fs>		5.90
_	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	<u>5.51</u>
	1	A/N	Field Separator <fs></fs>	71	5.90
_	1	A/N	Field Separator <fs></fs>		5.90
	1-12	NUM	Transaction Amount		5.199
_	1	A/N	Field Separator <fs></fs>		5.90
_	0-12	NUM	Secondary Amount		5.169
_	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
-	25	A/N	Merchant Name	(Required)	5.32.1
_	13	A/N	Merchant Location/City	(Required)	5.32.2
	2	A/N	Merchant State	(Required)	5.32.3
_	1	A/N	Field Separator <fs></fs>	,	5.90
_	1	A/N	Field Separator <fs></fs>		5.90
-	6	A/N	Approval Code	(Required)	5.165.1
-	6	A/N	Local Transaction Date	(Required)	5.165.2
-	6	A/N	Local Transaction Time	(Required)	5.165.3
-	12	NUM	RRN	(Required)	5.165.5
_	1	A/N	Field Separator <fs></fs>	,	5.90
-	7	A/N	System Trace Audit Number (STAN) 6 bytes, 1 byte SPACE (' ')	(Required)	5.166.1
_	1	A/N	Field Separator <fs></fs>		5.90
_	1-30	A/N	Sharing Group	K	5.176
_	1	A/N	Field Separator <fs></fs>		5.90
_	0 or 9	NUM	Merchant ABA Number		5.118
-	0 or 4	A/N	Merch. Settlement Agent Number		5.132
_	1	A/N	Field Separator <fs></fs>		5.90
-	6	NUM	Agent Bank Number		5.12
-	6	NUM	Agent Chain Number		<u>5.13</u>
-	3	NUM	Batch Number		5.31
-	1	A/N	Reimbursement Attribute		5.158
=	1	A/N	Field Separator <fs></fs>		5.90
_	3	NUM	Group III Version Number	013	5.95

	T-Format Authorization Request Message (EBT)						
Byte	Length	Format	Field description	Content	Section		
-	0 or 7	A/N	FCS ID		5.89		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	0 or 15	A/N	Electronic Voucher Serial Number		5.77		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	0 or 6	A/N	Voucher Approval Code		5.216		
-	1	ASCII	Group Separator		5.96		
_	3	NUM	Group III Version Number	020	5.95		
_	6	A/N	Developer ID		5.73		
_	4	A/N	Version ID		5.215		
-	1	A/N	Field Separator <fs></fs>		5.90		
	1	A/N	Field Separator <fs></fs>		5.90		

7.1.2.7 Electronic benefits transfer (EBT) non-confirmation - request

Table 7.26 EBT non-confirm - request

	T-Format Authorization Request Message (EBT Non-confirm)					
Byte	Length	Format	Field description	Content	Section	
1	1	A/N	Record Format	T	5.157	
2	1	NUM	Application Type	4-Interleaved	5.21	
3	1	A/N	Message Delimiter		5.136	
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4	
10-21	12	NUM	Merchant Number		5.129	
22-25	4	NUM	Store Number		5.177	
26-29	4	NUM	Terminal Number		5.187	
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74	
31	1	A/N	Industry Code	R	<u>5.101</u>	
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>	
35-37	3	NUM	Country Code	840 - United States	5.63	
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59	
47-48	2	NUM	Language Indicator	00 - English	5.110	
49-51	3	NUM	Time Zone Differential		5.192	
52-55	4	NUM	Merchant Category Code		5.121	
56	1	A/N	Requested ACI	Y	5.161	

		T-Format	t Authorization Request Mess	sage (EBT Non-confirm)	
Byte	Length	Format	Field description	Content	Section
57-60	4	NUM	Transaction Sequence Number		5.205
61-62	2	A/N	Transaction Code	9E - Food Stamps Electronic Voucher 9F - Cash benefits: Purchase or Purchase with Cash back	5.201
63	1	A/N	Cardholder ID Code	K - DUK/PT PIN Entry Z - Cardholder Signature - Terminal has a PIN pad	5.50
64	1	A/N	Account Data Source	D - Track 2 T - Manual Entry/T2 capable X - Manual Entry/T1 capable	5.1
-	5-76	A/N	Customer Data Field	Full Track 2 or manually entered data (EBT)	<u>5.71</u>
-	1	ASCII	Field Separator	<fs></fs>	5.90
-	0-29	A/N	Cardholder ID Data	Encrypted PIN Block Data	<u>5.51</u>
-	1	ASCII	Field Separator	<fs></fs>	5.90
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
-	1-12	NUM	Transaction Amount		5.199
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
-	0-12	NUM	Secondary Amount		5.169
-	1	ASCII	Field Separator	<fs></fs>	5.90
-	1	ASCII	Field Separator	<fs></fs>	5.90
-	40	A/N	Card Acceptor Data	(Required)	<u>5.32</u>
-	1	ASCII	Field Separator	<fs></fs>	5.90
-	1	ASCII	Field Separator	<fs></fs>	5.90
-	6	A/N	Approval Code	(Required)	5.165.1
-	6	A/N	Local Transaction Date	(Required)	<u>5.165.2</u>
-	6	A/N	Local Transaction Time	(Required)	<u>5.165.3</u>
-	12	NUM	RRN	(Required)	5.165.5
-	1	ASCII	Field Separator	<fs></fs>	5.90
-	7	A/N	System Trace Audit Number (STAN) 6 bytes, 1 byte SPACE (' ')	(Required)	5.166.1
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
-	1-30	A/N	Sharing Group	K	5.176
-	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>

		T-Format	Authorization Request Mess	age (EBT Non-confir	m)
Byte	Length	Format	Field description	Content	Section
-	0 or 9	NUM	Merchant ABA Number		<u>5.118</u>
	0 or 4	A/N	Merch. Settlement Agent Number		5.132
	1	ASCII	Field Separator	<fs></fs>	5.90
	6	NUM	Agent Bank Number		5.12
	6	NUM	Agent Chain Number		5.13
	3	NUM	Batch Number		5.31
	1	A/N	Reimbursement Attribute		5.158
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	013	5.95
	0 or 7	A/N	FCS ID		5.89
	1	ASCII	Field Separator	<fs></fs>	5.90
	0 or 15	A/N	Electronic Voucher Serial Number		5.77
	1	ASCII	Field Separator	<fs></fs>	5.90
	0 or 6	A/N	Voucher Approval Code		5.216
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	020	5.95
	6	A/N	Developer ID		5.73
	4	A/N	Version ID		5.215
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90

7.1.2.8 Electronic benefits transfer (EBT) - confirmation message

Table 7.27 Electronic benefits transfer (EBT) non-confirmation - request

	Authorization Request Message - Confirmation Message (EBT)								
Byte	Length	Format	Field description	Content	Section				
1	1	A/N	Record Format	V	5.157				
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran.	5.21				
3	1	A/N	Message Delimiter		5.136				
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4				
10-17	8	A/N	Host Message Identifier		5.98				

	Authorization Request Message - Confirmation Message (EBT)							
Byte	Length	Format	Field description	Content	Section			
18-23	6	NUM	System Trace Audit Number		5.179			

7.1.2.9 Direct debit - request

Table 7.28 <u>Direct debit - request</u>

	T-Format Authorization Request Message (Direct Debit)						
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	Т	5.157		
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran.	<u>5.21</u>		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74		
31	1	A/N	Industry Code	R	<u>5.101</u>		
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70		
35-37	3	NUM	Country Code	840 - United States	5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59		
47-48	2	NUM	Language Indicator	00 - English	5.110		
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192		
52-55	4	NUM	Merchant Category Code		<u>5.121</u>		
56	1	A/N	Requested ACI	Y	<u>5.161</u>		
57-60	4	NUM	Transaction Sequence Number	0001	5.205		
61-62	2	A/N	Transaction Code	93 - Purchase	5.201		
63	1	A/N	Cardholder ID Code	K - DUK/PT PIN Entry	5.50		
64	1	A/N	Account Data Source	D - Track 2	<u>5.1</u>		
-	5-76	A/N	Customer Data Field	Full Track 2	5.71		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	<u>5.51</u>		

	T-Format Authorization Request Message (Direct Debit)							
Byte	Length	Format	Field description	Content	Section			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
_	1	A/N	Field Separator <fs></fs>		5.90			
_	1-12	NUM	Transaction Amount		5.199			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	0-12	NUM	Cash back Amount					
-	1	A/N	Field Separator <fs></fs>		5.90			
=	1	A/N	Field Separator <fs></fs>		5.90			
-	25	A/N	Merchant Name	(Required)	5.32.1			
-	13	A/N	Merchant Location/City	(Required)	5.32.2			
-	2	A/N	Merchant State	(Required)	5.32.3			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	6	A/N	Approval Code	(Required)	5.165.1			
-	6	A/N	Local Transaction Date	(Required)	5.165.2			
-	6	A/N	Local Transaction Time	(Required)	5.165.3			
-	12	NUM	RRN	(Required)	5.165.5			
_	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>			
-	7	A/N	System Trace Audit Number (STAN) 6 bytes, 1 byte SPACE ('')	(Required)	5.166.1			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
-	1-30	A/N	Sharing Group		5.176			
=	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
-	0 or 9	NUM	Merchant ABA Number		5.118			
-	0 or 4	A/N	Merch. Settlement Agent Number		5.132			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
=	6	NUM	Agent Bank Number		5.12			
-	6	NUM	Agent Chain Number		5.13			
-	3	NUM	Batch Number		5.31			
-	1	A/N	Reimbursement Attribute		5.158			
-	0 or 8	NUM	Original Purchase Data	MMDDHHMM (Returns Only)	5.142			
_	1	A/N	Field Separator <fs></fs>		5.90			
_	3	NUM	Group III Version Number	020	<u>5.95</u>			

		T-Forn	nat Authorization Request Me	essage (Direct Debit)	
Byte	Length	Format	Field description	Content	Section
-	6	A/N	Developer ID		<u>5.73</u>
-	4	A/N	Version ID		5.215
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90

7.1.2.10 Direct debit - confirmation message

Table 7.29 Direct Debit/EBT - confirmation message

	T-Forma	at Authoriz	ation Request Message - Co	nfirmation Message (Direct De	ebit)
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	V	5.157
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran.	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-17	8	A/N	Host Message Identifier		5.98
18-23	6	NUM	System Trace Audit Number		5.179

7.1.2.11 Debit integrated chip card (ICC - EMV format) - request

All group III version 55 alpha-numeric format data elements are hexadecimal values unless otherwise specified.

Table 7.30 Debit integrated chip card (ICC - EMV format) - request

	T-Format EMV Authorization Request Message (Direct Debit)								
Byte	Length	Format	Field description	Content	Section				
1	1	A/N	Record Format	Т	5.157				
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran. 4 - Interleaved	5.21				
3	1	A/N	Message Delimiter		<u>5.136</u>				
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4				
10-21	12	NUM	Merchant Number		5.129				

T-Format EMV Authorization Request Message (Direct Debit) Byte Length Format Field description Content						
	_		•	Content	Section	
22-25	4	NUM	Store Number		5.177	
26-29	4	NUM	Terminal Number		5.187	
30	1	A/N	Device Code	B, C, D, E, I, M, Q	<u>5.74</u>	
31	1	A/N	Industry Code	A, B, F, G, H, L, O, P, R	<u>5.101</u>	
32-34	3	NUM	Currency Code		<u>5.70</u>	
35-37	3	NUM	Country Code		5.63	
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59	
47-48	2	NUM	Language Indicator	00 - English	5.110	
49-51	3	NUM	Time Zone Differential	008 (GMT + 8 hours, non-daylight savings)	5.192	
52-55	4	NUM	Merchant Category Code		5.121	
56	1	A/N	Requested ACI	Y	<u>5.161</u>	
57-60	4	NUM	Transaction Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	93 - Purchase	5.201	
63	1	A/N	Cardholder ID Code	F - PIN Authentication by ICC (Chip Card) (Offline PIN authentication for debit and credit chip card transactions) K - Personal Identification Number 32-character DUK/PT. (Online PIN authentication for debit and credit transactions) Z - Cardholder Signature - Terminal has a PIN pad	5.50	
64	1	A/N	Account Data Source	G - Chip Card Read Data(ICC)	<u>5.1</u>	
_	1	ASCII	Field Separator	<fs></fs>	5.90	
_	5-76	A/N	Customer Data Field	Full Track 2	<u>5.71</u>	
_	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>	
-	32	A/N	Cardholder Identification Data	Encrypted PIN Block Data	<u>5.51</u>	
_	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>	
_	1	ASCII	Field Separator	<fs></fs>	5.90	
_	1-12	NUM	Transaction Amount		5.199	

T-Format EMV Authorization Request Message (Direct Debit)						
Byte	Length	Format	Field description	Content	Section	
=	1	ASCII	Field Separator	<fs></fs>	5.90	
-	0 - 12	NUM	Secondary Amount		5.169	
-	1	ASCII	Field Separator	<fs></fs>	5.90	
-	1	ASCII	Field Separator	<fs></fs>	5.90	
	40	A/N	Card Acceptor Data	(Required)	5.32	
-	1	ASCII	Field Separator	<fs></fs>	5.90	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	6	A/N	Approval Code	(Required)	5.165.1	
	6	A/N	Local Transaction Date	(Required)	5.165.2	
	6	A/N	Local Transaction Time	(Required)	5.165.3	
	12	NUM	RRN	(Required)	5.165.5	
	1	ASCII	Field Separator	<fs></fs>	5.90	
=	7	A/N	System Trace Audit Number (STAN) 6 bytes, 1 byte SPACE (' ')	(Required)	5.166.1	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	1-30	A/N	Sharing Group		5.176	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	0, 9	NUM	Merchant ABA Number		5.118	
	0, 4	A/N	Merch. Settlement Agent Number		5.132	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	6	NUM	Agent Bank Number		5.12	
	6	NUM	Agent Chain Number		5.13	
	3	NUM	Batch Number		5.31	
	1	A/N	Reimbursement Attribute		5.158	
-	0, 8	NUM	Original Purchase Data	MMDDHHMM (Returns Only)	5.142	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	3	NUM	Group III Version Number	020	<u>5.95</u>	
	6	A/N	Developer ID		5.73	
	4	A/N	Version ID		5.215	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	3	NUM	Group Separator	<gs></gs>	<u>5.96</u>	

	T-Format EMV Authorization Request Message (Direct Debit)							
Byte	Length	Format	Field description	Content	Section			
-	3	NUM	Group III Version Number	027	<u>5.95</u>			
-	12	A/N	POS Data Code		5.150			
-	3	NUM	Group Separator	<gs></gs>	5.96			
-	3	NUM	Group III Version Number	045 055	5.95			
-	6-255	ASCII Hex	TLV EMV Tag Data	Send all EMV Data tags that are supported by the card and terminal interaction. Expected tags can be found in Appendix A.	5.193			
-	1	ASCII	Field Separator	<fs></fs>	5.90			
-	3	NUM	Group Separator	<gs></gs>	5.96			

7.1.2.12 Debit integrated chip card (ICC - EMV format) - response

All group III version 55 alpha-numeric format data elements are hexadecimal values unless otherwise specified.

Table 7.31 Debit integrated chip card (ICC - EMV format) - response

		T-Format	EMV Authorization Response	Message (Direct Debit)	
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	U	<u>5.157</u>
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran. 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		<u>5.136</u>
4	1	NUM	Return ACI		<u>5.164</u>
5-8	4	NUM	Store Number		<u>5.177</u>
9-12	4	NUM	Terminal Number		<u>5.187</u>
13	1		Authorization Source Code		<u>5.28</u>
14-17	4	NUM	Transaction Sequence Number		<u>5.205</u>
18-19	2	A/N	Response Code		<u>5.162</u>
20-25	6	A/N	Approval Code		<u>5.22</u>
26-31	6	NUM	Local Transaction Date	MMDDYY	<u>5.112</u>
32-37	6	NUM	Local Transaction Time HHMMSS		5.113

Byte	Length	Format	Field description	Content	Section
38-53	16	A/N	Auth. Response Text		5.27
54	1	A/N	AVS Result Code		<u>5.11</u>
55-66	12	A/N	Retrieval Reference Number		5.163
67	1	A/N	Market Data Identifier		5.117
	0-15	A/N	Transaction Identifier		5.204
-	1	ASCII	Field Separator	<fs></fs>	5.90
-	0-4	A/N	Validation Code		5.212
-	1	A/N	Field Separator	<fs></fs>	5.90
-	6	NUM	Acquirer BIN		<u>5.4</u>
	8	A/N	Host Message Identifier		5.98
	6	NUM	System Trace Audit Number		5.179
	1	A/N	Network Identification Code		5.139
	4	NUM	Settlement Date	MMDD	<u>5.175</u>
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	027	5.95
	3	NUM	Group Separator	<gs></gs>	5.96
-	3	NUM	Group III Version Number	055	5.95
-	6-255	ASCII Hex	TLV Data, 2 characters per byte	Typically includes one or more issuer scripts (tag 71 or 72) the response code (tag 8A) and issuer authentication data (tag 91)	5.193
-	1	ASCII	Field Separator	<fs></fs>	5.90
_	3	NUM	Group Separator	<gs></gs>	<u>5.96</u>

7.1.3 ATM

7.1.3.1 ATM cash disbursement - request

Table 7.32 ATM balance inquiry - request

	T-Format Authorization Request Message (ATM Cash Disbursement Non-Confirm)							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	Т	<u>5.157</u>			
2	1	NUM	Application Type	4 - Interleaved	<u>5.21</u>			
3	1	A/N	Message Delimiter		<u>5.136</u>			

Byte	Length	Format	Field description	Content	Section
4- 9	6	NUM	Acquirer BIN		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	В	<u>5.74</u>
31	1	A/N	Industry Code	В	5.101
32-34	3	NUM	Currency Code	840 – USD	5.70
35-37	3	NUM	Country Code	840 – United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	5.59
47-48	2	NUM	Language Indicator	00 – English	5.110
49-51	3	NUM	Time Zone Differential	705 – EST 706 – CST 707 – MST 708 – PST	5.192
52-55	4	NUM	Merchant Category Code	6011	5.121
56	1	A/N	Requested ACI	N	5.161
57-60	4	NUM	Trans. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	B1 – ATM Cash Disbursement	5.201
63	1	A/N	Cardholder ID Code	J - PIN at Automated Dispensing Machine 32- character DUK/PT	5.50
64	1	A/N	Account Data Source	D – Track 2	<u>5.1</u>
	5-76	A/N	Customer Data Field	Full Track 2	<u>5.71</u>
	1	ASCII	Field Separator	<fs></fs>	5.90
	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	<u>5.51</u>
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1-12	NUM	Transaction Amount		5.199
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	25	A/N	Merchant Name	(Required)	5.32.1
	13	A/N	Merchant Location/City	(Required)	5.32.2
	2	A/N	Merchant State	(Required)	5.32.3
	1	ASCII	Field Separator	<fs></fs>	5.90

-			zation Request Message (ATM Ca		<u> </u>
3yte	Length	Format	Field description	Content	Section
	1	ASCII	Field Separator	<fs></fs>	5.90
	30	A/N	Approval Code - Space Filled if not available (6 bytes)	(Required)	<u>5.165</u>
			Local Transaction Date - (6 bytes)		
			Local Transaction Time - (6 bytes)		
			Retrieval Reference Number - (12 bytes)		
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	7	A/N	System Trace Audit Number (STAN) 6 bytes	(Required)	
			1 bytes SPACE ('')		
	1	ASCII	Field Separator	<fs></fs>	5.90
	1-30	A/N	Sharing Group		5.176
	1	ASCII	Field Separator	<fs></fs>	5.90
	0 or 9	NUM	Merchant ABA		5.118
	0 or 4	A/N	Merchant Settlement Agent Number		5.132
	1	ASCII	Field Separator	<fs></fs>	5.90
	6	NUM	Agent Bank Number		5.12
	6	NUM	Agent Chain Number		5.13
	3	NUM	Batch Number		<u>5.31</u>
	1	A/N	Reimbursement Attribute		5.158
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		5.73
	4	A/N	Version ID		<u>5.215</u>
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	025	5.95
	9	A/N	Transaction Fee Amount	required in ATM messages	5.203
	1	ASCII	Field Separator	<fs></fs>	5.90

	T-Format Authorization Request Message (ATM Cash Disbursement Non-Confirm)							
Byte	Length	Format	Field description	Content	Section			
	1	ASCII	Group Separator	<g\$></g\$>	5.96			
	3	NUM	Group III Version Number	044	<u>5.95</u>			
	0 or 2	NUM	Account Type (From)	10 = Savings account 20 = Checking account 30 = Credit Card account 40 = Universal	5.2			
	1	ASCII	Field Separator	<fs></fs>	5.90			
	0 or 2	NUM	Account Type (To)	00 = Not Applicable	<u>5.3</u>			
	1	ASCII	Field Separator	<fs></fs>	5.90			

7.1.3.2 ATM balance inquiry - request

Table 7.33 ATM balance inquiry - request

	T-Fo	rmat Autho	orization Request Message (AT	M Balance Inquiry Non-Confirm)
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	Т	5.157
2	1	NUM	Application Type	4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer BIN		<u>5.4</u>
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	В	5.74
31	1	A/N	Industry Code	В	5.101
32-34	3	NUM	Currency Code	840 – USD	5.70
35-37	3	NUM	Country Code	840 – United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	5.59
47-48	2	NUM	Language Indicator	00 – English	5.110
49-51	3	NUM	Time Zone Differential	705 – EST 706 – CST 707 – MST 708 – PST	5.192
52-55	4	NUM	Merchant Category Code	6011	5.121
56	1	A/N	Requested ACI	N	5.161
57-60	4	NUM	Trans. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	B2 – ATM Balance Inquiry	5.201

Byte	Length	Format	Field description	Content	Section
63	1	A/N	Cardholder ID Code	J - PIN at Automated Dispensing Machine 32- character DUK/PT	5.50
64	1	A/N	Account Data Source	D – Track 2	<u>5.1</u>
	5-76	A/N	Customer Data Field	Full Track 2	<u>5.71</u>
	1	ASCII	Field Separator	<fs></fs>	5.90
	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	5.51
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1-12	NUM	Transaction Amount		5.199
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	25	A/N	Merchant Name	(Required)	5.32.1
	13	A/N	Merchant Location/City	(Required)	5.32.2
	2	A/N	Merchant State	(Required)	5.32.3
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	30	A/N	Approval Code - Space Filled if not available (6 bytes)	(Required)	5.165
			Local Transaction Date - (6 bytes)		
			Local Transaction Time - (6 bytes)		
			Retrieval Reference Number - (12 bytes)		
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	7	A/N	System Trace Audit Number (STAN) 6 bytes	(Required)	
			1 bytes SPACE (' ')		
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1-30	A/N	Sharing Group		5.176
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	0 or 9	NUM	Merchant ABA		5.118

Byte	Length	Format	Field description	Content	Section
	0 or 4	A/N	Merchant Settlement Agent Number		5.132
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	6	NUM	Agent Bank Number		5.12
	6	NUM	Agent Chain Number		5.13
	3	NUM	Batch Number		<u>5.31</u>
	1	A/N	Reimbursement Attribute		5.158
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		5.73
	4	A/N	Version ID		5.215
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	025	<u>5.95</u>
	9	A/N	Transaction Fee Amount	required in ATM messages	5.203
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	044	<u>5.95</u>
	0 or 2	NUM	Account Type (From)	10 = Savings account 20 = Checking account 30 = Credit Card account 40 = Universal	5.2
	1	ASCII	Field Separator	<fs></fs>	5.90
	0 or 2	NUM	Account Type (To)	00 = Not Applicable	<u>5.3</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>

7.1.3.3 ATM deposit - request

Table 7.34 ATM deposit - request

T-Format Authorization Request Message (ATM deposit non-confirmation)							
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	Т	5.157		
2	1	NUM	Application Type	4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer BIN		5.4		

Byte	Length	Format	Field description	Content	Section
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	В	<u>5.74</u>
31	1	A/N	Industry Code	В	<u>5.101</u>
32-34	3	NUM	Currency Code	840 – USD	5.70
35-37	3	NUM	Country Code	840 – United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	5.59
47-48	2	NUM	Language Indicator	00 – English	5.110
49-51	3	NUM	Time Zone Differential		5.192
52-55	4	NUM	Merchant Category Code	6011	5.121
56	1	A/N	Requested ACI	N	<u>5.161</u>
57-60	4	NUM	Trans. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	B3 – ATM Deposit	5.201
63	1	A/N	Cardholder ID Code	J - PIN at Automated Dispensing Machine 32- character DUK/PT	5.50
64	1	A/N	Account Data Source	D – Track 2	<u>5.1</u>
	5-76	A/N	Customer Data Field	Full Track 2	<u>5.71</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	<u>5.51</u>
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1-12	NUM	Transaction Amount		5.199
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	25	A/N	Merchant Name	(Required)	5.32.1
	13	A/N	Merchant Location/City	(Required)	5.32.2
	2	A/N	Merchant State	(Required)	5.32.3
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>

Byte	Length	Format	horization Request Message (ATI Field description	Content	Section
Буге			•		
	30	A/N	Approval Code - Space Filled if not available (6 bytes)	(Required)	<u>5.165</u>
			Local Transaction Date - (6 bytes)		
			Local Transaction Time - (6 bytes)		
			Retrieval Reference Number - (12 bytes)		
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	7	A/N	System Trace Audit Number (STAN) 6 bytes	(Required)	
			1 bytes SPACE ('')		
	1	ASCII	Field Separator	<fs></fs>	5.90
	1-30	A/N	Sharing Group		5.176
	1	ASCII	Field Separator	<fs></fs>	5.90
	0 or 9	NUM	Merchant ABA		5.118
	0 or 4	A/N	Merchant Settlement Agent Number		5.132
	1	ASCII	Field Separator	<fs></fs>	5.90
	6	NUM	Agent Bank Number		5.12
	6	NUM	Agent Chain Number		<u>5.13</u>
	3	NUM	Batch Number		5.31
	1	A/N	Reimbursement Attribute		5.158
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		<u>5.73</u>
	4	A/N	Version ID		5.215
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	025	<u>5.95</u>
	9	A/N	Transaction Fee Amount	required in ATM original request messages	5.203
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>

	T-Format Authorization Request Message (ATM deposit non-confirmation)								
Byte	Length	Format	Field description	Content	Section				
	3	NUM	Group III Version Number	044	<u>5.95</u>				
	0 or 2	NUM	Account Type (From)	00 = Not applicable	5.2				
	1	ASCII	Field Separator	<fs></fs>	5.90				
	0 or 2	NUM	Account Type (To)	10 = Savings account 20 = Checking account 30 = Credit Card account 40 = Universal	5.3				
	1	ASCII	Field Separator	<fs></fs>	5.90				

7.1.3.4 ATM account transfer - request

Table 7.35 ATM account transfer - request

Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	Т	5.157
2	1	NUM	Application Type	4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer BIN		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	В	5.74
31	1	A/N	Industry Code	В	5.101
32-34	3	NUM	Currency Code	840 – USD	5.70
35-37	3	NUM	Country Code	840 – United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	5.59
47-48	2	NUM	Language Indicator	00 – English	5.110
49-51	3	NUM	Time Zone Differential		5.192
52-55	4	NUM	Merchant Category Code	6011	5.121
56	1	A/N	Requested ACI	N	5.161
57-60	4	NUM	Trans. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	B4– ATM Account Transfer	5.201
53	1	A/N	Cardholder ID Code	J - PIN at Automated Dispensing Machine 32- character DUK/PT	5.50
64	1	A/N	Account Data Source	D – Track 2	5.1
	5-76	A/N	Customer Data Field	Full Track 2	<u>5.71</u>

Byte	Length	Format	Field description	Content	Section
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	<u>5.51</u>
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1-12	NUM	Transaction Amount		5.199
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	25	A/N	Merchant Name	(Required)	5.32.1
	13	A/N	Merchant Location/City	(Required)	5.32.2
	2	A/N	Merchant State	(Required)	5.32.3
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	30	A/N	Approval Code - Space Filled if not available (6 bytes) Local Transaction Date - (6 bytes) Local Transaction Time - (6 bytes) Retrieval Reference Number - (12 bytes)	(Required)	5.165
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	7	A/N	System Trace Audit Number (STAN) 6 bytes 1 bytes SPACE (' ')	(Required)	
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1-30	A/N	Sharing Group		<u>5.176</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	0 or 9	NUM	Merchant ABA		<u>5.118</u>
	0 or 4	A/N	Merchant Settlement Agent Number		5.132
	1	ASCII	Field Separator	<fs></fs>	5.90
	6	NUM	Agent Bank Number		5.12
	6	NUM	Agent Chain Number		5.13

Byte	Length	Format	Field description	Content	Section
	3	NUM	Batch Number		5.31
	1	A/N	Reimbursement Attribute		5.158
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		5.73
	4	A/N	Version ID		5.215
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<g\$></g\$>	5.96
	3	NUM	Group III Version Number	025	5.95
	9	A/N	Transaction Fee Amount	required in ATM original request messages	5.203
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<g\$></g\$>	5.96
	3	NUM	Group III Version Number	044	<u>5.95</u>
	0 or 2	NUM	Account Type (From)	10 = Savings account 20 = Checking account 30 = Credit Card account 40 = Universal	5.2
	1	ASCII	Field Separator	<fs></fs>	5.90
	0 or 2	NUM	Account Type (To)	10 = Savings account 20 = Checking account 30 = Credit Card account 40 = Universal	5.3
	1	ASCII	Field Separator	<fs></fs>	5.90

7.1.3.5 ATM reversal and adjustment - request

Table 7.36 ATM reversal and adjustment - request

T-Format Authorization Request Message (ATM Reversal and Adjustment Non-Confirm)							
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	Т	5.157		
2	1	NUM	Application Type	4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer BIN	Original request value	5.4		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		

T-	Format A	uthorizatio	n Request Message (ATM Re	versal and Adjustment Non-Co	onfirm)
Byte	Length	Format	Field description	Content	Section
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	В	5.74
31	1	A/N	Industry Code	В	<u>5.101</u>
32-34	3	NUM	Currency Code		5.70
35-37	3	NUM	Country Code		5.63
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	5.59
47-48	2	NUM	Language Indicator	00 – English	5.110
49-51	3	NUM	Time Zone Differential		5.192
52-55	4	NUM	Merchant Category Code	6011	<u>5.121</u>
56	1	A/N	Requested ACI	N	<u>5.161</u>
57-60	4	NUM	Trans. Sequence Number	0001	<u>5.205</u>
63	2	A/N A/N	Transaction Code Cardholder ID Code	C1 – ATM Cash Disbursement Reversal C3 – ATM Deposit Reversal C4 – ATM Account Transfer Reversal C8 – ATM Adjustment Up (Credit) C9 – ATM Adjustment Down (Debit) D - Self - Service Terminal (No ID method available)	<u>5.201</u>
64	1	A/N	Account Data Source	T - Manually keyed, Track two capable	5.1
	5-76	A/N	Customer Data Field	Acct# <fs>ExpDate<fs></fs></fs>	<u>5.71</u>
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	5.90
	1-12	NUM	Total Authorized Amount	reversal C1,C3,C4 -original transaction amount adjustment C8, C9 -amount to be adjusted	5.193
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90

3yte	Length	Format	Field description	Content	Section
	25	A/N	Merchant Name	(Required)	5.32.1
	13	A/N	Merchant Location/City	(Required)	5.32.2
	2	A/N	Merchant State	(Required)	5.32.3
	1	ASCII	Field Separator	<fs></fs>	5.90
	15	A/N	Transaction ID	Send Transaction ID from original response	5.203
	1	ASCII	Field Separator	<fs></fs>	5.90
	6	A/N	Approval Code	Original response value	5.22
	6	A/N	Local transaction date	reversal C1,C3,C4 –original request value adjustment C8, C9 –current date	5.112
	6	A/N	Local Transaction Time	reversal C1,C3,C4 – original request value adjustment C8, C9 –current time	5.113
	12	A/N	Retrieval Reference Number	reversal C1,C3,C4 – original request value adjustments C8, C9 – assign new value	5.163
	1	ASCII	Field Separator	<fs></fs>	5.90
	6	A/N	System Trace Audit Number (STAN)	reversal C1,C3,C4 – original request value adjustment C8, C9 – assign new value	5.179
	1	A/N	Network Identification Code	Original request value	5.139
	1	ASCII	Field Separator	<fs></fs>	5.90
	1-30	A/N	Sharing Group		5.176
	1	ASCII	Field Separator	<fs></fs>	5.90
	0 or 9	NUM	Merchant ABA		5.118
	0 or 4	A/N	Merchant Settlement Agent Number		5.132
	1	ASCII	Field Separator	<fs></fs>	5.90
	6	NUM	Agent Bank Number		<u>5.12</u>
	6	NUM	Agent Chain Number		<u>5.13</u>
	3	NUM	Batch Number		5.31
	1	A/N	Reimbursement Attribute		5.158
	1	ASCII	Field Separator	<fs></fs>	5.90

T-Format Authorization Request Message (ATM Reversal and Adjustment Non-Confirm)							
Byte	Length	Format	Field description	Content	Section		
	3	NUM	Group III Version Number	020	<u>5.95</u>		
	6	A/N	Developer ID		<u>5.73</u>		
	4	A/N	Version ID		<u>5.215</u>		
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>		
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>		
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>		
	3	NUM	Group III Version Number	025 (If present in original)	<u>5.95</u>		
	9	A/N	Transaction Fee Amount	For reversals Transaction Codes C1, C3, C4 - the original request value. For adjustment Transaction Codes C8, C9 - "D000000000"	5.203		
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>		
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>		
	3	NUM	Group III Version Number	044	<u>5.95</u>		
	2	NUM	Account Type (FROM)	Original request value	<u>5.2</u>		
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>		
	2	NUM	Account Type (TO)	Original request value	<u>5.3</u>		
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>		

7.2 Card not present examples

7.2.1 Credit & Debit

7.2.1.1 Direct marketing - request

Table 7.37 <u>Direct marketing - request</u>

D-Format Authorization Request Message (Direct Marketing)								
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	5.157			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			

D-Format Authorization Request Message (Direct Marketing)							
Byte	Length	Format	Field description	Content	Section		
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	<u>5.74</u>		
31	1	A/N	Industry Code	D	<u>5.101</u>		
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70		
35-37	3	NUM	Country Code	840 - United States	5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	<u>5.59</u>		
47-48	2	NUM	Language Indicator	00 - English	<u>5.110</u>		
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192		
52-55	4	NUM	Merchant Category Code		5.121		
56	1	A/N	Requested ACI	Y	5.161		
57-60	4	NUM	Tran. Sequence Number	0001	5.205		
61-62	2	A/N	Transaction Code	56 - Card Not Present	<u>5.201</u>		
63	1	A/N	Cardholder ID Code	N - Address Verification	5.50		
64	1	A/N	Account Data Source	@ - No CardreaderT - Keyed/Track 2 CapableX - Keyed/Track 1 Capable	5.1		
-	5-76	A/N	Customer Data Field	Acct# <fs>ExpDate<fs></fs></fs>	<u>5.71</u>		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	0-29	A/N	Address Verification Data (If Cardholder ID - "N")	Street Address <sp>Zip Code</sp>	5.51.4		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
-	1-12	NUM	Transaction Amount		5.199		
=	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
-	1	A/N	Field Separator <fs></fs>		5.90		
_	1	A/N	Field Separator <fs></fs>		5.90		
	25	A/N	Merchant Name		5.32.1		
-	13	A/N	Merchant Location/City		5.32.2		

	D-Format Authorization Request Message (Direct Marketing)							
Byte	Length	Format	Field description	Content	Section			
_	2	A/N	Merchant State		5.32.3			
_	1	A/N	Field Separator <fs></fs>		5.90			
_	1	A/N	Field Separator <fs></fs>		5.90			
_	1	A/N	Field Separator <fs></fs>		5.90			
_	3	NUM	Group III Version Number	014	<u>5.95</u>			
-	1	A/N	MOTO/Electronic Commerce Ind.	1	5.137			
-	1	ASCII	Group Separator		<u>5.96</u>			
_	3	NUM	Group III Version Number	020	<u>5.95</u>			
-	6	A/N	Developer ID		5.73			
-	4	A/N	Version ID		5.215			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	ASCII	Group Separator <gs></gs>		<u>5.96</u>			
-	3	NUM	Group III Version Number	025	<u>5.95</u>			
_	0 or 9	A/N	Transaction Fee Amount		5.203			
	1	ASCII	Field Separator <fs></fs>		5.90			

7.2.1.2 Bill payment - request

Table 7.38 <u>Bill payment - request</u>

		D-Forma	at Authorization Reques	t Message (Bill Payment)	
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	<u>5.157</u>
1	1	NUM	Application Type	0 - Single Transaction2 - Multiple Transaction4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer BIN		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.191
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	R, D	<u>5.101</u>
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70

		D-Form	at Authorization Request I	Message (Bill Payment)	
Byte	Length	Format	Field description	Content	Section
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y - CPS Capable	<u>5.161</u>
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	5B	5.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature N - Address Verification	5.50
64	1	A/N	Account Data Source	 @ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable 	5.1
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct# <fs>ExpDate<fs></fs></fs>	5.71
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Transaction Amount		5.199
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Prestigious Property Ind.	Space	5.117.1
-	1	A/N	Market Specific Data ID	В	5.117.2
-	2	NUM	Stay of Duration	00	5.117.3
-	1	A/N	Field Separator <fs></fs>		5.90
-	25	A/N	Merchant Name		5.32.1
-	13	A/N	Merchant Location/City		5.32.2
-	2	A/N	Merchant State		5.32.3
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90

D-Format Authorization Request Message (Bill Payment)							
Byte	Length	Format	Field description	Content	Section		
	3	NUM	Group III Version Number	014	5.95		
	1	A/N	MOTO/e-Commerce Indicator	1, 2, 3, 7, or 8	5.137		
	1	ASCII	Group Separator		5.96		
	3	NUM	Group III Version Number	020	5.95		
	6	A/N	Developer ID		5.73		
-	4	A/N	Version ID		5.215		
	1	A/N	Field Separator <fs></fs>		5.90		
	1	A/N	Field Separator <fs></fs>		5.90		

7.2.1.3 Credit cardholder funds transfer [Visa] - request

Table 7.39 Credit cardholder funds transfer [Visa] - request

	D-Format Authorization Request Message (Credit Cardholder Funds Transfer [Visa])							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	5.157			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4			
10-21	12	NUM	Merchant Number		5.129			
22-25	4	NUM	Store Number		5.177			
26-29	4	NUM	Terminal Number		5.187			
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74			
31	1	A/N	Industry Code	D	<u>5.101</u>			
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>			
35-37	3	NUM	Country Code	840 - United States	5.63			
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59			
47-48	2	NUM	Language Indicator	00 - English	5.110			
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192			
52-55	4	NUM	Merchant Category Code		<u>5.121</u>			

			D-Format Authorization Req (Credit Cardholder Funds Tr		
Byte	Length	Format	Field description	Content	Section
56	1	A/N	Requested ACI	Y	5.161
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	5K - Cardholder Funds Transfer	5.201
63	1	A/N	Cardholder ID Code	N - Card not present AVS	5.50
64	1	A/N	Account Data Source	@ - No Card readerT - Keyed/Track 2 CapableX - Keyed/Track 1 Capable	5.1
-	5-76	A/N	Customer Data Field	Acct# <fs>ExpDate<fs></fs></fs>	5.71
-	1	A/N	Field Separator <fs></fs>		5.90
-	0-29	A/N	Address Verification Data (If Cardholder ID - "N")	Street Address <sp>Zip Code</sp>	<u>5.51.4</u>
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Transaction Amount		5.199
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	25	A/N	Merchant Name		5.32.1
-	13	A/N	Customer Service Phone Number	NNN-NNNNNNN (dash is required)	
-	2	A/N	Merchant State		5.32.3
_	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	3	NUM	Group III Version Number	007	<u>5.95</u>
-	6	A/N	Verification Code		5.213
-	1	ASCII	Group Separator		5.96
-	3	NUM	Group III Version Number	014	<u>5.95</u>
-	1	A/N	MOTO/e-Commerce Indicator		5.137
-	1	ASCII	Group Separator		5.96
-	3	NUM	Group III Version Number	020	5.95
-	6	A/N	Developer ID		5.73
-	4	A/N	Version ID		5.215

D-Format Authorization Request Message (Credit Cardholder Funds Transfer [Visa])								
Byte	Length	Format	Field description	Content	Section			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			

7.2.1.4 Credit account funding transactions [Visa] or payment transaction [MC] with CPS for Internet - request

Table 7.40 Credit account funding transactions [Visa] or payment transaction [MC] with CPS for Internet - request

Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	<u>5.157</u>
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		<u>5.177</u>
26-29	4	NUM	Terminal Number		<u>5.187</u>
30	1	A/N	Device Code	C, D, E, I, M, Q	<u>5.74</u>
31	1	A/N	Industry Code	D	<u>5.101</u>
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		<u>5.121</u>
56	1	A/N	Requested ACI	Y	<u>5.161</u>
57-60	4	NUM	Transaction Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	5G - Account Funding Tran. / Payment Tran.	5.201
63	1	A/N	Cardholder ID Code	N - Card not present AVS	<u>5.50</u>

D-Format Authorization Request Message (Credit Account Funding Transactions [Visa] or Payment Transaction [MC] with CPS for Internet)

Byte	Length	Format	Field description	Content	Section
64	1	A/N	Account Data Source	@ - No CardreaderT - Keyed/Track 2 CapableX - Keyed/Track 1 Capable	5.1
-	5-76	A/N	Customer Data Field	Acct# <fs>ExpDate<fs></fs></fs>	<u>5.71</u>
-	1	A/N	Field Separator <fs></fs>		5.90
-	0-29	A/N	Address Verification Data (If Cardholder ID - "N")	Street Address <sp>Zip Code</sp>	5.51.4
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Transaction Amount		5.199
-	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
_	25	A/N	Merchant Name		5.32.1
-	13	A/N	Customer Service Phone Number	NNN-NNNNNNN (dash is required)	
-	2	A/N	Merchant State		5.32.3
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	3	NUM	Group III Version Number	007	<u>5.95</u>
-	6	A/N	Verification Code		5.213
-	1	ASCII	Group Separator		5.96
-	3	NUM	Group III Version Number	014	5.95
-	1	A/N	MOTO/Electronic Commerce Ind.		5.137
-	1	ASCII	Group Separator		5.96
-	3	NUM	Group III Version Number	020	5.95
-	6	A/N	Developer ID		5.73
-	4	A/N	Version ID		5.215
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90

7.2.1.5 3-D secure - request

Table 7.41 <u>3-D secure - request</u>

		D-For	mat Authorization Request N	lessage (3-D Secure)	
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	<u>5.157</u>
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	D	5.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	5.161
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	56 - Card Not Present	5.201
63	1	A/N	Cardholder ID Code	N - AVS	5.50
64	1	A/N	Account Data Source	@ - No Cardreader	<u>5.1</u>
-	5-76	A/N	Customer Data Field	Acct# <fs>ExpDate<fs></fs></fs>	5.71
-	1	A/N	Field Separator <fs></fs>		5.90
-	0-29	A/N	Address Verification Data	Street Address <sp>Zip Code if Cardholder ID Code - N</sp>	5.51.4
-	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90

Byte	Length	Format	Field description	Content	Section
_	1-12	NUM	Transaction Amount		5.199
-	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
	25	A/N	Merchant Name		5.32.1
-	13	A/N	Merchant Location/City		5.32.2
	2	A/N	Merchant State		5.32.3
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
-	3	NUM	Group III Version Number	014	5.95
-	1	NUM	MOTO/Electronic Com. Ind.	5, 6, or 7	5.137
_	1	ASCII	Group Separator		5.96
_	3	NUM	Group III Version Number	017	5.95
-	0 or 40	A/N	XID		5.217
-	40	A/N	CAVV		5.55
-	1	ASCII	Group Separator		5.96
-	3	NUM	Group III Version Number	020	5.95
_	6	A/N	Developer ID		5.73
-	4	A/N	Version ID		5.215
_	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90

7.2.1.6 e-Commerce - request

Table 7.42 e-Commerce - request

	D-Format Authorization Request Message (e-Commerce)							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	5.157			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4			

Byte Length Format Field description Content Section							
10-21	12	NUM	Merchant Number	Conton	5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74		
31	1	A/N					
			Industry Code	A, B, D, F, G, P, R	5.101		
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70		
35-37	3	NUM	Country Code	840 - United States	5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	<u>5.59</u>		
47-48	2	NUM	Language Indicator	00 - English	<u>5.110</u>		
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192		
52-55	4	NUM	Merchant Category Code		<u>5.121</u>		
56	1	A/N	Requested ACI	Y	<u>5.161</u>		
57-60	4	NUM	Tran. Sequence Number	0001	5.205		
61-62	2	A/N	Transaction Code	56 - Card Not Present	5.201		
63	1	A/N	Cardholder ID Code	N - AVS	<u>5.50</u>		
64	1	A/N	Account Data Source	@ - No Cardreader	<u>5.1</u>		
_	5-76	A/N	Customer Data Field	Acct# <fs>ExpDate<fs></fs></fs>	<u>5.71</u>		
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
-	0-29	A/N	Address Verification Data	Street Address <sp>ZipCode if Cardholder ID Code- N</sp>	5.51.4		
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
_	1-12	NUM	Transaction Amount		5.199		
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
-	25	A/N	Merchant Name		5.32.1		
_	13	A/N	Merchant Location/City		5.32.2		
_	2	A/N	Merchant State		5.32.3		
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
=	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		

		D-Form	nat Authorization Request Me	ssage (e-Commerce)	
Byte	Length	Format	Field description	Content	Section
	3	NUM	Group III Version Number	014	<u>5.95</u>
-	1	NUM	MOTO/e-Commerce Indicator	7 or 8	5.137
-	1	ASCII	Group Separator		5.96
-	3	NUM	Group III Version Number	020	<u>5.95</u>
-	6	A/N	Developer ID		5.73
-	4	A/N	Version ID		<u>5.215</u>
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3 Check examples

7.3.1 Check guarantee authorization - request

Table 7.43 Check guarantee authorization - request

D-Format Check Authorization Request Message					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	5.157
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	A, D, H, P, R	5.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110

D-Format Check Authorization Request Message Byte Length Format Field description Content Section					
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		<u>5.121</u>
56	1	A/N	Requested ACI	N	5.161
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	70 - Check Authorization	5.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50
64	1	A/N	Account Data Source	@ - No CardreaderT - Keyed/Track 2 CapableX - Keyed/Track 1 Capable	5.1
_	1-28	A/N	Check Data Field 1	XXXXXXXXXXXXXX	*
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-128	A/N	Check Data Field 2	XXXXXXXXXXXXXX	*
_	1	A/N	Field Separator <fs></fs>		5.90
_	6	NUM	Receiving Institution ID	XXXXXX	5.156
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Transaction Amount		5.199
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
=	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
-	3	NUM	Group III Version Number	020	<u>5.95</u>
-	6	A/N	Developer ID		<u>5.73</u>
-	4	A/N	Version ID		<u>5.215</u>
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>

^{*}For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.2 Certegy/Equifax check guarantee (key MICR) - request

Table 7.44 Certegy/Equifax check guarantee (key MICR) - request

Byte	Length	Format	Field description	Request Message (Key MICR) Content Sec	
1	1	A/N	Record Format	D	5.157
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-14	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	A, D, H, P, R	<u>5.101</u>
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	5.161
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	70 - Check Authorization	<u>5.201</u>
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	5.1
65-66	2	A/N	MICR Entry Identifier	MR	*
_	1-26	A/N	Account Number	123456789	*
-	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90

D-Format Certegy/Equifax Check Guarantee Request Message (Key MICR)					
Byte	Length	Format	Field description	Content	Section
-	6	NUM	Receiving Institution ID	894300 - Certegy/Equifax	5.156
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Transaction Amount		5.199
_	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
_	3	NUM	Group III Version Number	020	5.95
_	6	A/N	Developer ID		5.73
-	4	A/N	Version ID		5.215
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.3 Certegy/Equifax check guarantee (raw MICR) - request

Table 7.45 Certegy/Equifax check guarantee (raw MICR) - request

D-Format Certegy/Equifax Check Guarantee Request Message (Raw MICR)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	5.157
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-14	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	A, D, H, P, R	5.101

D-Format Certegy/Equifax Check Guarantee Request Message (Raw MICR)					
Byte	Length	Format	Field description	Content	Section
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (Zip Code)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	<u>5.110</u>
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	<u>5.161</u>
57-60	4	NUM	Tran. Sequence Number	0001	5.205
51-62	2	A/N	Transaction Code	70 - Check Authorization	5.201
53	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50
54	1	A/N	Account Data Source	@ - No CardreaderT - Keyed/Track 2 CapableX - Keyed/Track 1 Capable	5.1
55-69	5	A/N	Entry Identifier	FM000	*
70	1	A/N	Field Separator <fs></fs>		5.90
71	1	A/N	Field Separator <fs></fs>		5.90
	1-128	A/N	RAW MICR Data		*
	1	A/N	Field Separator <fs></fs>		5.90
	6	NUM	Receiving Institution ID	894300 - Certegy/Equifax	5.156
	1	A/N	Field Separator <fs></fs>		5.90
	1-12	NUM	Transaction Amount		5.199
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	3	NUM	Group III Version Number	020	5.95
•	6	A/N	Developer ID		5.73
	4	A/N	Version ID		5.215
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90

* For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.4 Certegy/Equifax check guarantee (driver's license) - request

Table 7.46 Certegy/Equifax check guarantee (driver's license) - request

Byto	D-Format Certegy/Equifax Check Guarantee Request Message (Driver's Licens Byte Length Format Field description Content					
-	_		<u> </u>		Section	
1	1	A/N	Record Format	D	<u>5.157</u>	
2	1	NUM	Application Type	0 - Single Transaction2 - Multiple Transaction4 - Interleaved	5.21	
3	1	A/N	Message Delimiter		5.136	
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		<u>5.4</u>	
10-14	12	NUM	Merchant Number		5.129	
22-25	4	NUM	Store Number		5.177	
26-29	4	NUM	Terminal Number		5.187	
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74	
31	1	A/N	Industry Code	A, D, H, P, R	5.101	
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70	
35-37	3	NUM	Country Code	840 - United States	5.63	
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59	
47-48	2	NUM	Language Indicator	00 - English	5.110	
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192	
52-55	4	NUM	Merchant Category Code		<u>5.121</u>	
56	1	A/N	Requested ACI	Y	<u>5.161</u>	
57-60	4	NUM	Tran. Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	70 - Check Authorization	5.201	
63	1	A/N	Cardholder ID Code	@ - Customer Signature	<u>5.50</u>	
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	5.1	
65-66	2	A/N	State Code		5.57	
-	1-26	A/N	Driver's License Number		5.57	

	D-Format Certegy/Equifax Check Guarantee Request Message (Driver's License)							
Byte	Length	Format	Field description	Content	Section			
=	1	A/N	Field Separator <fs></fs>		5.90			
-	6	NUM	Date of Birth	MMDDYY Format	5.57			
_	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	6	NUM	Receiving Institution ID	894300 - Certegy/Equifax	5.156			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1-12	NUM	Transaction Amount		5.199			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	3	NUM	Group III Version Number	020	5.95			
-	6	A/N	Developer ID		5.73			
-	4	A/N	Version ID		5.215			
_	1	A/N	Field Separator <fs></fs>		5.90			
_	1	A/N	Field Separator <fs></fs>		5.90			

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.5 Certegy/Equifax check guarantee (driver's license with raw MICR data) - request

Table 7.47 Certegy/Equifax check guarantee (driver's license with raw MICR data) - request

	D-Format Certegy/Equifax Check Guarantee Request Message (Driver's License with Raw MICR Data)							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	<u>5.157</u>			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4			
10-14	12	NUM	Merchant Number		5.129			

D-Format Certegy/Equifax Check Guarantee Request Message (Driver's License with Raw MICR Data)					
Byte	Length	Format	Field description	Content	Section
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	A, D, H, P, R	5.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	5.161
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	70 - Check Authorization	5.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	5.1
65-66	2	A/N	State Code		<u>5.57</u>
-	1-26	A/N	Driver's License Number		5.57
-	1	A/N	Field Separator <fs></fs>		5.90
-	6	NUM	Date of Birth	MMDDYY Format	5.57
-	1	A/N	Field Separator <fs></fs>		5.90
-	4	NUM	Format Identifier	1002	*
-	40	A/N	Raw MICR Data	Left-justified/space-filled	*
-	1	A/N	Field Separator <fs></fs>		5.90
-	6	NUM	Receiving Institution ID	894300 - Certegy/Equifax	5.156
-	1	A/N	Field Separator <fs></fs>		5.90
-	1-12	NUM	Transaction Amount		5.199
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
-	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90

D-Format Certegy/Equifax Check Guarantee Request Message (Driver's License with Raw MICR Data)							
Byte	Length	Format	Field description	Content	Section		
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
-	3	NUM	Group III Version Number	020	<u>5.95</u>		
-	6	A/N	Developer ID		5.73		
-	4	A/N	Version ID		<u>5.215</u>		
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>		

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.6 SCAN check guarantee (short MICR) - request

Table 7.48 SCAN check guarantee (short MICR) - request

	[D-Format S	CAN Check Guarantee Req	uest Message (Short MICR)	
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	5.157
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	A, D, H, P, R	<u>5.101</u>
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192

D-Format SCAN Check Guarantee Request Message (Short MICR)						
Byte	Length	Format	Field description	Content	Section	
52-55	4	NUM	Merchant Category Code		5.121	
56	1	A/N	Requested ACI	Y	5.161	
57-60	4	NUM	Tran. Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	70 - Check Authorization	<u>5.201</u>	
63	1	A/N	Cardholder ID Code	@ - Customer Signature	<u>5.50</u>	
64	1	A/N	Account Data Source	@ - No CardreaderT - Keyed/Track 2 CapableX - Keyed/Track 1 Capable	5.1	
65-66	2	A/N	MICR Entry Identifier	MR	*	
-	9	A/N	ABA Number		*	
-	1-15	A/N	Account Number		*	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	6	NUM	Receiving Institution ID	813500 - Scan	5.156	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1-12	NUM	Transaction Amount		5.199	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
-	3	NUM	Group III Version Number	020	5.95	
-	6	A/N	Developer ID		5.73	
-	4	A/N	Version ID		5.215	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.7 International Check Service (ICS) check guarantee (MICR read) - request

Table 7.49 International Check Service (ICS) check guarantee (MICR read) - request

Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	5.157
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
15-19	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	<u>5.74</u>
31	1	A/N	Industry Code	A, D, H, P, R	5.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	5.161
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	70 - Check Authorization	5.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	5.1
65-69	5	A/N	Account Identifier	AAAAA	*
_	1	A/N	Field Separator <fs></fs>		5.90
_	1	A/N	Field Separator <fs></fs>		5.90
_	2	A/N	Entry Identifier	MR	*
_	9	A/N	ABA Number	121000400 (Test Data)	*

	D-Format International Check Service (ICS) Check Guarantee (MICR Read) Transaction Message							
Byte	Length	Format	Field description	Content	Section			
-	15	NUM	Account Number	Left-justified/space-filled	*			
-		NUM	Check Number	0100 (Test Data)	*			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	6	NUM	Receiving Institution ID	810000 - ICS	5.156			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1-12	NUM	Transaction Amount		5.199			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	3	NUM	Group III Version Number	020	<u>5.95</u>			
-	6	A/N	Developer ID		5.73			
-	4	A/N	Version ID		5.215			
-	1	A/N	Field Separator <fs></fs>		5.90			
_	1	A/N	Field Separator <fs></fs>		5.90			

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.8 International Check Service (ICS) check guarantee (key MICR) - request

Table 7.50 International Check Service (ICS) check guarantee (key MICR) - request

	D-Format International Check Service (ICS) Check Guarantee (Key MICR) Transaction Message							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	5.157			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4			

D-Format International Check Service (ICS) Check Guarantee (Key MICR) Transaction Message						
Byte	Length	Format	Field description	Content	Section	
15-19	12	NUM	Merchant Number		5.129	
22-25	4	NUM	Store Number		5.177	
26-29	4	NUM	Terminal Number		5.187	
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74	
31	1	A/N	Industry Code	A, D, H, P, R	<u>5.101</u>	
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70	
35-37	3	NUM	Country Code	840 - United States	5.63	
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59	
47-48	2	NUM	Language Indicator	00 - English	5.110	
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192	
52-55	4	NUM	Merchant Category Code		5.121	
56	1	A/N	Requested ACI	Y	<u>5.161</u>	
57-60	4	NUM	Tran. Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	70 - Check Authorization	<u>5.201</u>	
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50	
64	1	A/N	Account Data Source	@ - No Cardreader T -Keyed/Track 2 Capable X -Keyed/Track 1 Capable	5.1	
65-69	5	A/N	Account Identifier	BBBBB	*	
_		NUM	Check Number	0345 (Test Data)	*	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	2	A/N	Entry Identifier	MR	*	
-	9	NUM	ABA Number	121000400 (Test Data)	*	
=	1-15	NUM	Account Number	783776521 (Test Data)	*	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	6	NUM	Receiving Institution ID	810000 - ICS	5.156	
-	1	A/N	Field Separator <fs></fs>		5.90	
_	1-12	NUM	Transaction Amount		5.199	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
_	1	A/N	Field Separator <fs></fs>		5.90	

	D-Format International Check Service (ICS) Check Guarantee (Key MICR) Transaction Message								
Byte	Length	Format	Field description	Content	Section				
-	1	A/N	Field Separator <fs></fs>		5.90				
-	1	A/N	Field Separator <fs></fs>		5.90				
-	1	A/N	Field Separator <fs></fs>		5.90				
-	3	NUM	Group III Version Number	020	<u>5.95</u>				
-	6	A/N	Developer ID		5.73				
-	4	A/N	Version ID		<u>5.215</u>				
-	1	A/N	Field Separator <fs></fs>		5.90				
_	1	A/N	Field Separator <fs></fs>		5.90				

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.9 International Check Service (ICS) check guarantee (account number) - request

Table 7.51 International Check Service (ICS) check guarantee (account number) - request

	D-Format International Check Service (ICS) Check Guarantee (Account Number) Transaction Format							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	5.157			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4			
15-19	12	NUM	Merchant Number		5.129			
22-25	4	NUM	Store Number		5.177			
26-29	4	NUM	Terminal Number		5.187			
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74			
31	1	A/N	Industry Code	A, D, H, P, R	5.101			
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70			
35-37	3	NUM	Country Code	840 - United States	5.63			
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59			
47-48	2	NUM	Language Indicator	00 - English	5.110			

	D-Format International Check Service (ICS) Check Guarantee (Account Number) Transaction Format							
Byte	Length	Format	Field description	Content	Section			
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192			
52-55	4	NUM	Merchant Category Code		5.121			
56	1	A/N	Requested ACI	Y	<u>5.161</u>			
57-60	4	NUM	Tran. Sequence Number	0001	<u>5.205</u>			
61-62	2	A/N	Transaction Code	70 - Check Authorization	<u>5.201</u>			
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50			
64	1	A/N	Account Data Source	@ - No CardreaderT - Keyed/Track 2 CapableX - Keyed/Track 1 Capable	5.1			
_	1-15	NUM	Account Number		*			
_	1	A/N	Field Separator	#	*			
-		NUM	Check Number (Optional)	0345 (Test Data)	*			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	6	NUM	Receiving Institution ID	810000 - ICS	5.156			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
_	1-12	NUM	Transaction Amount		5.199			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			
-	3	NUM	Group III Version Number	020	<u>5.95</u>			
_	6	A/N	Developer ID		<u>5.73</u>			
=	4	A/N	Version ID		<u>5.215</u>			
_	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.10 TeleCheck check guarantee (driver's license) - request

Table 7.52 <u>TeleCheck check guarantee (driver's license) - request</u>

	D-Format TeleCheck Check Guarantee Request Message (driver's license)						
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	D	5.157		
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74		
31	1	A/N	Industry Code	A, D, H, P, R	5.101		
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70		
35-37	3	NUM	Country Code	840 - United States	5.63		
38-46	9	A/N	City Code (Zip Code)	Left-justified/space-filled	5.59		
47-48	2	NUM	Language Indicator	00 - English	5.110		
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192		
52-55	4	NUM	Merchant Category Code		5.121		
56	1	A/N	Requested ACI	Y	<u>5.161</u>		
57-60	4	NUM	Tran. Sequence Number	0001	5.205		
61-62	2	A/N	Transaction Code	70 - Check Authorization	5.201		
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50		
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	5.1		
65-69	5	A/N	Filler	Spaces	*		
70	1	A/N	Field Separator <fs></fs>		5.90		
71	1	A/N	Field Separator <fs></fs>		5.90		
72-73	2	A/N	Telecheck ID Type	03	*		
74-75	2	A/N	State Code		5.57		

	D-Format TeleCheck Check Guarantee Request Message (driver's license)							
Byte	Length	Format	Field description	Content	Section			
-	1-28	A/N	Driver's License Number		5.57			
-	1	A/N	Termination Character	(Vertical Bar)	5.57			
_	1	A/N	Field Separator <fs></fs>		5.90			
_	6	NUM	Receiving Institution ID	861400 - TeleCheck	5.156			
_	1	A/N	Field Separator <fs></fs>		5.90			
_	1-12	NUM	Transaction Amount		5.199			
_	1	A/N	Field Separator <fs></fs>		5.90			
_	1	A/N	Field Separator <fs></fs>		5.90			
_	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
_	1	A/N	Field Separator <fs></fs>		5.90			
-	3	NUM	Group III Version Number	020	5.95			
_	6	A/N	Developer ID		5.73			
-	4	A/N	Version ID		5.215			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.11 TeleCheck check guarantee (key full MICR) - request

Table 7.53 TeleCheck check guarantee (key full MICR) - request

	D-Format TeleCheck Check Guarantee Request Message (Key Full MICR)								
Byte	Length	Format	Field description	Content	Section				
1	1	A/N	Record Format	D	5.157				
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21				
3	1	A/N	Message Delimiter		<u>5.136</u>				
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4				
10-21	12	NUM	Merchant Number		<u>5.129</u>				
22-25	4	NUM	Store Number		<u>5.177</u>				

D-Format TeleCheck Check Guarantee Request Message (Key Full MICR)						
Byte	Length	Format	Field description	Content	Section	
26-29	4	NUM	Terminal Number		5.187	
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74	
31	1	A/N	Industry Code	A, D, H, P, R	<u>5.101</u>	
32-34	3	NUM	Currency Code	840 - U.S. Dollars	<u>5.70</u>	
35-37	3	NUM	Country Code	840 - United States	<u>5.63</u>	
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59	
47-48	2	NUM	Language Indicator	00 - English	5.110	
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192	
52-55	4	NUM	Merchant Category Code		5.121	
56	1	A/N	Requested ACI	Y	<u>5.161</u>	
57-60	4	NUM	Tran. Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	70 - Check Authorization	5.201	
53	1	A/N	Cardholder ID Code	@ - Customer Signature	<u>5.50</u>	
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	5.1	
65-69	5	A/N	Filler	Spaces	<u>5.91</u>	
70	1	A/N	Field Separator <fs></fs>		5.90	
71	1	A/N	Field Separator <fs></fs>		5.90	
72-73	2	A/N	Telecheck Tag	03	*	
74-75	2	A/N	Telecheck ID Type	19	*	
_	1-50	NUM	MICR Data	All digits from the check	*	
_	1	A/N	Termination Character	(Vertical Bar)	*	
-	2	A/N	Telecheck ID Type	07	*	
-	1-10	A/N	Check Sequence Number		*	
-	1	A/N	Termination Character	(Vertical Bar)	*	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
-	6	NUM	Receiving Institution ID	861400 - TeleCheck	5.156	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
-	1-12	NUM	Transaction Amount		5.199	
_	1	A/N	Field Separator <fs></fs>		5.90	
=	1	A/N	Field Separator <fs></fs>		5.90	

	D-Format TeleCheck Check Guarantee Request Message (Key Full MICR)							
Byte	Length	Format	Field description	Content	Section			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
-	1	A/N	Field Separator <fs></fs>		5.90			
_	3	NUM	Group III Version Number	020	<u>5.95</u>			
-	6	A/N	Developer ID		5.73			
-	4	A/N	Version ID		5.215			
-	1	A/N	Field Separator <fs></fs>		5.90			
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>			

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.12 TeleCheck check guarantee (key partial MICR) - request

Table 7.54 TeleCheck check guarantee (key partial MICR) - request

	D-Format TeleCheck Check Guarantee Request Message (Key Partial MICR)							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	5.157			
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4			
10-21	12	NUM	Merchant Number		5.129			
22-25	4	NUM	Store Number		5.177			
26-29	4	NUM	Terminal Number		5.187			
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74			
31	1	A/N	Industry Code	A, D, H, P, R	5.101			
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70			
35-37	3	NUM	Country Code	840 - United States	5.63			
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59			
47-48	2	NUM	Language Indicator	00 - English	5.110			

D-Format TeleCheck Check Guarantee Request Message (Key Partial MICR)						
Byte	Length	Format	Field description	Content	Section	
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192	
52-55	4	NUM	Merchant Category Code		5.121	
56	1	A/N	Requested ACI	Y	5.161	
57-60	4	NUM	Tran. Sequence Number	0001	5.205	
61-62	2	A/N	Transaction Code	70 - Check Authorization	<u>5.201</u>	
63	1	A/N	Cardholder ID Code	@ - Customer Signature	<u>5.50</u>	
54	1	A/N	Account Data Source	@ - No CardreaderT - Keyed/Track 2 CapableX - Keyed/Track 1 Capable	5.1	
55-69	5	A/N	Filler	Spaces	<u>5.91</u>	
70	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
71	1	A/N	Field Separator <fs></fs>		5.90	
72-73	2	A/N	Telecheck Tag	03	*	
74-75	2	A/N	Telecheck ID Type	18	*	
76-84	9	NUM	ABA Number		*	
-	1-12	NUM	Account Number		*	
_	1	A/N	Termination Character	(Vertical Bar)	*	
_	2	A/N	Telecheck ID Type	07	*	
_	1-10	A/N	Check Sequence Number		*	
-	1	A/N	Termination Character	(Vertical Bar)	*	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
-	6	NUM	Receiving Institution ID	861400 - TeleCheck	5.156	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
-	1-12	NUM	Transaction Amount		5.199	
_	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
_	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		5.90	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
-	1	A/N	Field Separator <fs></fs>		<u>5.90</u>	
-	3	NUM	Group III Version Number	020	<u>5.95</u>	
_	6	A/N	Developer ID		5.73	

D-Format TeleCheck Check Guarantee Request Message (Key Partial MICR)							
Byte	Length	Format	Field description	Content	Section		
-	4	A/N	Version ID		5.215		
-	1	A/N	Field Separator <fs></fs>		5.90		
-	1	A/N	Field Separator <fs></fs>		5.90		

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.13 TeleCheck check guarantee (raw MICR) - request

Table 7.55 TeleCheck check guarantee (raw MICR) - request

	D-	Format Tel	eCheck Check Guarantee Re	quest Message (Raw MICR)	
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	5.157
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	A, D, H, P, R	5.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	5.70
35-37	3	NUM	Country Code	840 - United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language Indicator	00 - English	5.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	<u>5.161</u>
57-60	4	NUM	Tran. Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	70 - Check Authorization	<u>5.201</u>

Byte	Length	Format	Field description	Content	Section
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50
64	1	A/N	Account Data Source	@ - No CardreaderT - Keyed/Track 2 CapableX - Keyed/Track 1 Capable	5.1
65-69	5	A/N	Filler	Spaces	5.91
70	1	A/N	Field Separator <fs></fs>		5.90
71	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
72-73	2	A/N	Telecheck ID Type	09	*
-	1-50	A/N	Full MICR Data	"TOAD" MICR Format	*
	1	A/N	Termination Character	Vertical Bar	*
	1	A/N	Field Separator <fs></fs>		5.90
	6	NUM	Receiving Institution ID	861400 - TeleCheck	5.156
	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
	1-12	NUM	Transaction Amount		5.199
	1	A/N	Field Separator <fs></fs>		<u>5.90</u>
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		5.73
	4	A/N	Version ID		5.215
	1	A/N	Field Separator <fs></fs>		5.90
	1	A/N	Field Separator <fs></fs>		5.90

^{*} For development testing please use the values as designated in the content column, or contact your TSYS Acquiring Solutions development lab technician for assistance. For production concerns, please contact either the merchant acquiring bank and or the check service provider for valid values.

7.3.14 Check guarantee authorization - response

Table 7.56 Check guarantee authorization - response

	D-Format Authorization Check Guarantee Response Message					
Byte	Length	Format	Field description	Content	Section	
1	1	A/N	Record Format	Е	<u>5.157</u>	
2	1	NUM	Application Type		5.21	

		D-Format	Authorization Check Guaran	tee Response Messa	ge
Byte	Length	Format	Field description	Content	Section
3	1	A/N	Message Delimiter		5.136
4	1	A/N	Returned ACI		5.164
5-8	4	NUM	Store Number		<u>5.177</u>
9-12	4	NUM	Terminal Number		<u>5.187</u>
13	1	A/N	Authorization Source Code		5.28
14-17	4	NUM	Transaction Sequence Number		5.205
18-19	2	A/N	Response Code	XX	5.162
20-25	6	A/N	Approval Code		5.22
26-31	6	NUM	Local Transaction Date	MMDDYY	5.112
32-37	6	NUM	Local Transaction Time	HHMMSS	5.113
38-53	16	A/N	Auth. Response Text		5.27
54	1	A/N	AVS Result Code	0	5.11
55-66	12	A/N	Retrieval Reference Number		5.163
67	1	A/N	Market Data Identifier		5.117
68	1	A/N	Field Separator <fs></fs>		5.90
69	1	A/N	Field Separator <fs></fs>		5.90
	3	NUM	Group III Version Number		<u>5.95</u>

7.4 Gen2 Terminal Authentication

7.4.1 Authentication request

Table 7.57 Gen2 Terminal Authentication - request

	D-FORMAT Authentication Request Message							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	5.157			
2	1	NUM	Application Type	0 – Single Transaction	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer BIN		5.4			
10-21	12	NUM	Merchant Number		5.129			
22-25	4	NUM	Store Number		5.177			
26-29	4	NUM	Terminal Number		5.187			
30	1		Device Code	same as for authorization	5.74			
31	1		Industry Code	same as for authorization	<u>5.101</u>			

			D-FORMAT Authentication Re	equest Message	
Byte	Length	Format	Field description	Content	Section
32-34	3		Currency Code	same as for authorization	5.70
35-37	3		Country Code	same as for authorization	5.63
38-46	9		City Code (ZIP)	same as for authorization	5.59
47-48	2		Language indicator	same as for authorization	5.110
49-51	3		Time Zone Differential	same as for authorization	5.192
52-55	4		Merchant Category Code	same as for authorization	5.121
56	1		Requested ACI	N	5.161
57-60	4		Transaction Sequence Number		<u>5.205</u>
61-62	2	A/N	Transaction Code	TA – Terminal Authentication	<u>5.201</u>
63	1		Cardholder ID Code	N - no card present	5.50
64	1		Account Data Source	@, T, X - manually keyed	5.1
	6-10	AN	Authentication Code		5.94.1
	1	ASCII	Field Separator	<fs></fs>	5.90
	0,5-6	NUM	Authentication Factor 1 (AF1)	Not present if AF2 present. (one of AF1 and AF2 is mandatory)	5.94.2
	1	ASCII	Field Separator	<fs></fs>	5.90
	0,7-10	NUM	Authentication Factor 1 (AF2)	Not present if AF1 present. (one of AF1 and AF2 is mandatory)	5.94.3
	1	ASCII	Field Separator	<fs></fs>	5.90
	3		Group 3 Version Number	049	5.95
	1		Field Separator	<fs></fs>	5.90

7.4.2 Authentication response

Table 7.58 Gen2 Terminal Authentication - response

	E-FORMAT Authentication Response Message							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	Е	5.157			
2	1	NUM	Application Type	0 – Single Transaction	5.21			
3	1	A/N	Message Delimiter		5.136			
4	1		Returned ACI	space	5.164			
5-8	4		Store Number		5.177			

Byte	Length	Format	Field description	Content	Section
9-12	4		Terminal Number		5.187
13	1		Authorization Source Code		5.28
14-17	4		Transaction Sequence Number		5.205
18-19	2	A/N	Response Code	A1 - Activated	5.162
				A2 - Not Activated	
20-25	6		Approval Code	all spaces	5.22
26-31	6		Local Transaction Date		5.112
31-37	6		Local Transaction Time		5.113
38-53	16	A/N	Authorization Response Text		5.27
54	1		AVS Result Code	space	<u>5.11</u>
55-66			Retrieval Reference Number		5.163
67			Market Specific Data Identifier	space	5.117
68	1	ASCII	Field Separator	<fs></fs>	5.90
69	1	ASCII	Field Separator	<fs></fs>	5.90
70-72	3	NUM	Group III Version Number	049	5.95
	24	ASCII	Genkey	ASCII Representation of HEX	5.94.4
	1	ASCII	Field Separator	<f\$></f\$>	5.90

7.4.3 Deactivation request

Table 7.59 Authentication Terminal Deactivation - request

	D-FORMAT Deactivation Request Message							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	D	5.157			
2	1	NUM	Application Type	0 – Single Transaction	5.21			
3	1	A/N	Message Delimiter		5.136			
4-9	6	NUM	Acquirer BIN		5.4			
10-21	12	NUM	Merchant Number		5.129			
22-25	4	NUM	Store Number		5.177			
26-29	4	NUM	Terminal Number		5.187			
30	1		Device Code	same as for authorization	5.74			

D-FORMAT Deactivation Request Message							
Byte	Length	Format	Field description	Content	Section		
31	1		Industry Code	same as for authorization	<u>5.101</u>		
32-34	3		Currency Code	same as for authorization	5.70		
35-37	3		Country Code	same as for authorization	5.63		
38-46	9		City Code (ZIP)	same as for authorization	5.59		
47-48	2		Language indicator	same as for authorization	5.110		
49-51	3		Time Zone Differential	same as for authorization	5.192		
52-55	4		Merchant Category Code	same as for authorization	5.121		
56	1		Requested ACI	N	5.161		
57-60	4		Transaction Sequence Number		5.205		
61-62	2	A/N	Transaction Code	TD – Terminal Deactivation	5.201		
63	1		Cardholder ID Code	N - no card present	5.50		
64	1		Account Data Source	@, T, X - manually keyed	<u>5.1</u>		
65	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>		
66	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>		
67	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>		
68-70	3	NUM	Group III Version Number	049	<u>5.95</u>		
71-94	24	ASCII	Genkey	ASCII Representation of HEX	5.94.4		
95	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>		

7.4.4 Deactivation response

Table 7.60 Authentication Terminal Deactivation - response

	D-FORMAT Deactivation Response Message							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	E	5.157			
2	1	NUM	Application Type	0 – Single Transaction	5.21			
3	1	A/N	Message Delimiter		5.136			
4	1		Returned ACI	space	5.164			
5-8	4		Store Number		5.177			
9-12	4		Terminal Number		5.187			
13	1		Authorization Source Code		5.28			
14-17	4		Transaction Sequence Number		5.205			

	D-FORMAT Deactivation Response Message							
Byte	Length	Format	Field description	Content	Section			
18-19	2	A/N	Response Code	A3 - Deactivated	5.162			
20-25	6		Approval Code	all spaces	5.22			
26-31	6		Local Transaction Date		5.112			
31-37	6		Local Transaction Time		5.113			
38-53	16	A/N	Authorization Response Text		5.27			
54	1		AVS Result Code	space	5.11			
55-66			Retrieval Reference Number		<u>5.163</u>			
67			Market Specific Data Identifier	space	<u>5.117</u>			
69	1	ASCII	Field Separator	<fs></fs>	5.90			
69	1	ASCII	Field Separator	<fs></fs>	5.90			
70-72	3	NUM	Group III Version Number	049	<u>5.95</u>			
	1	ASCII	Field Separator	<fs></fs>	5.90			

7.5 Encryption and token examples

7.5.1 Encrypted credit

This is a sample retail/restaurant credit request with encrypted track data.

Table 7.61 Encrypted retail/restaurant - request

	W-Format Encrypted Authorization Request Message (Retail/Restaurant)						
Byte	Length	Format	Field description	Content	Section		
1	1	A/N	Record Format	W	<u>5.157</u>		
2	1	NUM	Application Type	0 – Single Transaction 2 – Multiple Transaction 4 – Interleaved	5.21		
3	1	A/N	Message Delimiter		5.136		
4-9	6	NUM	Acquirer BIN		5.4		
10-21	12	NUM	Merchant Number		5.129		
22-25	4	NUM	Store Number		5.177		
26-29	4	NUM	Terminal Number		5.187		
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74		
31	1	A/N	Industry Code	B, F, G, P, R	5.101		
32-34	3	NUM	Currency Code	840- U.S. Dollars	5.70		
35-37	3	NUM	Country Code	840- U.S. United States	5.63		
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59		
47-48	2	NUM	Language indicator	00-English	5.110		
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	5.192		
52-55	4	NUM	Merchant Category Code		<u>5.121</u>		
56	1	A/N	Requested ACI	Y	<u>5.161</u>		
57-60	4	NUM	Transaction Sequence Number	0001	5.205		
61-62	2	A/N	Transaction Code	54 - Purchase	5.201		
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50		
64	1	A/N	Account Data Source	 @ - No Card Reader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable 	5.1		

Byte	Length	Format	Field description	Content	Section
	5-76	A/N	Customer Data Field	TEP2 Track1 TEP2 Track2 Encrypted Acct# <fs> ExpDt<fs>Encrypted CVV</fs></fs>	5.71
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	0-29	A/N	Address Verification Data	Street Address <sp> Zip Code</sp>	5.51.4
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1-12	NUM	Transaction Amount		5.199
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	25	A/N	Merchant Name		5.32.1
	13	A/N	Merchant Location/City		5.32.2
	2	A/N	Merchant State		5.32.3
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		<u>5.73</u>
	4	A/N	Version ID		5.215
	1	A/N	Field Separator <fs></fs>	<fs></fs>	<u>5.90</u>
	1	A/N	Field Separator <fs></fs>	<fs></fs>	<u>5.90</u>
	1	A/N	Group Separator <gs></gs>	<gs></gs>	<u>5.96</u>
	3	NUM	Group III Version Number	049	5.95
	24	A/N	GenKey	ASCII Representation of HEX	5.94.4
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	052	<u>5.95</u>
	1	A/N	Encryption Type	V	5.86
	250-300	A/N	Encryption Transmission Block (ETB)		5.85
	1	ASCII	Field Separator <fs></fs>	<fs></fs>	5.90

7.5.2 Encrypted debit non-confirmation - request

This is a sample debit non-confirmation request with encrypted track data.

Table 7.62 Encrypted debit non-confirmation - request

Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	X	5.157
2	1	NUM	Application Type	4 – Interleaved	<u>5.21</u>
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer BIN		<u>5.4</u>
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	<u>5.74</u>
31	1	A/N	Industry Code	R	<u>5.101</u>
32-34	3	NUM	Currency Code	840- U.S. Dollars	5.70
35-37	3	NUM	Country Code	840- U.S. United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language indicator	00-English	5.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	<u>5.161</u>
57-60	4	NUM	Transaction Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	93 - Purchase 94 - Purchase Return	5.201
63	1	A/N	Cardholder ID Code	K-DIK/PT PIN Entry	<u>5.50</u>
64	1	A/N	Account Data Source	D - Track 2 Read	<u>5.1</u>
	5-76	A/N	Customer Data Field	TEP2 Track1 TEP2 Track2 Encrypted Acct# <fs> ExpDt<fs>Encrypted CVV</fs></fs>	5.71
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	0-29	A/N	Address Verification Data	Street Address <sp> Zip Code</sp>	5.51.4

3yte	Length	Format	Field description	Content	Section
	32	A/N	Cardholder identification data	Encrypted PIN Block Data	5.51
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1-12	NUM	Transaction Amount		5.199
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	0-12	NUM	Cash Back Amount		
	1	ASCII	Field Separator	<f\$></f\$>	<u>5.90</u>
	1	ASCII	Field Separator	<f\$></f\$>	<u>5.90</u>
	25	A/N	Merchant Name		5.32.1
	13	A/N	Merchant Location/City		5.32.2
	2	A/N	Merchant State		5.32.3
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	6	A/N	Approval Code	Required	5.22
	6	A/N	Local Transaction Data	Required	5.112
	6	A/N	Local Transaction Time	Required	5.113
	12	NUM	Retrieval Reference Number (RRN)	Required	5.163
	1	A/N	Field Separator	<f\$></f\$>	<u>5.90</u>
	7	A/N	System Trace Audit Number (STAN) (6bytes) 1 byte SPACE (' ')		5.179
	1	ASCII	Field Separator <fs></fs>	<fs></fs>	5.90
	1-30	A/N	Sharing Group		5.176
	1	ASCII	Field Separator <fs></fs>	<fs></fs>	5.90
	0 or 9	NUM	Merchant ABA Number		5.118
	0 or 4	A/N	Merch. Settlement Agent Number		5.132
	1	ASCII	Field Separator <fs></fs>	<fs></fs>	5.90
	6	NUM	Agent Bank Number		5.12
	6	NUM	Agent Chain Number		5.13
	3	NUM	Batch Number		5.31
	1	A/N	Reimbursement Attribute		5.158
	0 or 8	NUM	Original Purchase Data	MMDDHHMM (Returns only)	5.142

	X-Fo	rmat Encr	ypted Authorization Request	Message (debit non-confirm)
Byte	Length	Format	Field description	Content	Section
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		5.73
	4	A/N	Version ID		5.215
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	049	<u>5.95</u>
	24	ASCII	GenKey	ASCII Representation of HEX	5.94.4
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	1	NUM	Group III Version Number	052	<u>5.95</u>
	1	A/N	Encryption Type	V	5.86
	250-300	A/N	Encryption Transmission Block (ETB)		5.85
	1	A/N	Field Separator	<fs></fs>	5.90

7.5.3 Encrypted credit with token - request

This is a sample retail/restaurant credit request with encrypted track data.

Table 7.63 Encrypted credit with token - request

W-Fo	W-Format Encrypted Authorization Request Message with Token Request (Retail/Restaurant)								
Byte	Length	Format	Field description	Content	Section				
1	1	A/N	Record Format	W	5.157				
2	1	NUM	Application Type	0 – Single Transaction 2 – Multiple Transaction 4 – Interleaved	5.21				
3	1	A/N	Message Delimiter		5.136				
4-9	6	NUM	Acquirer BIN		5.4				
10-21	12	NUM	Merchant Number		5.129				
22-25	4	NUM	Store Number		5.177				
26-29	4	NUM	Terminal Number		5.187				

			•	with Token Request (Retail/Re	
Byte	Length	Format	Field description	Content	Section
30	1	A/N	Device Code	C, D, E, I, M, Q	<u>5.74</u>
31	1	A/N	Industry Code	B, F, G, P, R	<u>5.101</u>
32-34	3	NUM	Currency Code	840- U.S. Dollars	<u>5.70</u>
35-37	3	NUM	Country Code	840- U.S. United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language indicator	00-English	5.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	5.161
57-60	4	NUM	Transaction Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	54 - Purchase	5.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	5.50
64	1	A/N	Account Data Source	 @ - No Card Reader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable 	5.1
	5-76	A/N	Customer Data Field	TEP2 Track1 TEP2 Track2 Encrypted Acct# <fs> ExpDt<fs>Encrypted CVV</fs></fs>	5.71
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	0-29	A/N	Address Verification Data	Street Address <sp>Zip Code</sp>	5.51.4
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	1-12	NUM	Transaction Amount		5.199
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<f\$></f\$>	<u>5.90</u>
	1	ASCII	Field Separator	<f\$></f\$>	<u>5.90</u>
	25	A/N	Merchant Name		5.32.1
	13	A/N	Merchant Location/City		5.32.2
	2	A/N	Merchant State		5.32.3
	1	ASCII	Field Separator	<fs></fs>	5.90

W-Format Encrypted Authorization Request Message with Token Request (Retail/Restaurant)						
Byte	Length	Format	Field description	Content	Section	
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	3	NUM	Group III Version Number	020	<u>5.95</u>	
	6	A/N	Developer ID		<u>5.73</u>	
	4	A/N	Version ID		5.215	
	1	A/N	Field Separator	<fs></fs>	<u>5.90</u>	
	1	A/N	Field Separator	<fs></fs>	5.90	
	1	A/N	Group Separator	<gs></gs>	<u>5.96</u>	
	3	NUM	Group III Version Number	049	<u>5.95</u>	
	24	A/N	GenKey	ASCII Representation of HEX	5.94.4	
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>	
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>	
	3	NUM	Group III Version Number	052	<u>5.95</u>	
	1	A/N	Encryption Type	V	5.86	
	250-300	A/N	Encryption Transmission Block (ETB)		<u>5.85</u>	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	3	NUM	Group III Version Number	053	<u>5.95</u>	
	1	ASCII	Group Separator	<gs></gs>	5.96	

7.5.4 Encrypted credit with token request - response

This is a sample response to a retail/restaurant credit request with encrypted track data and a token request.

Table 7.64 Encrypted credit with token request-response

	E-Format Authorization Response Message with Token (Retail/Restaurant)							
Byte	Length	Format	Field description	Content	Section			
1	1	A/N	Record Format	Е	5.157			
2	1	NUM	Application Type	0 – Single Transaction 2 – Multiple Transaction 4 – Interleaved	5.21			
3	1	A/N	Message Delimiter		5.136			
4	1	A/N	Returned ACI	Space	5.164			
5-8	4	NUM	Store Number		5.177			

Byte	Length	Format	Field description	Content	Section
9-12	4	NUM	Terminal Number		5.187
13	1	A/N	Authorization Source Code		5.28
14-17	4	NUM	Transaction Sequence Number		5.205
18-19	2	A/N	Response Code		5.162
20-25	6	A/N	Approval Code		5.22
26-31	6	NUM	Local Transaction Date	MMDDYY	5.112
32-37	6	NUM	Local Transaction Time	HHMMSS	5.113
38-53	16	A/N	Authorization Response Text		5.27
54	1	A/N	AVS Result Code		5.11
55-66	12	A/N	Retrieval Reference Number		5.163
67	1	A/N	Mkt. Specific Data Identifier		<u>5.117</u>
	0,15	A/N	Transaction Identifier	Reference Number	5.204
	1	ASCII	Field Separator	<fs></fs>	5.90
	0,4	A/N	Validation Code		
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		5.73
	4	A/N	Version ID		5.215
	1	A/N	Field Separator	<fs></fs>	5.90
	1	A/N	Field Separator	<fs></fs>	5.90
	1	A/N	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	049	5.95
	24	A/N	GenKey	ASCII Representation of HEX	5.94.4
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	053	<u>5.95</u>
	1	A/N	Token Status	0	5.195
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	0,13-19	A/N	Token		5.193
	1	ASCII	Field Separator	<fs></fs>	5.90

7.5.5 Debit non-confirmation with token request - request

This is a sample debit non-confirmation request requesting a token.

Table 7.65 Debit non-confirmation with token request -request

	T-Format	Authoriza	ation Request Message with	Token Request (debit non-con	firm)
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	T	5.157
2	1	NUM	Application Type	4 – Interleaved	5.21
3	1	A/N	Message Delimiter		5.136
4-9	6	NUM	Acquirer BIN		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74
31	1	A/N	Industry Code	R	5.101
32-34	3	NUM	Currency Code	840- U.S. Dollars	5.70
35-37	3	NUM	Country Code	840- U.S. United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language indicator	00-English	5.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	5.161
57-60	4	NUM	Transaction Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	93 - Purchase 94 - Purchase Return	5.201
53	1	A/N	Cardholder ID Code	K-DIK/PT PIN Entry	5.50
54	1	A/N	Account Data Source	D - Track 2 Read	<u>5.1</u>
	5-76	A/N	Customer Data Field	Full Track 2	<u>5.71</u>
	1	ASCII	Field Separator	<fs></fs>	5.90
	32	A/N	Cardholder identification data	Encrypted PIN Block Data	5.51
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>

	T-Format	Authorization Request Message with Token Request (debit non-confirm)				
Byte	Length	Format	Field description	Content	Section	
	1-12	NUM	Transaction Amount		5.199	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	0-12	NUM	Cash back amount			
	1	ASCII	Field Separator	<fs></fs>	5.90	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	25	A/N	Merchant Name		5.32.1	
	13	A/N	Merchant Location/City		5.32.2	
	2	A/N	Merchant State		5.32.3	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	6	A/N	Approval Code	Required	5.22	
	6	A/N	Location Transaction Date	Required	5.112	
	6	A/N	Location Transaction Time	Required	5.113	
	12	A/N	Retrieval Reference Number	Required	5.163	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	7	A/N	System Trace Audit Number (STAN) (6bytes) 1 byte SPACE (' ')		5.179	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	1-30	A/N	Sharing Group		5.176	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	0 or 9	NUM	Merchant ABA Number		5.118	
	0 or 4	A/N	Merch. Settlement Agent Number		5.132	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	6	NUM	Agent Bank Number		5.12	
	6	NUM	Agent Chain Number		5.13	
	3	NUM	Batch Number		5.31	
	1	A/N	Reimbursement Attribute		5.158	
	0 or 8	NUM	Original Purchase Data	MMDDHHMM (Returns only)	5.142	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	3	NUM	Group III Version Number	020	<u>5.95</u>	
	6	A/N	Developer ID		<u>5.73</u>	

	T-Format	Authoriza	tion Request Message with T	oken Request (debit non-co	nfirm)
Byte	Length	Format	Field description	Content	Section
	4	A/N	Version ID		5.215
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	049	<u>5.95</u>
	24	A/N	GenKey	ASCII Representation of HEX	5.94.4
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	053	<u>5.95</u>
	1	ASCII	Field Separator <fs></fs>	<fs></fs>	5.90

7.5.6 Debit care/EBT with token request-response

This is a sample response to a debit/EBT request that is requesting a token.

Table 7.66 Debit/EBT with token request-response

U-Format Authorization Response Message with Token (Debit Card/EBT)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	U	5.157
2	1	NUM	Application Type		5.21
3	1	A/N	Message Delimiter		5.136
4	1	A/N	Returned ACI	Space	5.164
5-8	4	NUM	Store Number		5.177
9-12	4	NUM	Terminal Number		5.187
13	1	A/N	Authorization Source Code		5.28
14-17	4	NUM	Transaction Sequence Number		5.205
18-19	2	A/N	Response Code	XX	<u>5.162</u>
20-25	6	A/N	Approval Code		5.22
26-31	6	NUM	Local Transaction Date	MMDDYY	5.112
32-37	6	NUM	Local Transaction Time	HHMMSS	5.113
38-53	16	A/N	Authorization Response Text		5.27
54	1	A/N	AVS Result Code		5.11
55-66	12	A/N	Retrieval Reference Number		5.163

Byte	Length	Format	Field description	Content	Section
67	1	A/N	Mkt. Specific Data Identifier		5.117
	0,15	A/N	Transaction Identifier		5.204
	1	ASCII	Field Separator	<fs></fs>	5.90
	0,4	A/N	Validation Code		5.212
	1	ASCII	Field Separator	<fs></fs>	5.90
	6	NUM	Acquirer BIN		5.4
	8	A/N	Host Message Identifier		5.98
	6	NUM	System Trace Audit Number		5.179
	1	A/N	Network Identification Code		5.139
	4	NUM	Settlement Date	MMDD	<u>5.175</u>
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	049	<u>5.95</u>
	24	A/N	GenKey	ASCII Representation of HEX	5.94.4
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	5.96
	3	NUM	Group III Version Number	053	<u>5.95</u>
	1	A/N	Token Status	0	5.195
	1	ASCII	Field Separator	<fs></fs>	5.90
	0,13-19	A/N	Token		5.193
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>

7.5.7 Tokenized bill pay

This is a sample bill pay request with a Token in place of the PAN. The response will be the same as any other E-Format Tokenized Auth Request Message.

Table 7.67 Tokenized bill payment -request

Y-Format Tokenized Authorization Request Message (bill payment)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	Y	<u>5.157</u>
2	1	NUM	Application Type	0-Single Transaction 2-Multiple Transaction 4-Interleaved	5.21
3	1	A/N	Message Delimiter		<u>5.136</u>

Y-Format Tokenized Authorization Request Message (bill payment)					
Byte	Length	Format	Field description	Content	Section
4-9	6	NUM	Acquirer BIN		5.4
10-21	12	NUM	Merchant Number		5.129
22-25	4	NUM	Store Number		5.177
26-29	4	NUM	Terminal Number		5.187
30	1	A/N	Device Code	C, E, I, M, Q	5.74
31	1	A/N	Industry Code	R, D	<u>5.101</u>
32-34	3	NUM	Currency Code	840- U.S. Dollars	5.70
35-37	3	NUM	Country Code	840- United States	5.63
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59
47-48	2	NUM	Language indicator	00-English	5.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	5.161
57-60	4	NUM	Transaction Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	5B-Bill Payment	5.201
63	1	A/N	Cardholder ID Code	N-Card Not Present	5.50
64	1	A/N	Account Data Source	@-Manually Keyed	5.1
	5-76	A/N	Customer Data Field	Token <fs>ExpDate<fs></fs></fs>	<u>5.71</u>
	1	A/N	Field Separator	<fs></fs>	5.90
	0-29	A/N	Address Verification Data (If Cardholder ID = "N")	Street Address <sp> Zip Code</sp>	5.51.4
	1	A/N	Field Separator	<fs></fs>	5.90
	1	A/N	Field Separator	<fs></fs>	5.90
	1-12	NUM	Transaction Amount		5.199
	1	A/N	Field Separator	<fs></fs>	5.90
	1	A/N	Field Separator	<fs></fs>	5.90
	1	A/N	Field Separator	<fs></fs>	5.90
	25	A/N	Merchant Name		5.32.1
	13	A/N	Merchant Location/City		5.32.2
	2	A/N	Merchant State		5.32.3
	1	A/N	Field Separator	<fs></fs>	5.90

Y-Format Tokenized Authorization Request Message (bill payment)						
Byte Length Forr		Format	Field description	Content	Section	
	1	A/N	Field Separator	<fs></fs>	<u>5.90</u>	
	1	A/N	Field Separator	<fs></fs>	5.90	
	3	NUM	Group III Version Number	014	<u>5.95</u>	
	1	A/N	MOTO/Electronic Commerce Ind.	1	5.137	
	1	ASCII	Group Separator	<gs></gs>	5.96	
	3	NUM	Group III Version Number	020	<u>5.95</u>	
	6	A/N	Developer ID		5.73	
	4	A/N	Version ID		5.215	
	1	A/N	Field Separator	<fs></fs>	5.90	
	1	A/N	Field Separator	<fs></fs>	5.90	
	1	A/N	Group Separator	<gs></gs>	<u>5.96</u>	
	3	NUM	Group III Version Number	049	<u>5.95</u>	
	24	A/N	GenKey	ASCII Representation of HEX	5.94.4	
	1	ASCII	Field Separator	<fs></fs>	5.90	
	1	ASCII	Group Separator	<gs></gs>	5.96	

7.5.8 Tokenized PINIess debit bill payment - request

Table 7.68 Tokenized PINless debit bill payment -request

	Z-Format Tokenized PINIess Debit Bill Payment					
Byte Length Format		Format	Field description	Content	Section	
1	1	A/N	Record Format	Z	5.157	
2	1	NUM	Application Type	4-Interleaved	5.21	
3	1	A/N	Message Delimiter		5.136	
4-9	6	NUM	Acquirer BIN		5.4	
10-21	12	NUM	Merchant Number		5.129	
22-25	4	NUM	Store Number		5.177	
26-29	4	NUM	Terminal Number		5.187	
30	1	A/N	Device Code	C, D, E, I, M, Q	5.74	
31	1	A/N	Industry Code	R	5.101	
32-34	3	NUM	Currency Code	840- U.S. Dollars	5.70	
35-37	3	NUM	Country Code	840- United States	5.63	
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	5.59	
47-48	2	NUM	Language indicator	00-English	5.110	

Byte Length Format Field description Content					
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	Section 5.192
52-55	4	NUM	Merchant Category Code		5.121
56	1	A/N	Requested ACI	Y	5.161
57-60	4	NUM	Transaction Sequence Number	0001	5.205
61-62	2	A/N	Transaction Code	9C-PINless Debit	5.201
63	1	A/N	Cardholder ID	N- Not Present	5.50
64	1	A/N	Account Data Source	@-Manually Keyed	<u>5.1</u>
	5-76	A/N	Customer Data Field	Token <fs>ExpDate<fs></fs></fs>	5.71
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1-12	NUM	Transaction Amount		5.199
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	0,4	A/N	Market Specific Data Indicator	B11, B22	5.117
	1	ASCII	Field Separator	<fs></fs>	5.90
	25	A/N	Merchant Name	(Required)	5.32.1
	13	A/N	Merchant Location/City	(Required) Phone # if NYCE network	5.32.2
	2	A/N	Merchant State	(Required)	5.32.3
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	6	A/N	Approval Code		5.22
	6	NUM	Location Transaction Date		5.112
	6	NUM	Location Transaction Time		5.113
	12	A/N	Retrieval Reference Number		5.163
	1	ASCII	Field Separator	<fs></fs>	<u>5.90</u>
	6	NUM	System Trace Audit Number (STAN)		5.179
	1	A/N	Network Identification Code		5.139

Byte Length Format Field description				Content	Section
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	0 or 9	NUM	Merchant ABA Number		5.118
	0 or 4	A/N	Merch. Settlement Agent Number		5.132
	1	ASCII	Field Separator	<fs></fs>	5.90
	6	NUM	Agent Bank Number		5.12
	6	NUM	Agent Chain Number		5.13
	3	NUM	Batch Number		5.31
	1	A/N	Reimbursement Attribute		5.158
	1	ASCII	Field Separator	<fs></fs>	5.90
	3	NUM	Group III Version Number	014	<u>5.95</u>
	1	A/N	MOTO Indicator	Must be 1, 2, 3, 5, 6, 7, or 8	5.137
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>
	3	NUM	Group III Version Number	020	<u>5.95</u>
	6	A/N	Developer ID		5.73
	4	A/N	Version ID		5.215
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Field Separator	<fs></fs>	5.90
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>
	3	NUM	Group III Version Number	043	<u>5.95</u>
	4	NUM	Network ID	Must not be "0000"	5.139
	1	ASCII	Group Separator	<gs></gs>	<u>5.96</u>
	3	NUM	Group III Version Number	049	<u>5.95</u>
	0,24	ASCII	GenKey	ASCII Representation of HEX	5.94.4
	1	ASCII	Field Separator	<f\$></f\$>	5.90

Appendix A

The following list of EMV tags are mandatory and must be sent on any transaction that contains Group 3 Version 55. If either or both of these tags are missing, the transaction will be rejected.

Table A.1 Mandatory EMV tags

Tag	Tag name	Description
DF79	Kernal Version Number	The version number of the kernel used to process the chip data in the transaction. (variable 1 - 32)
DF78	Device Serial Number	The manufacturer's unique serial number of the device that interacts with the chip card. (variable 1 - 20)

The following list of EMV tags are the primary tags used in a chip card transaction. Not all tags are used in every transaction. The tags being sent should be included if available and in the order listed where possible.

Table A.2 Summary chip card transaction data elements

Tag	Tag name	Description
9F40	Additional Terminal Capabilities	Indicates the data input and output capabilities of the terminal.
9F02	Amount, Authorized	Authorized amount of the transaction (excluding adjustments).
9F03	Amount, Other	Secondary amount associated with the transaction representing a cashback amount
9F26	Application Cryptogram	Cryptogram returned by the ICC in response of the GENERATE AC command.
4F	Application Identifier (AID) - ICC	Identifies the application as described in ISO/IEC 7816-5.
9F06	Application Identifier (AID) - Terminal	Identifies the application as described in ISO/IEC 7816-5.
82	Application Interchange Profile	Mnemonic associated with the AID according to ISO/IEC 7816-5.

Tag	Tag name	Description
9F36	Application Transaction Counter	Counter maintained by the application in the ICC (incrementing the ATC is managed by the ICC).
9F34	Cardholder Verification Method (CVM) Results	Identifies a method of verification of the cardholder supported by the application.
9F27	Cryptogram Information Data	Indicates the type of cryptogram and the actions to be performed by the terminal.
9F39	POS Entry Mode	Indicates the method by which the PAN was entered, according to the first two digits of the ISO 8583:1987 POS Entry Mode.
9F33	Terminal Capabilities	Indicates the card data input, CVM, and security capabilities of the terminal.
9F1A	Terminal country Code	Indicates the country of the terminal, represented according to ISO 3166.
9F35	Terminal Type	Indicates the environment of the terminal, its communications capability, and its operational control.
95	Terminal Verification Results	Status of the different functions as seen from the terminal.
5F2A	Transaction Currency Code	Indicates the currency code of the transaction according to ISO 4217.
9A	Transaction Date	Local date that the transaction was authorized.
9B	Transaction Status Information	Indicates the functions performed in a transaction.
9F21	Transaction Time	Local time that the transaction was authorized.
9C	Transaction Type	Indicates the type of financial transaction, represented by the first two digits of ISO 8583:1987 Processing Code.
9F37	Unpredictable Number	Value to provide variability and uniqueness to the generation of a cryptogram.
5F2D	Language Preference	1-4 languages stored in order of preference, each represented by 2 alphabetical characters according to ISO 639.
91	Issuer Authentication Data	Data sent to the ICC for online issuer authentication.

Tag	Tag name	Description
5F34	Primary Account Number (PAN) Sequence Number	Identifies and differentiates cards with the same PAN.
84	Dedicated File (DF) Name	Identifies the name of the DF as described in ISO/IEC 7816-4.
9F10	Issuer Application Data	Contains proprietary application data for transmission to the issuer in an online transaction.
9F5B	Issuer Script Results	Indicates the result of the terminal script processing.

The following list of EMV tags should not be sent in Group 3 Version 55.

Table A.3 EMV tags that should not be sent

Tag	Tag name	
5A	Primary Account Number (PAN)	
57	Track 2 Equivalent Data	
5F24	Application Expiration date	
5F30	Service Code	
9F1F	Track 1 Discretionary Data	
9F20	Track 2 Discretionary Data	

The following list of EMV tags are only used in contactless transactions. If the tag is transaction specific, this is stated in the description.

Table A.4 Contactless chip card transaction data elements

Tag	Tag name	Description
9F4C	ICC Dynamic Number	ICC PIN Encipherment Public Key certified by the issuer (Contactless EMV only)
9F6B	Track 2 Data (MasterCard)	The Track 2 Data is present in the file read using the READ RECORD command during a PayPass - Mag Stripe transaction. The PayPass reader copies the required digits of the UN (Numeric), CVC3TRACK2, ATC and nUN into the discretionary data field of the Track 2 Data and stores the modified Track 2 Data in the Data Record to be sent to the terminal. (MasterCard Contactless mag stripe only)
9F6E	Form Factor Indicator (FFI)	The PayPass Third Party Data contains proprietary information from a third party. (contactless mag stripe only)
9F7C	Customer Exclusive Data (CED) (Visa)	Contains data for transmission to the Issuer in Magnetic Stripe Data (MSD) transactions with a cryptogram. The MSD chip may contain customer data to be sent to the issuer in a contactless MSD transaction containing a cryptogram
		For Visa only, the issuer may change this customer data using the Issuer Script in the response message.

The following is a list of expected response tags in a typical response message. Tags 71 and 72 are optional and if one is received the other will not be received. Other tags may be included in the response message.

Table A.5 Chip card transaction response data elements

Tag	Tag name	Description
8A	Authorization Response Code	Code that defines the disposition of a message. (response)
91	Issuer Authentication Data	Data sent to the ICC for online issuer authentication
71	Issuer Script Template 1	Contains proprietary issuer data for transmission to the ICC before the second GENERATE AC command. (response)

72	Issuer Script Template 2	Contains proprietary issuer data for transmission to the ICC after the second GENERATE AC command. (response)

Appendix B

Card product codes

Value	Product description
A^	Visa Traditional
AX	American Express Card
B^	Visa Traditional Rewards
C^	Visa Signature
D^	Visa Signature Preferred
DI	Discover Card
DN	Diners Card
E^	Proprietary ATM
F^	Visa Classic
G^	Visa Business
G1	Visa Signature Business
G2	Reserved
G3	Visa Business Enhanced Visa Platinum Business
G4	Visa Infinite Business Visa Infinite Privilege Business (Canada)
H^	Reserved
I,	Visa Infinite [New Consumer Credit Product]
I1	Visa Infinite Privilege
I2	[Ultra High Net Worth]
J^	Reserved
J1	Reserved
J2	Reserved
J3	Visa Healthcare
J4	Reserved

Value	Product description
JC	JCB Card
K^	Visa Corporate T & E
K1	Visa GSC Corporate T & E
L^	Electron
M^	MasterCard
N^	Visa Platinum
N1	Visa Rewards
N2	Visa Select
P^	Visa Gold
Q^	Private Label
Q1	Reserved
Q2	Private Label Basic
Q3	Private Label Standard
Q4	Private Label Enhanced
Q5	Private Label Specialized
Q6	Private Label Premium
R^	Proprietary
S^	Visa Purchasing
S1	Visa Purchasing with Fleet (outside of Canada) Visa Fleet (cards issued in Canada)
S2	Visa GSA Purchasing
S3	Visa GSA Purchasing with Fleet
S4	Commercial Loan
S5	Commercial Transport EBT
S6	Business Loan
S7	Reserved
T^	Reserved
U^	Visa Travel Money

Value	Product description
V _γ	V Pay
V1	Reserved
W.	Reserved
X^	Reserved
Υ^	Reserved
Z^	Reserved

NOTE: The new names in brackets ([-]) are tentative; and may be changed with very short notice.