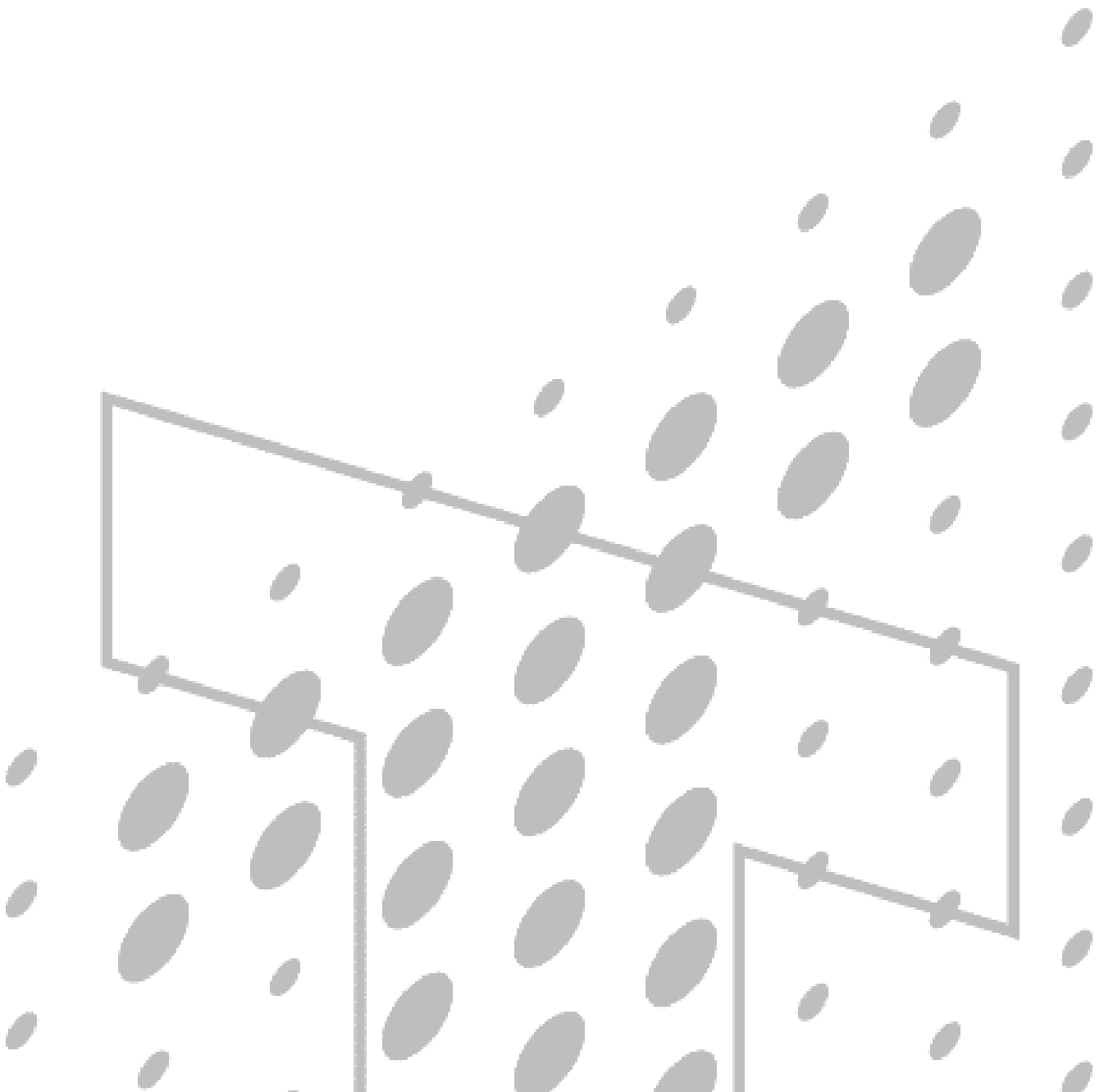


Trans**Union**SM

TU Release 4 User Guide, Version 0

Automated Inquiry User Manual

February 2003



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About This Guide

The **TU40 User Guide** describes the fixed-format inquiry (FFI) and fixed-format response (FFR) that are used in TU Release 4.0 (TU40). The intended audience for this guide consists of the programmers who are moving from an earlier format or who maintain systems that currently use TU40 to conduct electronic transactions with the TransUnion consumer database.

Many of the FFI and FFR segments are new or modified and the segment order is completely different from that used in ARPT. Use the information in this guide to ensure that your systems are prepared to work properly with TU40 as it is now the standard for Trans Union transactions.

The “About This Guide” section describes the chapters in this guide and contains the Summary of Revisions, a list of the changes in this update of the **TU40 User Guide**.

Chapter Descriptions

This guide contains the following chapters:

- Chapter 1, “Connecting to the TransUnion Network,” briefly describes the purpose of the TU40 format and provides detailed descriptions of how to configure your asynchronous, LU 6.2, TCP/IP, or TransUnion Net Access environment to communicate with TransUnion.
- Chapter 2, “TU40 FFI Segments,” describes the segments of the TU40 fixed-format inquiry (FFI), including segment order, length, fields, and so on.
- Chapter 3, “TU40 FFR Segments,” describes the segments of the TU40 fixed-format response (FFR), including segment order, length, and fields.
- Chapter 4, “TU40 Processing Rules,” describes in more detail how to successfully set up TU40 FFIs and FFRs and provides various examples of both.
- Chapter 5, “Standalone Product Descriptions,” describes each TransUnion standalone product that is supported by TU40. Each product section lists the segments that can be included in an inquiry using that product and shows the segments that can be returned in response.
- Chapter 6, “Add-on Product Descriptions,” describes each TransUnion add-on product that is supported by TU40. Each product section shows how to include the product in an FFI and shows the segments that can be returned in response.

- Appendix A, “Name, Address, and Phone Codes,” lists codes that are used to specify names and addresses in TU40. These include codes for states, street types, prefixes, and suffixes. This appendix also contains examples of how to code addresses in TU40 and a list of phone type codes returned by the Reverse Phone Append database.
- Appendix B, “Industry Codes,” lists subscriber industry codes.
- Appendix C, “Trade and Loan Type Codes,” lists codes for elements of tradelines and loan information. These include loan type codes, MOP codes, and remarks codes. This appendix also describes payment pattern logic.
- Appendix D, “Public Record Codes,” lists court type codes and public record codes.
- Appendix E, “Puerto Rico Name and Address Logic,” describes how to enter Hispanic names and addresses in TU40 format and provides examples of how to code them.
- Appendix F, “Edit and Error Codes,” describes the types of input errors that generate edit and error segments, and lists edit and error codes.
- Appendix G, “The TU40 Format in the U.S. and Canada,” describes differences between the U.S. and Canadian applications of the TU40 format.
- Appendix H, “Test Files,” lists test files that you can use to test your system setup.
- Glossary, which describes terms used commonly in TU40.

Summary of Revisions

This guide is substantially the same as the previous edition, dated November 2001, but contains a number of modifications and revisions. These changes are listed in the table below.

Chapter-Page	Segment, Product, or Table Affected	Description of Change
1-38	Ping test for TransUnion Net Access	Modified URL address.
2-4 to 2-5	Product codes	Updated product code tables.
2-8	AF01	Added AF01 segment to hold a consumer's access code (for Security Freeze).
2-13	DI01	Updated DI01 segment.
2-15	EU01	Removed list of permissible purpose codes from this location and added to Appendix B.
2-24	OR01	Added value (W) to Owning Bureau Identification of Credit File field for return of OB02 segment.
2-29	RP02	Added RP02 segment for use with ACQUIRE Bundled Product.
2-32	TU4I	Described how to use version switch to send a version 0 FFI and receive a version 1 FFR.
2-34	VN01	Updated segment to reflect new Vendor ID field (replacing Vendor Product Name field).
3-12	CD01	Added CD01 segment to return customer data sent in FFI.
3-17	CORR	Modified description of Version Switch field to indicate subscriber can receive a version 1 FFR.
3-20	CS01	Modified segment to add Security Alert information.
3-26	DR01	Clarified return of segment for customers with multiple matrices and added new field, Credit Data Status.
3-49	OB02	Added new segment for return of Adverse Action URL.
3-64, 3-67	SH01, SH04	Added Security Freeze values (F, E, X) to Suppression Indicator field.
3-65	SH02	Added new value (07) to Product Action field to indicate frozen file returned.
3-84	TU4E	Modified description of Version Switch field to indicate subscriber can receive a version 1 FFR.
3-85	TU4R	Modified description of Version Switch field to indicate subscriber can receive a version 1 FFR.
3-86	TX01	Updated Content Type, Statement Identifier, and Number of Trades Closed/Disputed fields to reflect changes in the handling of FCRA information.
4-2	TU4v1 FFR	Added note explaining possible return of version 1 FFR for a version 0 FFI.
4-12, 4-15, 4-16	Multiple products	Updated sample FFRs on these pages to show how multiple products are returned in one FFR.
5-3 ff	Global changes to product FFIs/FFRs	Added AF01 to affected product FFIs. Added OB02 to affected product FFIs. Removed TX01 segment from all FFRs except for ACQUIRE and PEER.
5-3 ff	Max Returned column in FFR	Removed Current Maximum Returned column from all FFRs.

Chapter-Page	Segment, Product, or Table Affected	Description of Change
5-3 to 5-8	ACQUIRE	Added new RP02 segment to FFI table and added ACQUIRE Bundled Product information.
6-3 ff	Max Returned column in FFR	Removed Current Maximum Returned column from all FFRs.
6-13	Inquiry Analysis	Added information about this product to the chapter. Use the same IN01 for this product that we've always had.
6-17	OFAC Advisor	Added OFAC Advisor as add-on product.
6-25	TUDC	Added TransUnion Data Connect.
6-38	Spectrum 2002	Added Spectrum 2002 factor codes.
6-42 to 6-47	TransRisk	Updated tables for TransRisk AM and Bankruptcy. Also replaced TransRisk New Account factor code table to include both Version 1.0 and Version 2.0 codes.
Appendix B	Permissible Purpose Codes	Added list of valid permissible purpose codes to this appendix.
Appendix C	Loan Type Codes	Added FD (Fraud Identity Check) and LN (Construction Loan) to table. Removed CT (Construction Loan).
Appendix C	Account Designator Codes	Added list of valid account designator codes to this appendix.
Appendix C	MOP Codes	Added 8A (Voluntary Surrender) to table.
Appendix C	Remarks Codes	Modified or removed several dozen codes from table per changes to database.
Appendix D	Public Records Codes	Added TB (Tax Lien Included in Bankruptcy) to table.
Appendix F	Error Codes	<p>Added these codes to table:</p> <ul style="list-style-type: none"> 091 (Total ID) 170 (CD01) 171 (CD01) 172 (CD01) 215 (Security Freeze) 216 (Security Freeze) 461 (GLANCE) 466 (GLANCE) 472 (CD01) 473 (CD01) 475 (TransUnion Net Access) 476 (TransUnion Net Access) 477 (TransUnion Net Access) 478 (Total ID) <p>Modified wording of these codes:</p> <ul style="list-style-type: none"> 033 (expanded current description to include duplicate entries) 132 (changed number of AD01 segments from 3 to 2) 212 (added reference to End User field) <p>Deleted code 463 from table.</p>

Chapter 1. Connecting to the TransUnion Network

TransUnion's Release 4.0 (TU40) is a standardized format that is designed to be flexible and to make products easier to develop and maintain. Each segment is defined as a logical data group that can be used for different products that require the same information. Because these segments are reusable for every product, we recommend that you code for all segments if you request several TransUnion products.

This format will encourage product consistency and reduce the amount of effort required to add new products or enhance existing ones. TU40 is the only TransUnion fixed format that is Year 2000 compliant and will support future products and product enhancements.

Note

Please note that the current maximum number of segments specified for each product is not permanent. The TU40 format is designed to accept and return an unlimited number of segments between the **control** and **end** segments of a transaction. This lets us accommodate new products, enhanced products, and various ways of packaging multiple products together. If the maximum number of returned segments for a product changes, TransUnion will announce the new figure.

The remainder of this chapter describes how to set up your system to use TU40 to send data back and forth between your site and TransUnion. The information is organized according to communication protocol and appears in this order:

- Asynchronous
- SNA LU62
- TCP/IP
- TransUnion Net Access

Asynchronous Connectivity Options

This section describes how to connect with TransUnion in an asynchronous environment.

CPU-CPU Processing

Computer-to-Computer (CPU-to-CPU) processing allows you to make inquiries and receive the desired report within seconds. Your computer creates inquiry records by formatting consumer information into fixed format inquiry (FFI) records. Reports are transmitted for review and evaluation.

Control Characters

ASCII control characters used in the messages from the TransUnion computer in an asynchronous environment are defined as follows:

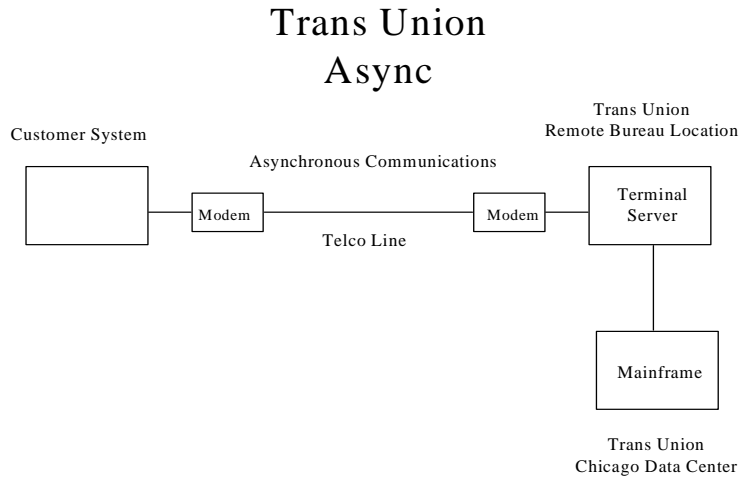
<u>CONTROL CHARACTER</u>	<u>ASCII</u>	<u>WITH EVEN PARITY</u>
X-OFF	HEXADECIMAL 13	HEXADECIMAL 93
X-ON	HEXADECIMAL 11	HEXADECIMAL 11
CR	HEXADECIMAL 0D	HEXADECIMAL 8D
LF	HEXADECIMAL 0A	HEXADECIMAL 0A
BELL	HEXADECIMAL 07	HEXADECIMAL 87
*	HEXADECIMAL 2A	HEXADECIMAL AA

Character Set

The character set is ASCII with 7 data bits, 1 start bit, 1 stop bit and 1 parity bit (Even). Alpha characters can be in upper or lower case ASCII.

Asynchronous Protocol Diagram

The diagram below illustrates how asynchronous communication occurs between your system and TransUnion.



Using Asynchronous Protocol to Communicate with TransUnion

All inquiries must be transmitted from your computer to a TransUnion Credit Bureau terminal server. These inquiries are forwarded to the TransUnion main computer for processing. The asynchronous protocol may be used with either a dial-up or dedicated lease line.

Conversation After Initial Connection

The following conversation takes place between TransUnion and your computer in a dial up environment, after the initial connection:

YOUR COMPUTER TRANSMITS: (CR) AUTOSPEED DETECTION

TRANS UNION TRANSMITS: GO-(X-ON)

TransUnion is now available to receive inquiries. Inquiries must be submitted one at a time. All segments of an inquiry must be transmitted back-to-back in a stream that ends with (X-OFF).

After reception of the last portion of the inquiry, TransUnion transmits a response (report or error message) to your computer. At the conclusion of the response, TransUnion transmits:

(X-OFF)(BEL)(CR)(LF)(8 NULLS)GO-(X-ON)

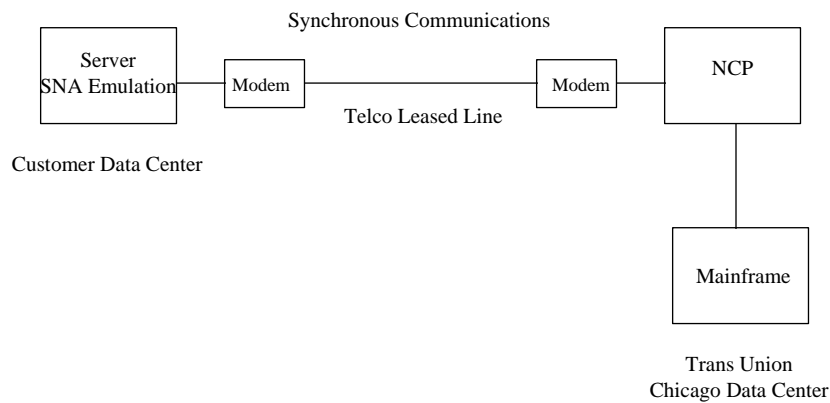
LU 6.2 Connectivity Options

This section describes how to connect with TransUnion in an SNA LU 6.2 environment.

Direct LU 6.2-PU Type 2.1 Protocol Diagram

The diagram below illustrates how your computer communicates with TransUnion in a LU 6.2-PU Type 2.1 environment.

Trans Union LU 6.2 Type 2.1



Using LU 6.2-PU Type 2.1 Protocol to Communicate with TransUnion

The line, PU, and LUs must be defined in TransUnion's NCP. In addition, the LU must be defined in TransUnion's CICS.

Direct LU 6.2-PU Type 2.1 Information Exchange Form

The following information is required in order to install or reconfigure a LU 6.2-PU Type 2.1 customer interface into the TransUnion mainframe in Chicago.

Customer Name: _____

Contact Name and Phone Number: _____

TransUnion will provide PU and LU names as defined to our network, and the local addresses of the LUs.

Please indicate if you plan to run Dependent or Independent sessions below:

___ **Dependent** - Single session, LU Address = ___ (Can be any address except 00 (zero))

___ **Independent** - Parallel sessions, LU Address **must be 00 (zero)**

- **NRZI** =N
- **Modename** must be LU62 (Blank entry in mode table)
- **Trans ID** = SPE1 for SPEC transaction, TU62 for ARPT transaction, TU4L for TU40
- **Trans Union NET ID** = TU0 as in (TU Zero)

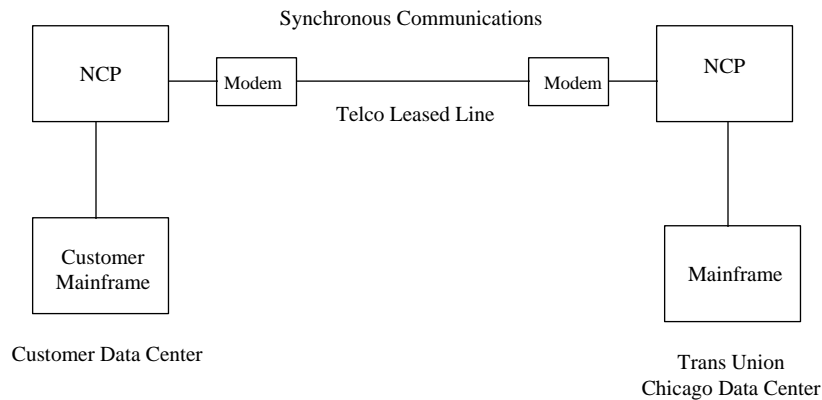
Please fax the completed form to (312) 466-7993 or mail to:

TransUnion Corporation
Network Integration Group
555 West Adams Street
3rd Floor
Chicago, IL 60661-3601

Direct LU 6.2-PU Type IV Protocol

The diagram below illustrates how your computer communicates with TransUnion in a LU 6.2-PU Type IV environment.

Trans Union LU 6.2 Type IV



Using LU 6.2-PU Type IV Protocol to Communicate with TransUnion

A Direct LU 6.2-PU Type IV Information Exchange Form is located on pages 1-15 to 1-16. Complete this form before starting any installation or reconfiguration project.

The LU 6.2 protocol may only be used with a dedicated leased line directly into the TransUnion Corporate Data Center. LU 6.2 protocol is intended to support only fixed-format response records (FFI's and FFR's). Special adjustments by the customer will be necessary to support print image output under this protocol. Use the OD01 FFI segment, described in Chapter 2, to specify your output type if it is other than FFR, which is the default.

Dedicated Requirements

The Direct LU 6.2 protocol is an SNA environment in which your application will be in direct conversation with the TransUnion application. To allow communication between your application and the TransUnion application, the following must be defined:

- LINE
- PHYSICAL UNIT (PU)
- CROSS DOMAIN RESOURCE MANAGER (CDRM)
- CROSS DOMAIN RESOURCE SESSION CONTROL (CDRSC)
- ADJACENT SYSTEM SERVICES CONTROL POINT (ADJSSCP)
- CLASS OF SERVICE TABLE (COS)
- MODE TABLE

Direct LU 6.2 protocol is capable of supporting multiple parallel sessions. Each of the sessions supported by the LU allows for transmission of bureau inquiries and receipt of responses (reports or error messages).

SNI Coding Definition Description

Below are TransUnion definitions for certain terms that you need to know to complete your system's connection to TransUnion.

1. **TransUnion's NCP (Network Control Program)**—The TransUnion NCP defines the characteristics of the resources, which have been made available by the customer for the purpose of this connection. Those resources include the hardware and the associated software that allows the customer's connection to the SUBAREA NODE defined. TransUnion will assign a specific NCP SUBAREA NODE for the customer's use into TransUnion's NULL Network.
2. **TransUnion's CDRM**—The CDRM (CROSS-DOMAIN RESOURCE MANAGER) is defined to allow the ability to use any set of resources available to the SUBAREA NODE defined.
3. **The Customer's CDRM**—The customer provides the name of the CDRM, the Network ID and the ELEMENT number. This information is needed in order to determine the resources that will be made available to TransUnion for purposes of this connection. TransUnion will assign a specific NCP (Network Control Program) SUBAREA NODE for the customer's use in a NULL Network. **The customer must use the SUBAREA NODE as specified by TransUnion.**
4. **The Customer's ADJSSCP**—The customer's ADJSSCP (Adjacent System Services Control Point) is a centralized listing of the customer's Network ID with the associated CDRMS. This allows for a central point from which to start, control, and stop the resources which have been made available by the customer for the purpose of this connection.
5. **The Customer's CDRSC**—The customer provides the name of the CDRSC (Cross-Domain Resource Session Control). The Network ID used is the same as is used in the CDRM definition. This is to define the customer's CICS APPLID (CICS Application ID) so that it is recognized by the TransUnion CICS Application ID.
6. **TransUnion's Mode Table**—The mode table is a listing of mode names that determine the characteristics of a session initiated between two LUs (Logical Units). These characteristics include the available path, authorization, and session protocols. The mode name is **LU62**, which is defined as a blank VTAM modeent entry.
7. **TransUnion's COS (Class of Service) Table**—The COS determines which of the available virtual route(s) will be used by a particular session. The choice of the virtual route(s) is made at the initiation of the session based upon security, priority and bandwidth requirements.

Customer SNI Coding Samples

SAMPLE CUSTOMER DEFINITIONS

Sample customer CDRM definition. The element defined in the customer CDRM is the same as the ADJNETEL in the TransUnion definition of the customer CDRM. Below is an example of a customer CDRM definition:

```

Custcdrm      VBUILD  TYPE=CDRM
              CDRM    SUBAREA=a,
                   ELEMENT=b,
                   CDRDYN=YES
    
```

Sample customer definition of TransUnion CDRMs. The customer needs to define the SUBAREAS and elements for each of the GWPATH (Gateway Path) statements. Below is an example of customer-defined TransUnion CDRMs:

```

TRANCDRM      VBUILD  TYPE=CDRM
TU0 (zero)    NETWORK NETID=TU0 (zero)

TUCDRM1      CDRM
              GWPATH  SUBAREA= Customer NCP Subarea,
                   ELEMENT= d, Alias element in customer netwk
                   ADJNET=  XTU___, (assigned by TransUnion)
                   ADJNETSA= 15,
                   ADJNETEL= 2

              GWPATH  SUBAREA= Customer NCP Subarea,
                   ELEMENT= d, Alias element in customer netwk
                   ADJNET=  XTU___, (assigned by TransUnion)
                   ADJNETSA= 16,
                   ADJNETEL= 2

              GWPATH  SUBAREA= Customer NCP Subarea,
                   ELEMENT= d, Alias element in customer netwk
                   ADJNET=  XTU___, (assigned by TransUnion)
                   ADJNETEL= 17,
                   ADJNETEL= 2

              GWPATH  SUBAREA= Customer NCP Subarea,
                   ELEMENT= d, Alias element in customer netwk
                   ADJNET=  XTU___, (assigned by TransUnion)
                   ADJNETEL= 18,
                   ADJNETEL= 2
    
```


SAMPLE CUSTOMER DEFINITIONS (cont'd)

TUCDRM2	CDRM
	GWPATH SUBAREA= Customer NCP Subarea, ELEMENT= e, Alias element in customer netwk ADJNET= XTU___, (assigned by TransUnion) ADJNETSA= 15, ADJNETEL= 3
	GWPATH SUBAREA= Customer NCP Subarea, ELEMENT= e, Alias element in customer netwk ADJNET= XTU___, (assigned by TransUnion) ADJNETSA= 16, ADJNETEL= 3
	GWPATH SUBAREA= Customer NCP Subarea, ELEMENT= e, Alias element in customer netwk ADJNET= XTU___, (assigned by TransUnion) ADJNETSA= 17, ADJNETEL= 3
	GWPATH SUBAREA= Customer NCP Subarea, ELEMENT= e, Alias element in customer netwk ADJNET= XTU___, (assigned by TransUnion) ADJNETSA= 18, ADJNETEL= 3

SAMPLE CUSTOMER DEFINITION OF TRANSUNION CICS APPLIDS

TUCDRSC	VBUILD TYPE=CDRSC
TU0	NETWORK NETID=TU0
IQRPRDT1	CDRSC

SAMPLE CUSTOMER ADJSSCP TABLE

Note: No label required on the VBUILD command.

	VBUILD TYPE=ADJSSCP
TU0	NETWORK NETID=TU0
TUCDRM1	ADJCDRM
TUCDRM2	ADJCDRM

SAMPLE CUSTOMER NCP DEFINITION

The customer needs to define primary and secondary groups. The customer also needs to define the element for each CDRM and the number of sessions. Below are examples of these definitions:

PCCU
 BUILD
 SYSCNTRL

	GWNAU	NAME=	TUCDRM1,
		NETID=	TU0,
		NUMSESS=	1,
		ELEMENT=	d, Alias element in customer netwk
	GWNAU	NAME=	TUCDRM2,
		NETID=	TU0,
		NUMSESS=	1,
		ELEMENT=	e, Alias element in customer netwk
	GWNAU	NUMADDR=	k
Psdlcst	SDLCST	GROUP=	pgrp,
		MODE=	PRIMARY
Ssdlcst	SDLCST	GROUP=	sgrp,
		MODE=	SECONDARY
Pgrp	GROUP	LNCTL=	SDLC,
		MODE=	PRI
Sgrp	GROUP	LNCTL=	SDLC,
		MODE=	SEC
Grp	GROUP	LNCTL=	SDLC,
		SDLCST=	(Psdlcst,Ssdlcst)
Line	LINE	ADDRESS=	(n,FULL),
		CLOCKING=	EXT,
		NRZI=	YES or NO (customer preference)
		DUPLEX=	(FULL),
		SPEED=	9600, (or 19200 or 56000)

SAMPLE CUSTOMER NCP DEFINITION (cont'd)

Pu	PU	TGN=	1,
		NETID=	XTU____, (assigned by TransUnion)
		PUTYPE=	4
	NETWORK	NETID=	XTU____, Def. of the Null Network
		MAXSUBA=	63,
		SUBAREA=	xx Customer Subarea in XTU____
	GWNAU	NAME=	Customer CDRM,
		ELEMENT=	b, Element in Customer Network
		NETID=	Customer Network ID,
		NUMSESS=	j
	GWNAU	NAME=	Customer CICS APPLID,
		NETID=	Customer Network ID,
		NUMSESS=	n Total LU-LU Sessions
	GWNAU	NUMADDR=	n One Network Address for each LU-LU Session
	PATH	DESTSA=	16 Path to TransUnion production NCP
		ER0=	(16,1)
		VR0=	0
	PATH	DESTSA=	15 Path to TransUnion backup NCP
		ER0=	(15,1)
		VR0=	0
	PATH	DESTA=	17 Path to TransUnion production NCP
		ER0=	(17,1)
		VER0=	0
	PATH	DESTA=	18 Path to TransUnion production NCP
		ER0=	(18,1)
		VER0=	0

CICS Description For a Direct LU 6.2 Connection

This section describes CICS considerations in your LU 6.2 connection.

CICS Processes

The CICS portion of the connection consists of four processes:

- **Allocation** Request for conversation with another transaction program. This is followed by an attached request to start the conversation.
- **Attachment**
- **Conversation**
- **End**

Synch Levels

- **SYNCH LEVEL 0:** There is no coordination for error recovery.
- **SYNCH LEVEL 1:** The conversing transactions are able to mutually confirm that data sent does not contain errors. This is accomplished by means of the "Send Confirm" and "Issue Confirm" commands.
- **SYNCH LEVEL 2:** This level allows for error recovery at the completion of a logical unit of work.

Additional Information

- While the synch level may be changed, it is necessary to free the session and reallocate prior to changing.
- An ABEND may cause the session to "Free" prior to all of the data being received.

Direct LU 6.2-PU Type IV Information Exchange Form

CUSTOMER SOFTWARE LEVELS MUST BE AT LEAST VTAM 2.2.0 AND NCP V3.

TRANSUNION SOFTWARE LEVELS.

VTAM CSV2R10
NCP 7.7
CICS 5.3
Transaction Server 1.3

CUSTOMER SOFTWARE LEVELS

VTAM _____
NCP _____
CICS _____
Transaction Server _____

I. CUSTOMER INFORMATION

- A. See SNI Coding samples in this section for explanation of CDRM definition:

CUSTOMER NET ID= _____

Table with 2 columns: CUSTOMER CDRMs NAME, ELEMENTS. Includes five rows of blank lines for data entry.

- B. See SNI Coding samples in this section for an explanation of CDRSC definition of CICS APPLIDS.

Table with 2 columns: CUSTOMER CDRSC's TEST, PRODUCTION. Includes five rows of blank lines for data entry.

- C. See SNI Coding samples in this section for explanation of NCP definition.

NRZI = _____ (YES OR NO)
MAX DATA = 4096
TGN = _____

- D. See SNI Coding Definition in this section for explanation of COS (Class of Service) Table Definition.

NAMES = ISTSDCOS (WE USE BLANK DEFAULT ENTRY)
 ISTVTCOS
ER = 0
VR = 0

- E. See SNI Coding samples, Item IG, for explanation of Mode Table Definition.

NAMES = LU62
SNASVCMG

II. TRANSUNION INFORMATION

- A. TRANSUNION NET ID = TU0 (TUzero)
- B. TRANSUNION NULL NETWORK ID = XTU(_____) COMPANY ID
ADJACENT NET SUBAREA = _____ (**must be agreed on**)
- C. TRANSUNION ADJACENT SUBAREAS IN XTU(_____) COMPANY ID

SUBAREAS

- 1) 15 (BACKUP)
- 2) 16 (PRODUCTION)
- 3) 17 (PRODUCTION)
- 3) 18 (PRODUCTION)

- D. TRANSUNION CDRSC
PRODUCTION = _____
(ASSIGNED BY TRANSUNION)

- E. TRANSUNION CDRMs

NAMES	ELEMENTS
1) TUCDRM2	3 (PRIMARY)
2) TUCDRM1	2 (BACKUP)

- F. TRANSUNIONS LU6.2 TRANSID (PROCNAME)

FOR SPEC FORMAT = SPE1 / FOR ARPT FORMAT = TU62
FOR TU40 = TU4L / FOR THE TDRM FORMAT = TD62

TCP/IP Connectivity Options

Note

This document supersedes all other ACE documents that have been distributed.

This section is organized into three different topics:

ACE Functional Overview

Helps you proceed through the various steps required to communicate with the TransUnion network and specifically the ACE gateway.

Customer Interface Specifications

Helps you to develop your client application to communicate with the ACE gateway and ultimately CPA.

Customer Information and Questionnaire

There is a customer questionnaire that should be completely filled out and returned to TransUnion before we can start on your project.

ACE Functional Overview

What is ACE?

ACE is TransUnion's Advanced Communications Engine, a TCP/IP interface to CPA, and TransUnion's online credit reporting database. ACE is implemented as a UNIX-based gateway, servicing inquiries on TCP/IP sockets and relaying requests and responses through a pool of high-speed LU 6.2 connections to CPA.

How does it work?

Customers connect to the ACE gateway through a dedicated network connection using TCP/IP sockets. The client software opens a TCP/IP socket connection to the ACE gateway, which validates the customer's IP address, and then accepts the connection. For each transaction, ACE reads from the customer's TCP/IP connection an inquiry (ARPT, SPEC, or TU40 data format) embedded in an ACE Client Interface message. The customer query is converted to LU62, sent to CPA, processed there, and sent back to ACE, which in turn encapsulates the response in a Client Interface message and sends it to the customer over the same TCP/IP socket. A special header helps identify each transaction, and provides diagnostic information about the connection to both client and server.

Production and Test ACE Gateways

The production ACE gateway is at IP address 206.6.158.34. The test ACE gateway is at IP address 206.6.158.51. Client applications should direct inquiries to the production ACE gateway, but should have the ability to switch automatically to the test if the production server fails. TransUnion recommends that the client application call the gateways by name and not by IP address, and record the names in the /etc/hosts file (UNIX) or local host file (PC platform) of the client system. Doing so makes it easy for the client system to make changes if the addresses of the server's change or additional servers are made available.

Note

TransUnion reserves the right to change the ACE Production and Test IP Addresses and TCP destination port numbers.

Using Sockets

The ACE system implements its gateway connectivity using TCP/IP sockets. The client system opens a socket using TCP service number (Destination Port Number) 10001, then exchanges formatted transactions with the ACE gateway across the TCP/IP sockets.

How many sockets?

Although a single socket could manage all transactions, client systems that encounter a heavy volume of transactions will see performance benefits by opening and using more than one socket. When multiple requests are queued on the client system for service through a socket, the client application must wait until the response to the most recent inquiry on the socket has been received before transmitting the next inquiry.

By contrast, if two sockets are opened, a new inquiry can be transmitted on the second socket before the reply has been received on the first. The gateway has several LU6.2 conversations active with CPA, and queues the requests from sockets in the order in which they are received. As load increases, opening additional sockets will help ensure that inquiries are serviced as quickly as the client application can generate them.

Given the increase in performance associated with opening more sockets, one might conclude that the most efficient method of managing high-volume processing would be to open a new socket for every transaction, eliminating the need for any one transaction to wait for another to be processed. But in reality, it's best to keep the number of open sockets low. Opening a socket takes time and system resources both on the client and the server. The more sockets opened, the more resources the client and the server have to dedicate simply to managing the sockets themselves.

Consider parallel vs. serial processing with TCP/IP socket connections into the ACE gateway. TransUnion recommends that customers do not go to either extreme. Do not serialize all your transactions by queuing all of them into one socket connection. Also, do not open a new socket connection for each transaction. A middle ground should be determined by the customer while benchmark testing is occurring at the initial stages after connectivity is established into the ACE gateway.

If throughput is a concern due to high activity, a meeting can take place between the customer and the TransUnion technical staff to determine the optimum settings to achieve the best throughput.

Socket life

In order to conserve server resources and eliminate abandoned connections, the ACE gateway will close any socket that has had no activity for five minutes. To prevent errors on the client side, client applications should be aware of this time-out and shut down sockets themselves less than five minutes after the most recent transaction on the socket has been completed. Refer to the ACE customer Interface Specifications section.

Note

TransUnion reserves the right to change the time-out value of inactive socket connections.

Data Formats / Limitations

ARPT, SPEC, and TU40 data formats are supported over the same TCP service port number (destination port number) 10001. This is true for both test and production ACE gateways.

ACE cannot support a human-readable format. As in true LU 6.2 connections, human-readability is not supported because carriage control characters are not inserted into the datastream upstream from the ACE gateway into CPA. If human-readability is a requirement, the TCP/IP client software will need to format the data to make it human-readable by performing the necessary data conversions.

The current ACE product is tied only to production CPA regions of the mainframe, and therefore cannot be used to provide connectivity to other TransUnion services.

Using test files in production CPA regions accommodates test transactions.

Connectivity Options

Use of the ACE gateway requires a TCP/IP connection to TransUnion's corporate office in Chicago. TransUnion prefers to purchase all the necessary equipment on the customer's behalf and install and manage the circuit between the customer and TransUnion. In a lower volume environment, TransUnion may recommend using a third party network such as Advantis.

Standard Service Option

TransUnion will supply the router, DSU, wide area network circuit, and support modem on the customer side. TransUnion will provide a line and equipment for dial backup. **Time frame for installing a new connection with the Standard Service Option is 5 to 7 weeks.**

The customer is responsible for providing a physical connection (twisted pair 10Mb Ethernet or 4/16Mb Token Ring.) The customer is also responsible for providing rack space, power, and physical access for installation of the equipment, WAN connection, and DID dial access to a support modem.

TransUnion will supply the IP address space for the wide area connection between the customer and TransUnion. Those addresses will come from RFC1597 private address space (class A network 10, class B networks 172.16 through 172.31, or class C networks 192.168.0 through 192.168.255). Where RFC1597 addresses are used, TransUnion will confirm that the addresses assigned do not conflict with private addresses in use on the customer network.

TransUnion will only support customers who use registered addresses.

Smaller Volume Customers

For smaller volume customers TransUnion will use AT&T Global Services for connectivity. TransUnion currently has an IP connection into AT&T Global Services with ISDN dial back up capability. To establish communication through AT&T Global Services, the customer contacts AT&T Global Services at (800) 588-5808. The customer and TransUnion must submit a trading partner agreement to AT&T Global Services. This form is obtained from AT&T Global Services.

TransUnion recommends that AT&T Global Services customers order a dial backup facility provided by AT&T Global Services. In the event of an outage on your circuit to AT&T Global Services, the dial backup service will take over and re-establish a connection. Time frame for installing a new circuit into AT&T Global Services is 6 to 8 weeks.

Testing

Upon request, TransUnion will provide a PPP dial up facility for customers to test their application until the production circuit is installed. Although the PPP circuits are used only for test purposes, the ACE gateway itself is connected to a production region of CPA. If PPP dial up testing is required, please indicate your request on the customer questionnaire form.

To ensure compliance with the Fair Credit Reporting Act and to avoid billing for real transactions, we suggest that you use Fantasy Island files for testing. The Fantasy Island files contain fictitious data for consumers living in the non-existent city of Fantasy Island, Illinois.

Service Levels

Limitations

TransUnion can only commit to service levels for the “Standard Service” Environment. With all other connectivity options TransUnion does not have control over all aspects of the connection. Therefore, TransUnion cannot guarantee something it does not have control over.

Hours of System Availability (in Central Standard Time)

The CRONUS system is available at all times except for a short period on Sunday when TransUnion applies maintenance. The Sunday outage period is:

2:00 AM to 5:00 AM CST

Reporting Problems

To report an unscheduled system outage, call TransUnion Customer Solution Center at **(312) 258-8088**.

Important

Please indicate that you are an ACE TCP/IP customer and have your customer ID ready.

When reporting a problem, please use the following guidelines:

1. Identify yourself as an ACE TCP/IP customer.
2. Provide the TransUnion support person with your ACE customer ID.
3. Provide the customer host IP address (client), which is experiencing the problem, and the ACE gateway IP address.
4. Describe the nature of the problem:
 - ACE is not accessible from any of the customer hosts.
 - ACE is not accessible from a specific customer host.
 - An error message being received by the customer. Ensure the error message is accurately conveyed to the TransUnion support person.
 - The problem is consistent / reproducible.
 - Is this a new or existing problem.
 - Has any recent changes been made to the customer hardware or software.

Expected Support Response Times

TransUnion will verify line status and availability of the CPA application while the caller is on the line, and will escalate the problem and dispatch system support resources if required to address the outage. Technicians trained in the operation and maintenance of the ACE gateway are on call 24 hours a day. Normal expected response time is approximately 10-20 minutes.

Security

While TransUnion takes reasonable precautions to secure its customers' connections against unauthorized access to the customer's network both from TransUnion itself and from other TransUnion customers, ultimate responsibility for customer security lies with the customer.

TransUnion recommends that customers deploy a firewall and use packet filtering to allow only the following, all of which can be accomplished through software instructions on a Cisco router:

1. Allow ping packets for both send and receive, restricted between the TransUnion servers mentioned previously and authorized test and production IP Addresses (Clients) on the customer side, including intermediate routers. This prevents outside parties from using the connection.
2. Allow no TCP packets that do not have the ACK bit set to travel from the TransUnion network to the customer network. This ensures that all TCP communications are initiated on the customer side of the connection.
3. Besides ping packets, all packets should use TCP destination port number 10,001 on the TransUnion side and a client TCP port greater than 1063 on the customer side. TCP packets using any other numbers, and other IP protocols (e.g., UDP) should be filtered out. This prevents the use of any TCP services except the ACE gateway because no other servers are listening on port 10,001.

In addition to these precautions, TransUnion uses only static routes for customer connections, and does not provide routes through the TransUnion network from one customer to another.

TransUnion Customer Project Support Information

During service setup, at least one person from the Network Integration Group, Network Services Group, and Distributed Systems Group will be assigned to your project. When a new project is started, a person from the Network Integration Group is assigned the project. That person is responsible for coordinating all tasks and activities related to your project within the other groups mentioned and is your main contact for project status. You may actually interact with members in other groups based on a referral from the Network Integration Services Project Manager. Your initial technical contact should be the following:

TransUnion Corporation
Network Integration Services
555 West Adams Street
Chicago, IL 60661
(312) 466-7993 (fax)

ACE Customer Interface Specifications

Introduction

TransUnion's Advanced Communication Engine (ACE) provides customers with a TCP/IP interface into CPA services. ACE translates TCP/IP into SNA LU6.2 to provide this access. This document describes Version 1.1 of the interface between customer applications and the ACE gateway.

Customer Interface

The data that is communicated between ACE and a customer application is called a message. The exchanges, or message flows, are referred to as a conversation. The message structure allows customer applications and ACE to exchange both CPA (ARPT, SPEC, and TU40) and non-CPA messages. CPA messages are requests for service, while the non-CPA messages provide conversation-level information to both customer applications and ACE. The conversation-level information communicates status of the two applications and their respective connections to one another.

Message Format

This section describes the format of the data exchanged between ACE and customer applications. Each message consists of three sections, the Message Length field, Header, and Data. The Message Length field and Header contain information that is relevant only to the ACE gateway and the customer application, not to the CPA CICS application. Information in the Data portion of the message contains either a CPA message or an informational message. Any communications between ACE and a customer application is expected to be in this format.

All information in the message is in ASCII formatted eight-bit bytes. The information contained in the message is made up of byte fields and not strings, therefore, they need not be NULL terminated. The first five bytes of the message are the length of the entire message. The next 6 to 26 bytes are the Header, followed by the Data. The format of the message is shown in Figure 1.

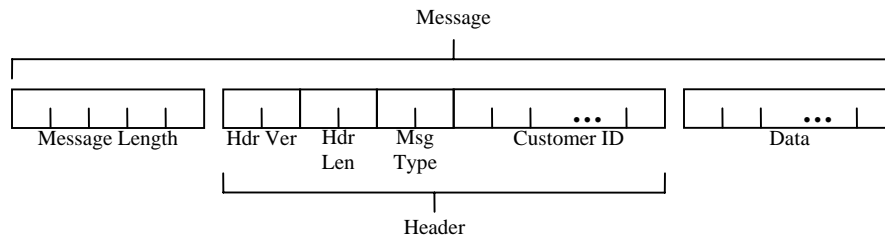


Figure 1. Message Field Layout.

Message Length Field

This field is five (5) bytes in length and is in hexadecimal. This number represents (in hex) the length of the entire message, including the length of this field. The upper limit is equal to the size of this field (5 bytes) plus the maximum size of the header, which is 26 bytes, plus the maximum data size. The maximum data size is therefore 131,077 bytes.

Values less than five digits should be preceded with zero (e.g., 01024, 00512, etc.). Any values outside this range or that cannot be interpreted as an integer will cause a "Message Format" error to occur.

Header

The header contains four fields; Header Version, Header Length, Message Type, and Customer ID. ACE strips the header from the incoming message and sends the remainder of the data to the mainframe. Likewise, it adds the header to the information received from the mainframe before it sends it to the customer application.

Header Version

The header version is a two (2) byte field that tells ACE how to interpret the header information. This will allow ACE to be backward compatible with previous versions of the header. The current version of the header is denoted as version '12'. For this version of ACE, any values other than '12' will cause an "INVALID MESSAGE FORMAT" (message type = 22) error message to be returned by the receiver.

Header Length

This field tells ACE where the header begins and ends. The header length is also a two-(2) byte field representing an integer in the range of 01 to 99. The value in this field includes the lengths of the Header Version, Header Length, Message Type and Customer ID. Values outside this range or those that cannot be interpreted as an integer will cause an "INVALID MESSAGE FORMAT" (message type = 22) error message to be returned by the receiver.

Message Type

Message type is two (2) bytes in length and indicates the data content of the message. This field allows both the customer application and the ACE gateway to interpret the data segment of the message. The flow of messages is described in the Section titled 'Conversation Level Interaction'. If the receiver cannot interpret the values in this field, an "UNKNOWN MESSAGE TYPE" (message type = 28) error message is returned.

Status messages are sent by either ACE or customer applications and are not responded to by the receiving party. The status messages have information (e.g., errors and other notifications) that allow actions to be taken within ACE and the customer application and are relevant only to them (i.e., status messages are not forwarded to the mainframe). The various message types are discussed in detail in

Section “Message Types.” A summary of the message types is shown in the table on the next page.

Message Types	ACE to Customer	Customer to ACE	Value
Service Messages			
CPA MESSAGE	Y ¹	Y	01
SPEC MESSAGE	Y ¹	Y	02
TU40 MESSAGE	Y ¹	Y	06
Status Messages			
UNABLE TO IDENTIFY CUSTOMER	Y		21
INVALID MESSAGE FORMAT	Y	Y	22
TCP ERROR	Y	Y	23
TCP TIME-OUT ERROR	Y	Y	24
SNA ERROR	Y		25
INTERNAL ERROR	Y	Y	26
CLOSING CONNECTION	Y	Y	27
UNKNOWN MESSAGE TYPE	Y	Y	28
CONNECTION LIMIT REACHED	Y		29
Test Messages			
CPA TEST MESSAGE	Y ¹	Y	71

¹ Response to Customer Message

Customer ID

This is a variable length field and identifies the customer sending the message. The Customer ID is case sensitive and has a maximum length of twenty (20) bytes. This field is used by ACE to identify the customer sending the message. If ACE cannot interpret the data in this field, it will return an “UNABLE TO IDENTIFY CUSTOMER” (message type = 21) error message to the customer application. This field is populated by ACE only on response messages to the CPA and CPA TEST messages (i.e., this field is empty in status messages sent by ACE). ACE puts the identification received in the request message into this field in the response message.

The Network Integration Group assigns the Customer ID. Once your connection is deemed as production it is used as the key for our customer support database records when a problem ticket is opened.

Data

The data segment of the message is also of variable length. The data segment for service messages will contain ARPT, SPEC, or TU40 requests and replies, which are also known as FFIs (Fixed Format Inquiries) and FFRs (Fixed Format Responses) respectively. The only other case in which this field will contain information is the test message reply. Test message requests and status messages have zero length data fields.

Message Types

As discussed previously, there are three categories of messages: service (CPA) messages, status messages, and test messages. For this version of ACE, service messages carry CPA ARPT, SPEC, or TU40 requests (FFIs) and replies (FFRs) between the customer application and the CPA CICS regions. Status messages are purely informational messages exchanged between a customer application and ACE. Test messages are used by customer applications to verify the operation and connectivity of ACE.

Service (CPA) Messages

CPA messages contain ARPT, SPEC, or TU40 formatted records. CPA messages merely pass through ACE to CICS but represent the majority of all messages sent. Any CPA error (CORR or TU4E) messages will be treated as regular CPA responses by ACE and passed back to the client application. The value in the Message Type field sent by the customer application and returned by ACE for this message is 01 for ARPT CPA messages, 02 for SPEC CPA messages, and 06 for TU40 CPA messages.

For every CPA message sent from the customer, ACE will respond with either the data returned from CPA (a CPA message) or one of the conversation management messages discussed in the next section.

Status Messages

Conversation Management Messages

Conversation management messages are non-service messages and are only sent between ACE and a customer application. They contain information about the status of either application, the message format, or the connections between them. The purpose of these messages is to allow both applications to react more intelligently to conditions that may arise that would affect the processing of service messages.

Conversation management messages have nothing in the data portion of the message. It is the responsibility of the applications to interpret and act on these messages as they see fit. The only course of action taken after sending this class of message should be to close the connection and retry. No response to these messages from the receiving application is either expected or necessary. In fact, the receiving application should expect that the connection has been or is being

closed by the sending application after the receipt of these messages. The specific conditions and message flows are described in the Section titled “Conversation Level Interaction”. The categories of status messages include connection, format, security, and general.

Connection Messages

This class of messages communicates status of connections. These would include protocol errors (both TCP and SNA), connection limits, inactivity, and shutdown messages. Due to the nature of some of these messages, not all of them are expected from the customer application.

TCP Protocol Error

This message indicates that an error condition on the TCP/IP socket connection was detected. Either the customer or ACE can be expected to send this message. Specifically, ACE attempts to return this message when an error is returned on either the socket get peer address or read call. Depending on the state of the socket and the condition under which the error was returned, this message may or may not make it to its destination. The value in the Message Type field for this message is ‘23’ (TCP ERROR).

SNA Protocol Error

SNA errors are expected to flow only from ACE to customer applications and relate problems with the communications to the mainframe. ACE returns this message when an error occurs on the SNA LU6.2 open, allocate, read, and write API calls. The value in the Message Type field for this message is ‘25’ (SNA ERROR).

Connection Limit Exceeded

This message is only expected to flow from ACE to the customer application and indicates that the customer has already established the maximum number of allowable connections. ACE will immediately close this connection request. The value in the Message Type field for this message is ‘29’ (CONNECTION LIMIT REACHED).

Inactivity Time-out

This message indicates that no communications has been detected on the connection for a specified time-out period. ACE currently has this period set at 300 seconds, or five (5) minutes. Either ACE or the customer application can send this message. The value in the Message Type field for this message is ‘24’ (TCP TIME-OUT ERROR).

Closing Connection

This message is sent before one of the communicating parties is closing the connection. When ACE sends this message, it means that its processes are shutting down. This message is sent only during normal shutdown processing. When ACE receives this message, it closes the connection and the process handling the connection. The value in the Message Type field for this message is ‘27’ (CLOSING CONNECTION).

Format Messages

Message Format Error

This type of message indicates that an error has occurred in the translation of the message. These would include invalid message layouts and invalid field values for Message Length, Header Version, or Header Length. Either ACE or the customer application can send this message. The value in the Message Type field for this message is '22' (INVALID MESSAGE FORMAT).

Unknown Message Type

This message indicates that the value contained in the Message Type field of the message is not known. Either ACE or the customer application can send this message. The value in the Message Type field for this message is '28' (UNKNOWN MESSAGE TYPE).

Security Messages

Unable to Identify Customer

This message is returned when validation of the customer connection or customer identification fails. It is expected to flow only from ACE to the customer application. It is sent when either the *getpeeraddress* call returns an unknown customer IP address, the IP address is not assigned to this customer, or when the value in the Customer ID field is not known. This means that ACE expects the customer applications to be sending from a limited set of known IP addresses. The value in the Message Type field for this message is '21' (UNABLE TO IDENTIFY CUSTOMER).

General Messages

Internal Error

This message indicates an internal processing error within the sending application. Either ACE or the customer application can send this message. The value in the Message Type field for this message is '26' (INTERNAL ERROR).

Test Message

This message, when sent to ACE, will perform a non-billable test transaction to verify the connectivity and operation of the entire gateway. This message will perform exactly as a real transaction would (with 'dummy' data) with the exception that the data portion of the message returned to the customer application will be 4 time-stamps indicating:

- 1) The time the test transaction was received from the customer application,
- 2) The time the transaction was sent to CPA,
- 3) The time the transaction was received from CPA, and
- 4) The time the message was returned to the customer application.

Each time-stamp will be in the form YYYYMMDDHHMMSS and separated by a semicolon. These values can be used by the customer application to calculate the round-trip time of the message and the breakdown of that time into its component parts. The value used in the Message Type field of both the request and reply is '71' (CPA TEST MESSAGE).

Conversation Level Interaction

This section will describe the expected flows of messages between the customer application and ACE. Actions on the left side of the flows are from the customer application and those to the right of the flows are from ACE. Data sent to and received from the mainframe (CPA) are not shown in the diagram and are assumed to occur after ACE reads from the customer connection, unless otherwise noted (flows marked with an asterisk).

Normal Processing

Figure 2 below depicts the expected normal flow of messages between a customer application and the ACE gateway. ACE will accept multiple transactions on a single connection, but they are processed one at a time. ACE will close the connection after it receives a message with a type equal to CLOSING CONNECTION. No data is sent to the mainframe after this message type is received and ACE immediately closes the connection.

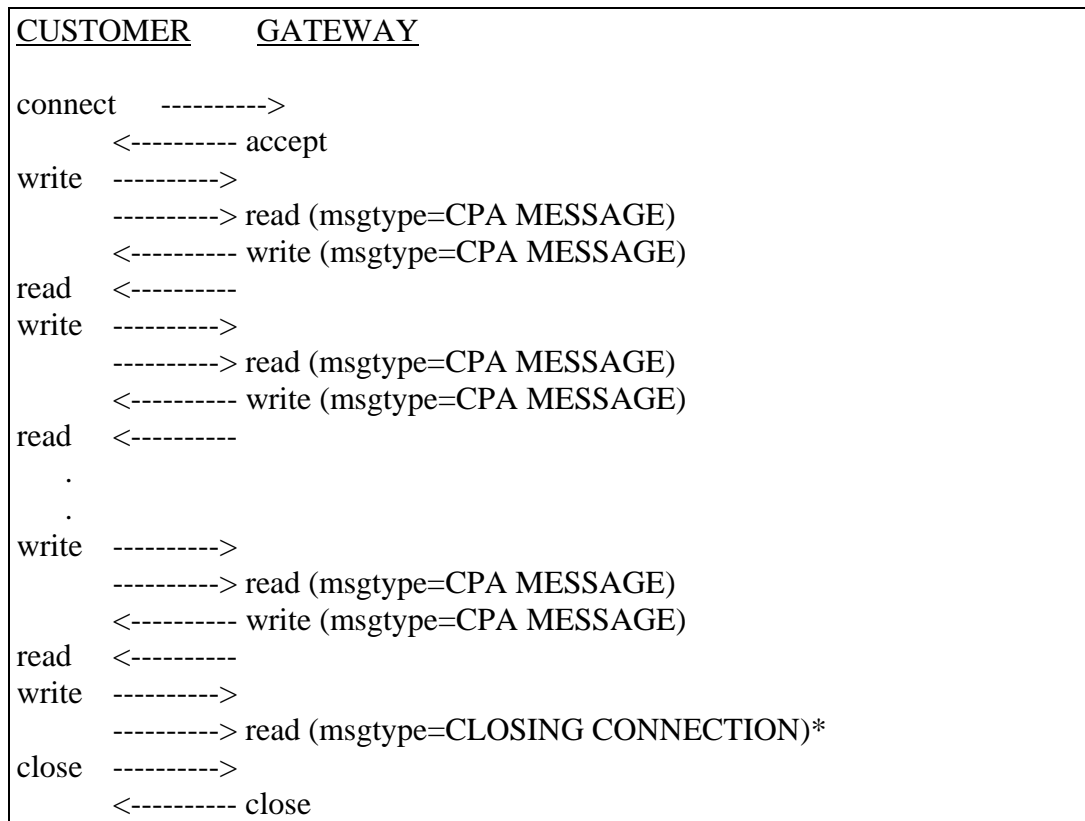


Figure 2 - Normal Processing, Customer closes connection.

Figure 3 shows the expected flow of messages when the ACE gateway is halting under normal conditions. ACE will always complete a transaction in progress before it attempts to shutdown. A message of type CLOSING CONNECTION will be sent to the customer application before it actually closes the connection.

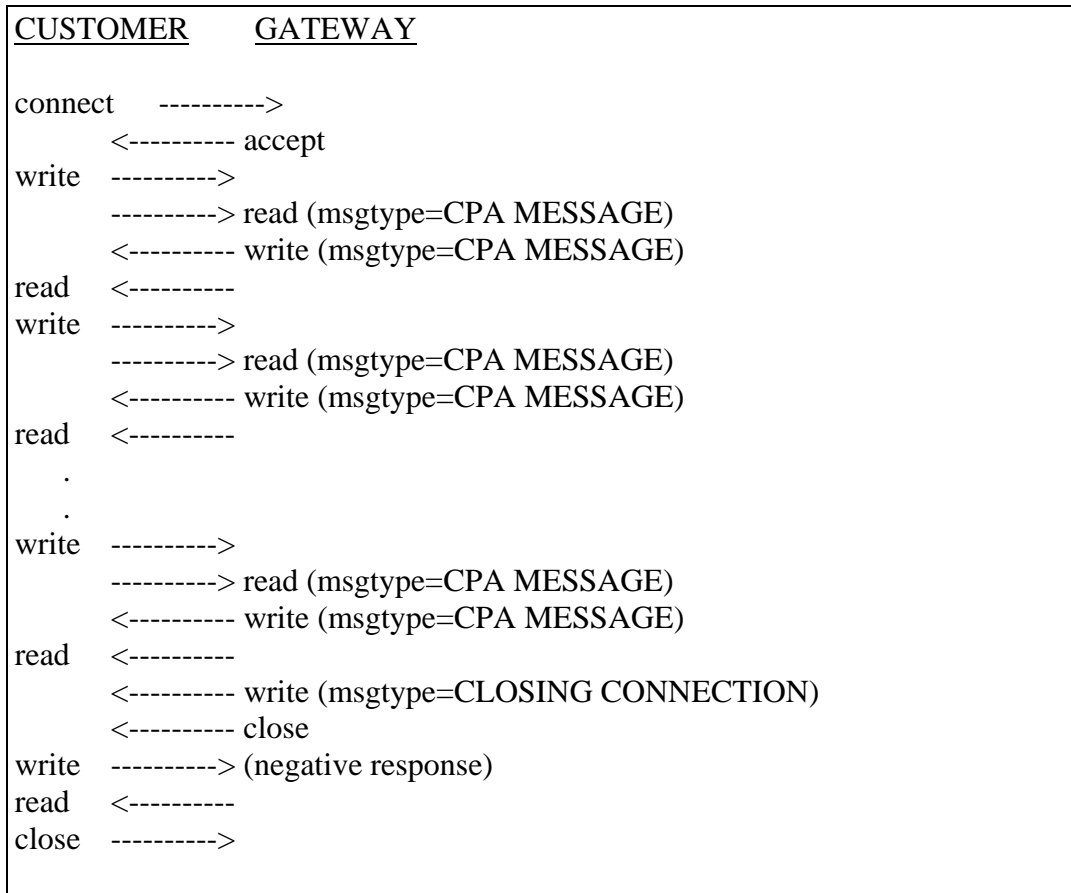


Figure 3 - Normal Processing, ACE closes connection (gateway shutting down).

Abnormal Processing

Figures 4 and 5 describe the potential messages that could be exchanged under abnormal, or error, conditions. It is understood that certain messages may not make it to their destination during abnormal processing, but are attempted in all cases.

Figure 4 shows error messages sent from the customer application. When these message types are received from the customer by ACE, it does not send any data to the mainframe, nor does it respond to the customer application.

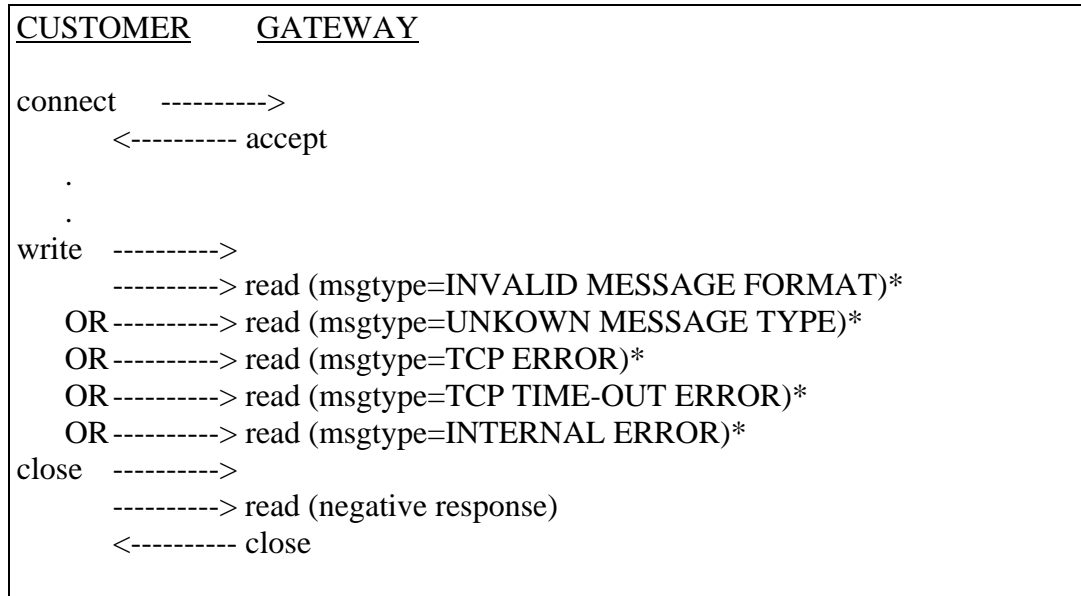


Figure 4 - Abnormal Processing, Customer sends error condition.

Figure 5 shows the messages sent to the customer application when an error condition exists within the ACE gateway. The ACE gateway will always close the connection immediately after sending one of these messages.

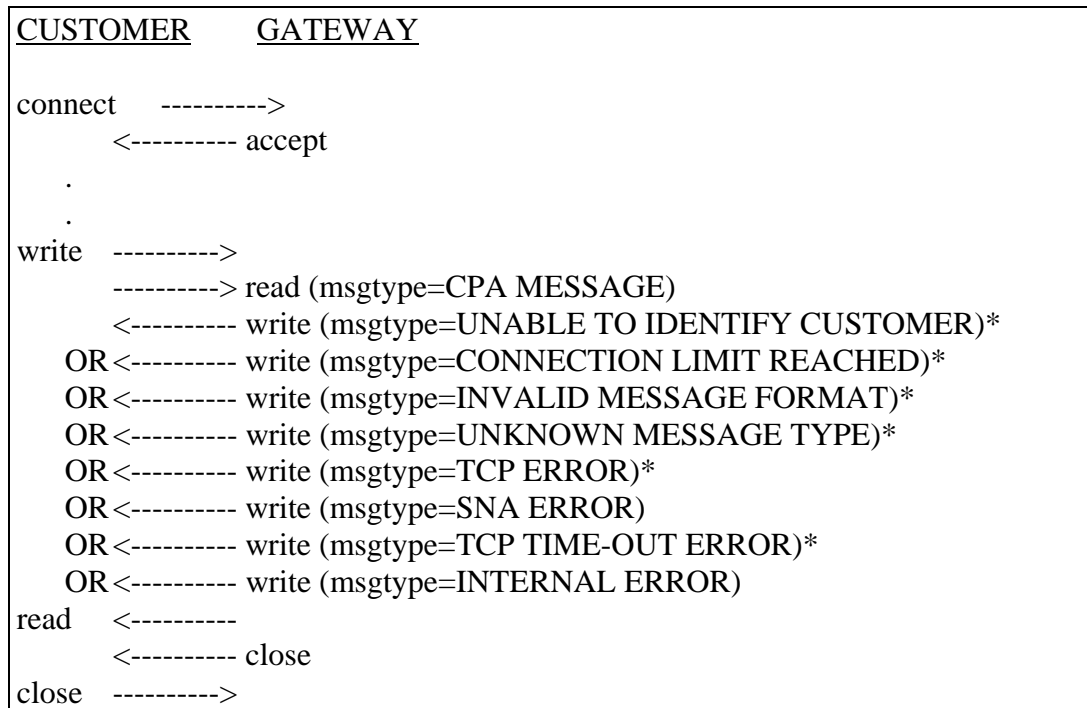


Figure 5 - Abnormal Processing, ACE sends error condition.

Test Processing

Figure 6 shows the flows of a test transaction (message type = CPA TEST MESSAGE). This message type causes a test (non-billable) transaction to be sent to the mainframe. The data portion of the message written to the customer application by ACE contains 4 time-stamps. These time-stamps will indicate:

- 1) When the transaction was received from the customer application,
- 2) When it was sent to the mainframe,
- 3) When it was received from the mainframe, and
- 4) When it was sent back to the customer application.

Any error conditions that occur during a test transaction will be acted upon as they are in the abnormal processing of a regular transaction (Figure 4).

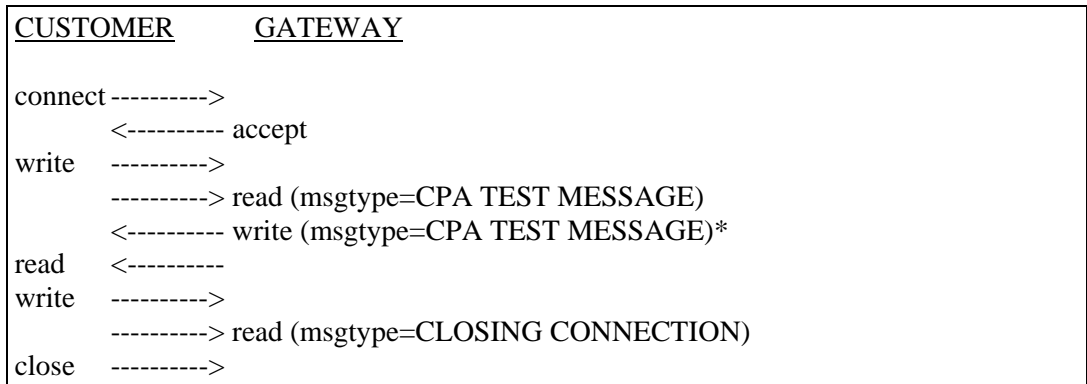


Figure 6 - Test Transaction Processing

TransUnion Net Access Connectivity Options

In this section, you'll find the following information:

TransUnion Net Access Functional Overview, which helps you proceed through the various steps required to communicate with the TransUnion network via the Internet.

Customer Interface Specifications, which you can use to develop your client application to communicate with TransUnion via the Internet to access TransUnion products.

Intended Audience

This section contains the technical specifications for developing your communication interface with TransUnion Net Access. Its target is a more technical audience, and is intended for use by your application programmers.

Please note that due to the nature of the Internet, TransUnion is unable to guarantee service levels typical of those for private connections. Therefore, TransUnion Net Access is most suitable for TransUnion's small-to-mid-range customers who submit less than 25,000 transactions per month for TransUnion products. Larger customers should consider a private connection.

TransUnion Net Access Functional Overview

This section guides you through the process of establishing a connection to TransUnion through the Internet.

What is TransUnion Net Access?

TransUnion Net Access is TransUnion's Internet interface to TransUnion's on-line credit reporting system. TransUnion Net Access is implemented in CICS on the mainframe, servicing inquiries on TCP/IP sockets.

The three notable layers to TransUnion Net Access include:

Transport Layer (TCP/IP). TransUnion uses SSLv3 or TLSv1 IP protocol with strong authentication using X.509 digital certificates generated and provided by TransUnion. The SSLv3 protocol is implemented as defined by Netscape, and the TLSv1 standard is implemented as defined by IETF RFC 2246. Internet PING is supported for connectivity checking using the standard ICMP protocols.

Server Layer (CICS). The server communicates via the HTTPS protocol as defined by IETF RFC 2616. Each transaction is a single GET request, which will be responded to via a POST with the IETF-defined status codes.

Application Layer (TU40). Request and response transactions are exchanged in TU40 format only. A customer sends in a TU4I request, which is responded to as either a TU4R (non-error) or TU4E (error) response.

How Does TransUnion Net Access Work?

Customers connect to the TransUnion Net Access web interface through a dedicated network connection to the Internet using TCP/IP sockets. The client software opens a secure TCP/IP socket (SSL) connection to the TransUnion Net Access web interface, which validates the customer's digital certificate (assigned by TransUnion), and accepts the connection.

For each transaction, the TransUnion Net Access web interface reads a TU40 inquiry from the customer's TCP/IP connection. The customer query is sent to TransUnion's credit reporting system, processed, and sent back to TransUnion Net Access, which in turn sends it to the customer over the same TCP/IP socket. A special segment (CD01) contained in the TU40 transaction identifies the ultimate requestor (user ID) of the product. The CD01 segment is required for these transactions.

Acquiring Digital Certificates. Customers wanting to test the TransUnion Net Access interface before implementing it in production may acquire a digital certificate and password that can be used in TransUnion's test environment. Customers must first sign a testing agreement, after which the *test* digital certificate and password will be issued. Your sales contact can direct you to your ASR or to the TransUnion Network Integration group, which can provide you with the testing agreement.

Customers seeking to implement a TransUnion Net Access connection in production must acquire a digital certificate and password that can be used in TransUnion's production environment. This certificate is distinctly different than that used in the test environment. Customers must first sign all contracts and/or agreements, after which the *production* digital certificate and password will be issued. Contact your sales representative for more information regarding getting set up to use the TransUnion Net Access web interface.

Using the TU40 CD01 Segment. The TU40 inquiry sent through the TransUnion Net Access web interface must contain a valid, properly-placed CD01 segment. This CD01 segment must contain the user id of your end user requesting the product. Refer to your TU40 documentation or contact your local Automated Services Representative for more information regarding this segment. Your sales contact can direct you to your ASR.

Production and Test TransUnion Net Access Gateways. Use <https://test.TransUnionNetAccess.com:3018> as the test TransUnion Net Access URL. Use the <https://www.TransUnionNetAccess.com:3019> URL for production TransUnion Net Access. Client applications should direct production inquiries to the production TransUnion Net Access web interface.

Only the test digital certificate will work with the test URL, and the same is true for the production digital certificate and URL. If the test digital certificate is used with the production URL (or the production certificate with the test URL), the connection will be refused by TransUnion's CICS server.

Note

TransUnion reserves the right to change the TransUnion Net Access Production and Test IP Addresses and TCP destination port numbers.

Using Sockets

TransUnion Net Access implements its Internet interface connectivity using secured TCP/IP sockets. The client system opens a secured socket using the TCP service number (Destination Port Number), and then exchanges formatted transactions with the TransUnion Net Access web interface across the TCP/IP sockets.

How many sockets? Although all transactions could be managed by a single socket, client systems that encounter a heavy volume of transactions will see performance benefits by opening and using more than one socket. When multiple requests are queued on the client system for service through a single socket, the client application must wait until the response to the most recent inquiry on the socket has been received before transmitting the next inquiry.

By contrast, if two sockets are opened, a new inquiry can be transmitted on the second socket before the reply has been received on the first. The web interface has several conversations active with TransUnion's credit reporting system, and queues the requests from sockets in the order in which they are received. As load increases, opening additional sockets will help ensure that inquiries are serviced as quickly as the client application can generate them.

Given the increase in performance associated with opening more sockets, one might conclude that the most efficient method of managing high-volume processing would be to open a new socket for every transaction, eliminating the need for any one transaction to wait for another to be processed. But in reality, it's best to keep the number of open sockets low. Opening a socket takes time and system resources both on the client and the server. The more sockets opened, the more resources the client and the server have to dedicate simply to managing the sockets themselves. TransUnion recommends that you keep your number of concurrent socket connections limited to sixteen or fewer.

Consider Parallel vs. Serial processing with TCP/IP socket connections into the TransUnion Net Access web interface. TransUnion recommends that customers do not go to either extreme. Do not serialize all your transactions by queuing all of them into one socket connection. Also, do not open a new socket connection for each transaction. A middle ground should be determined by the customer while bench-mark testing occurs at the initial stages after connectivity is established into the TransUnion Net Access web interface.

Socket life. In order to conserve server resources and eliminate abandoned connections, the TransUnion Net Access web interface will close any socket that has had no activity for five minutes. **In order to prevent errors on the client side, client applications should be aware of this timeout and shut down sockets themselves less than five minutes after the most recent transaction on the socket has been completed.** Refer to the TransUnion Net Access Customer Interface Specifications section.

Note

TransUnion reserves the right to change the timeout value of inactive socket connections.

TransUnion Net Access Data Formats / Limitations

The TransUnion Net Access web interface supports TU40 data format only and requires the inclusion of the CD01 segment in the FFI. This book contains complete details about using the TU40 format. You can also ask your TransUnion sales representative for a referral to an Automated Services Representative.

TransUnion Net Access cannot fully support a human-readable format. As is true for LU6.2 connections, human-readable reports are not supported because carriage-control characters are not inserted into the data stream between TransUnion's credit reporting system and the TransUnion Net Access web interface. If the human-readable format is required, the client software will need to format the data to make it human readable.

The current TransUnion Net Access interface is tied only to TransUnion's test and production regions on the mainframe and therefore cannot be used to provide connectivity to systems offering TransUnion services.

Test transactions are accommodated by submitting test subjects, and these can be obtained through your local Automated Services Representative. Your sales contact can direct you to your ASR.

Setting Up a TransUnion Net Access Connection

Use of the TransUnion Net Access web interface requires an Internet connection to TransUnion's headquarters office in Chicago. It also requires a TransUnion-issued digital certificate and password.

Digital Certificates. A digital certificate will be sent to you via email in a PKCS12 format (with a .p12 extension). If the .p12 file is opened in a Windows environment, the Certificate Store Import Wizard will automatically start up and take you through the certificate installation process.

This PKCS12 file has several parts, namely:

- Certificate Identification
- Certificate Public Key
- Certificate Private Key
- Certification Authority Chain

You will need to store the digital certificate in a Certificate Store based upon the toolkit you are using to code your application. That toolkit will need to use the password (provided by a TransUnion associate via telephone) to decrypt the Certificate Private Key. Most toolkits handle the PKCS12 format; if yours does not, conversion programs are available to transform PKCS12 into other toolkit formats. Note that TransUnion will not supply the conversion programs.

TransUnion will provide you with the digital certificate and password; however, it will not provide you with the toolkit required to install the digital certificate. Your sales representative can direct you to TransUnion's Network Integration group for more information regarding digital certificates for TransUnion Net Access.

Note

TransUnion reserves the right to revoke and issue a new certificate at any time, and customers are responsible for integrating those certificates quickly.

Testing Your TransUnion Net Access Connection

TransUnion supports a PING transaction that you may use to test the connection between your system and TransUnion Net Access. This transaction may be used in both the test and production environments once the appropriate digital certificate has been installed in the proper location.

From either a browser address line or from the application running on your server, use <https://www.TransUnionNetAccess.com:3019?ping> to test the connection in **production**. Use <https://test.TransUnionNetAccess.com:3018?ping> to test the connection in **test**.

A successful ping will result in the return of an http message containing information about the connection, including information such as the digital certificate, password, IP address, port number, and url used.

Using Test Data. To ensure compliance with the Fair Credit Reporting Act and to avoid billing for real transactions, test files containing fictitious consumer data should be used for testing. Use of the test files is described in Appendix H, "Test Cases," in this guide. Your sales contact can direct you to your ASR who can assist you with test cases.

Test files are accessible via both the test and production paths. Customers are encouraged to test their connectivity and performance through TransUnion Net Access in a test environment before implementing their production connection. In order to do so, customers must first sign a testing agreement. Once that is signed, a test digital certificate and password will be provided. Both the testing agreement

and test digital certificate information is provided by TransUnion's Network Integration personnel.

After accessing TransUnion products via TransUnion Net Access in production, customers may access both live and test files via the same connection. Contact your local ASR for more information regarding accessing test files in production.

Understanding TransUnion Net Access Service Levels

This section details the TransUnion Net Access service levels.

Limitations. TransUnion can only commit service levels for the "Standard Service" Environment. Given the nature of the Internet and its being out of TransUnion's control, TransUnion cannot guarantee specific service levels for your TransUnion Net Access transactions.

Hours of Availability. The Online System is available 24 hours, 7 days per week except for Sunday between 2:00am – 5:00 am CST.

Reporting Problems

To report an unscheduled system outage, call TransUnion Customer Solution Center at (312) 258-8088.

Important

Please indicate that you are a TransUnion Net Access web interface customer and have your subscriber code ready.

When reporting a problem, please use the following guidelines:

1. Identify yourself as a TransUnion Net Access web interface customer.
2. Provide the TransUnion Support person with your subscriber code.
3. Provide the TransUnion Net Access URL being accessed.
4. Describe the nature of the problem:
 - TransUnion Net Access is not accessible.
 - The customer is receiving an error message. Ensure the error message is accurately conveyed to the TransUnion support person.
 - The problem is consistent/reproducible.
 - The problem is a new one. Or the problem is an existing one.
 - Changes have been made to the customer hardware or software.

Expected Support Response Times. TransUnion will verify its Internet service provider status and availability of TransUnion's credit reporting application while the caller is on the line and will escalate the problem and dispatch system support resources if required to address the outage.

Technicians trained in the operation and maintenance of the TransUnion Net Access web interface are on call 24 hours a day. Normal expected response time is approximately 10-20 minutes.

Security. We recommend that the customer use appropriate firewall technology when dealing with any internet-destined transactions. All transactions initiated to the TransUnion Net Access web gateway must use SSLv3 or above and must use TransUnion-generated and –authorized X.509 digital certificates for encryption and authentication. It is the customer’s responsibility to protect the use and security of the TransUnion-provided certificates.

TransUnion Net Access Customer Interface Specifications

Use the information in this section to set up Internet communication between your client application and TransUnion.

Introduction

TransUnion’s web interface (TransUnion Net Access) provides customers with the ability to access TransUnion’s products and services via an Internet connection. TransUnion Net Access handles the digital certificate handshake and validates the presence of the end user’s identification in the TU40 request. This section describes Version 1.0 of the interface between customer applications and the TransUnion Net Access web interface.

Understanding the Customer Interface

The data that is communicated between TransUnion Net Access and a customer application is called a message. The message accepted by TransUnion Net Access is a TU40 request for TransUnion’s product(s) or service(s). The message contains a header generated by classes provided with third-party HTTP software. The exchanges, or message flows, are referred to as a conversation. The TransUnion Net Access conversation is simply an HTTP send (**https**) involving standard HTTP protocol using SSL.

Formatting Messages for TransUnion Net Access

Your message should be formatted using the ISO 8859-1 Codepage. It should contain a standard HTTP header generated either by your programs or by classes provided with the third-party HTTP software you may be using.

The non-header data in your message is variable length and will contain TU40 requests and replies, which are also known as FFI (Fixed Format Inquiry) and FFR (Fixed Format Responses) respectively. Your request must include a TU40 CD01 segment containing your requestor’s internal user ID. This segment will be reflected back in your FFR.

Refer to other chapters in this guide for more information about TU40 record layouts.

Understanding Message Types

There are two categories of messages: service (application error) messages and status messages. For this version of TransUnion Net Access, service messages carry TU40 requests (FFI) and replies (FFR) between the customer application and TransUnion's CICS regions. Status messages are purely informational messages exchanged between a customer application and TransUnion Net Access.

Service (Application Error) Messages

Application error messages contain TU40 formatted records. The layout of these records is documented earlier in this chapter. Application error messages merely pass through TransUnion Net Access to CICS but represent the majority of all messages sent. Any application error messages will be treated as regular TU40 responses by TransUnion Net Access and passed back to the client application.

For every request sent from the customer, TransUnion Net Access will respond with either the data returned from TransUnion's credit reporting system (an application message) or one of the status messages discussed in the next section.

Status Messages

Below are described different types of status messages:

Connection Messages. This class of messages communicates status of connections. These include protocol errors, connection limits and refusals, inactivity, and shutdown messages.

Customers should be using standard HTTP protocol, which employs a standard set of HTTP messages, not TU40 messages, that indicate the problem with the connection.

Except for the Internal Communication Error, the errors below will be generated according to what is defined for the SSL protocol. TransUnion's software does not generate these messages.

TCP Protocol Error. An error condition on the TCP/IP socket connection will be indicated to the customer in a standard HTTP message.

Internal Communication Error. Errors relate problems with TransUnion Net Access's communications to the mainframe. TransUnion Net Access returns the message "SYSTEM ERROR PROCESSING REQUEST" when a communication error occurs between the TransUnion Net Access server and TransUnion's credit reporting system.

Connection Limit Exceeded. An error condition regarding the number of connections or connection refusals will be indicated to the customer in a standard HTTP message.

Inactivity Time-out. Connection timeouts will be indicated to the customer in a standard HTTP message.

Format Messages. The following are types of status messages that describe formatting problems.

Message Format Error. This type of message indicates that an error has occurred in the validation of the request. TransUnion Net Access validates the input segments and the presence of the certification data (CD01) in the request. TransUnion Net Access will return an “INVALID INPUT” message for the former and a “NO CERTIFICATION PROVIDED” message for the latter.

Unknown Message Type. This message indicates that the request is unrecognizable or empty. In this case, TransUnion Net Access will return an “INVALID REQUEST” message.

Security Messages. If a breach in security is detected at the communication layer, the connection is dropped and no message is returned. If a breach in security is detected at the CICS layer, the appropriate HTTP response (usually a 401 or 403 HTTP status code) is returned.

General Messages. These are messages that do not fit into any of the above categories.

Internal Error. This message indicates an internal processing error within one of the TransUnion applications. The message “SYSTEM ERROR PROCESSING REQUEST” will be returned for this error.

Conversation Level Interaction

This section describes the expected flows of messages between the customer application and TransUnion Net Access. Actions on the left side of the flows are from the customer application and those to the right of the flows are from TransUnion Net Access. Data sent to and received from the mainframe (TransUnion’s credit reporting system) are not shown in the diagram and are assumed to occur after TransUnion Net Access reads from the customer connection, unless otherwise noted (flows marked with an asterisk).

Normal Processing. Figure 1 below depicts the expected normal flow of messages between a customer application and the TransUnion Net Access gateway. TransUnion Net Access will accept multiple transactions on a single connection, but they are processed one at a time. TransUnion Net Access will close the connection after it receives a message with a type equal to CLOSING CONNECTION. No data is sent to the mainframe after this message type is received and TRANSUNION NET ACCESS immediately closes the connection.

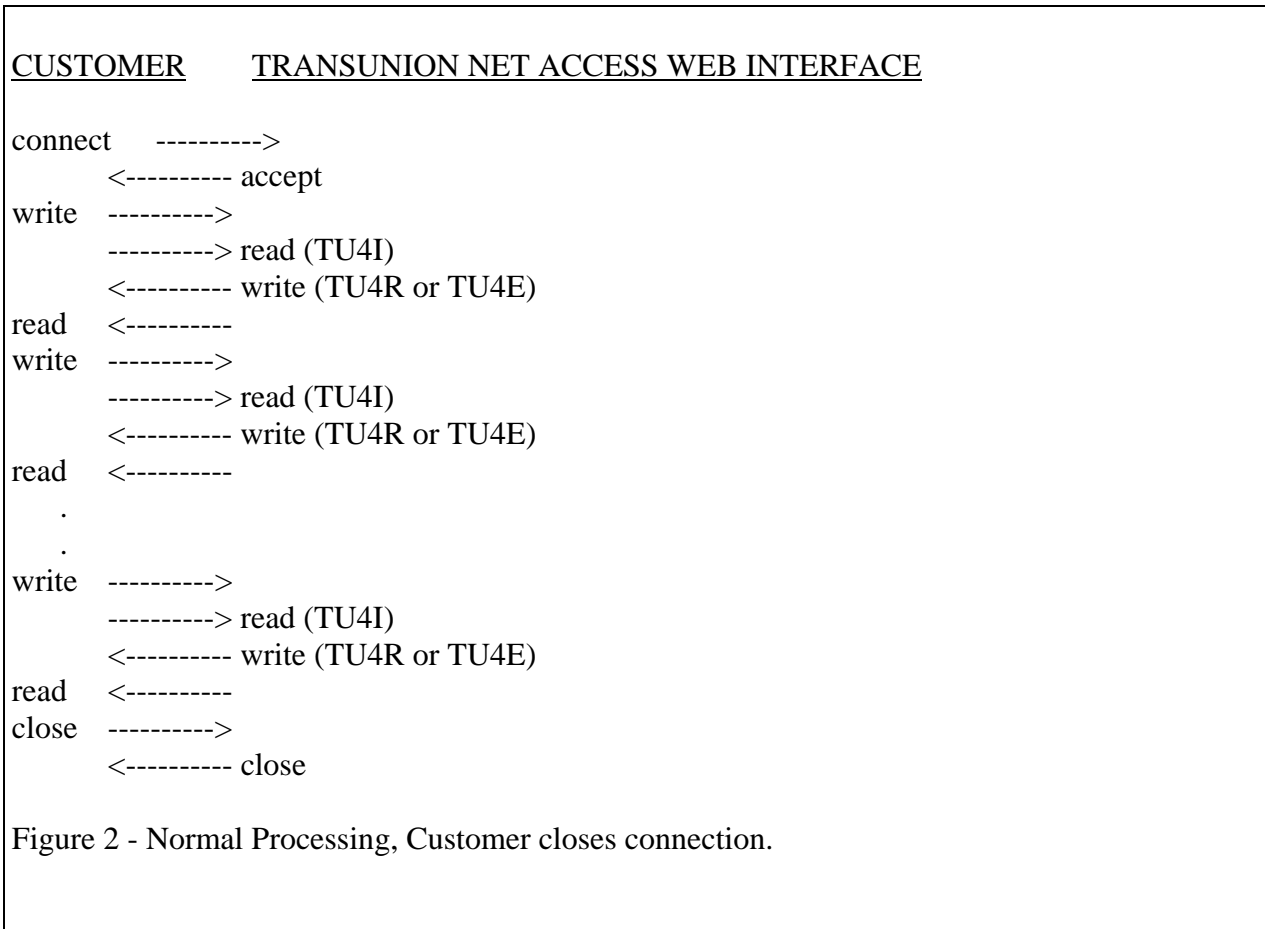


Figure 1

Abnormal Processing. Figure 2 shows the messages sent to the customer application when an error condition exists within the TransUnion Net Access web interface at the application level. TransUnion Net Access will always close the connection immediately after sending one of these messages.

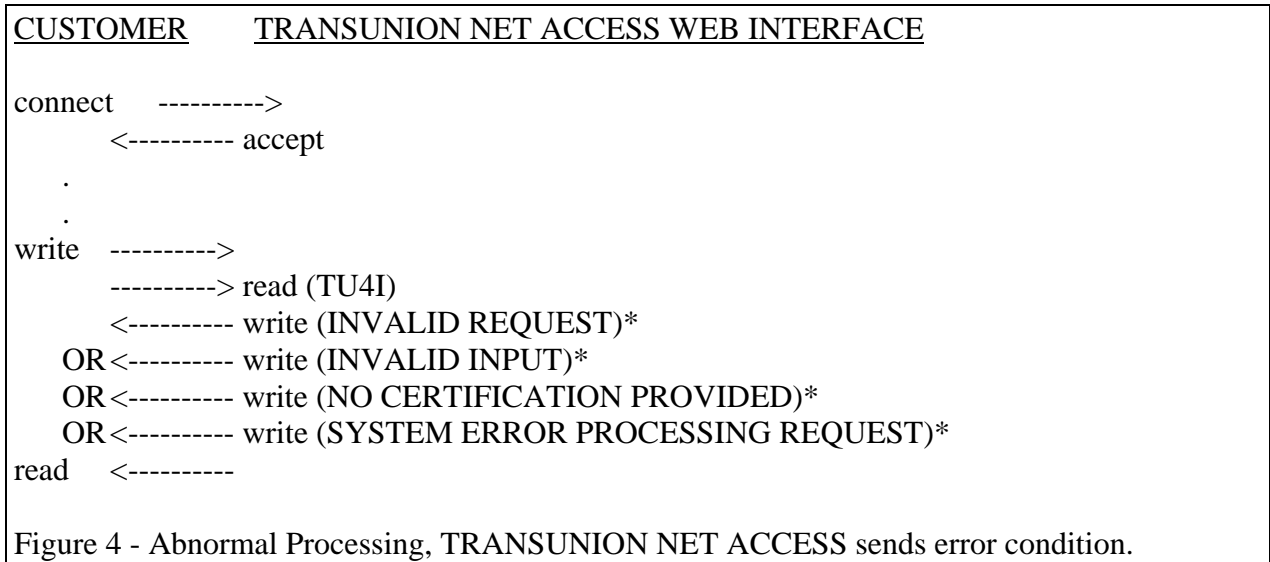


Figure 2

Customer Information & Questionnaire

Important

THIS IS NOT A SERVICE ORDER!

The following information will provide us preliminary information required to discuss the options with your TransUnion account representative. Please do not leave any section blank. We need the information in order to provide cost and delivery estimates to your TransUnion account representative. Please complete this form and return it to the initial contact mentioned in the ‘Customer Project Support Information’ section.

Company Information

Company Name		
Department/Division Request Service		
Mailing Address		
City	State	Zip
Shipping Address (If different)		
City	State	Zip
Demark Address, Including room Number		
City	State	Zip
Demark Complete Area Code & Number		
Project Coordinator Name & Number		
Help Desk Contact / Phone Number		

Customer Contacts

Please complete this information for everyone in your organization who will function as a contact person to TransUnion.

Customer Business Contact	Title	
Relationship to Project		
Mailing Address (if different from above)		
City	State	Zip
Work Phone	Fax	
E-mail	Pager (optional)	
Home Phone (optional)	Cellular (optional)	

TransUnion Account Rep	Title	
Mailing Address (if different from above)		
City	State	Zip
Work Phone	Fax	
E-mail	Pager (optional)	
TransUnion Market / Submarket Code:	Cellular (optional)	

Customer Hardware Contact	Title	
Relationship to Project		
Mailing Address (if different from above)		
City	State	Zip
Work Phone	Fax	
E-mail	Pager (optional)	
Home Phone (optional)	Cellular (optional)	

Customer Application Software Contact	Title	
Relationship to Project		
Mailing Address (if different from above)		
City	State	Zip
Work Phone	Fax	
E-mail	Pager (optional)	
Home Phone (optional)	Cellular (optional)	

Customer Router Support Contact	Title	
Relationship to Project		
Mailing Address (if different from above)		
City	State	Zip
Work Phone	Fax	
E-mail	Pager (optional)	

Capacity Planning

This information helps us prepare system and communication capacity to accommodate your volume of transactions. Please return this page with your completed customer questionnaire.

What is your expectation as far as time frames with this project?
Total current TransUnion transactions per month
Anticipated IP transactions per month
Will IP transactions replace or augment existing transactions?
What is your existing connection type if applicable? (Async or LU62)
If you have an existing connection, what is your subscriber code?
What type of LAN topology do you use (Token Ring or Ethernet)?
Is there an existing hub available for use or does one need to be provided?
How many transactions would you anticipate in a very busy five-minute period?
During what hours and days of the week will you submit transactions?
Whose client software are you using?
What data format do you plan to use? (SPEC, ARPT, or TU40)
Between now and the time production network service is installed, do you want to use the PPP connection for testing?
What is the domain name for your organization?
What are the names and IP addresses of your client systems that will access the ACE gateway?
Please provide TransUnion with a network drawing showing your client systems, including the names and addresses of any intermediate networks, routers, or firewalls. Attach the drawing along with the completed customer questionnaire.

Please return the completed customer questionnaire to TransUnion Corporation, Network Integrated Services. See the “TransUnion Customer Project Support Information” section earlier in this chapter.

Chapter 2. TU40 FFI Segments

This chapter contains descriptions of the TU40 FFI segments. The segments appear in alphabetic order. Below is a list of all the segments, including segment length, in a concise and complete table.

For the segments and segment order required for specific TransUnion product requests, refer to Chapter 5, “Standalone Product Descriptions” and Chapter 6, “Add-on Product Descriptions.” For examples of how to create joint inquiries, refer to Chapter 4, “TU40 Processing.”

Segment ID	Segment Name	Segment Length (bytes)
AD01	Address	97
AF01	Access File	22
AI01	Additional Information	15
CC01	Credit Card	60
CD01	Customer Data	38
DB01	Decision Systems Customer Branch	56
DI01	Decision Systems Custom Information	30
EM01	Employment	91
EU01	End Usage	26
ENDS	Transaction Ending	7
FA01	Future Address (see AD01 segment description)	97
ID01	Identification	54
LK01	LOOK UP Request	20
MD01	Model Data	37
NM01	Name	66
OD01	Output Delivery	64
OR01	Optional Request	9
PI01	Personal Information	25
PN01	Phone Number	21
RA01	Request Add-on Product	12
RP01	Request Product	15
RP02	Request Product	33
RS01	Reporting Subscriber	38
SH01	Subject Header	5
TU4I	Transaction Control	52
VN01	Vendor Information	41

The remainder of this chapter displays layouts of the TU40 FFI segments. Information in the segment layouts includes:

Field	Identifies the segment field.
Displacement	Identifies the segment column where this field begins.
Length	Identifies the maximum number of characters the field value can have.
Type	Identifies the data type to use in this field. These are the possible data types: <ul style="list-style-type: none"> A For alphabetic data. Data in alphabetic fields is left-justified and the remainder of the field is filled with blanks. N For numeric data. Data in numeric fields is right-justified and left-filled with zeroes. A/N For alphanumeric data. Data in alphanumeric fields is left-justified and the remainder of the field is filled with blanks except for currency amounts and for the member code and subscriber password fields of the TU4I segment. <p style="margin-left: 40px;">Currency values are right-justified and preceded by zeroes, just as numeric data is, unless the field contains no data. A currency field with no data is blank-filled to distinguish between amounts of zero and amounts not reported. Values in the TU4I member code and subscriber password fields are right-justified and have leading zeroes.</p>
Description	Describes the purpose of the field, whether the field is required, possible field values, and contains special notes about field usage. Values described in this field are the only ones that can currently be sent. We reserve the right to add new values and, if we do so, will make every effort to notify you.

Note

Although the format for all date fields is CCYYMMDD, many of the dates on our databases do not contain a day. If there is no day present on the database, a value of 01 is returned in the day field.

All segments have a fixed length and a specific segment ID. If any segment in a transaction has an incorrect length or ID, the transaction is terminated and an error message is returned to the submitter.

Every transaction must have a transaction control segment (TU4I) and a transaction end segment (ENDS). If either of these segments is missing, transaction processing stops and an error response record (TU4E) is returned.

Table: Standalone Products and Required FFI Segments

The table below lists the FFI segments and the standalone products and indicates which segments are required for each product. The codes used in this table are:

R Required segment **CR** Conditionally required segment **O** Optional segment

	ACQUIRE	Credit Report	FACT	Fraud Detect/ Fraud ID-Tect	GAD	GLANCE	HAWKeye	IDSearch	IDSearch- plus	LOOK UP	PEER	ReTRACE	ReTRACE- plus	Rev Phone Append	Score Report	Score- Search	Total ID	TRACE	TRACE-plus	WATCH Delete	WATCH Set		
TU4I	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
EU01	CR	CR	CR		CR			CR			CR		CR		CR	CR			CR			CR	
VN01	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
SH01	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
AF01	CR	CR		CR	CR			CR	CR	CR	CR		CR		CR	CR	CR		CR				
NM01	R	R	R	O	R	R	O	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PI01	O	O	O	O	O	O	O	O	R	O	O	O	O	O	O	O	O	O	R	R	O	O	O
ID01	O	O		O													O						
CC01	O			O													O						
AD01	R	R	R	O	R	R	R	O	O		R	R	R		R	O	R				R	R	R
PN01	O	O	O	O	O		O	O	O		O	O	O	R	O	O	O				O	O	O
EM01	CR	O		O							O				O								
RP01	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
LK01										R													
DB01	O																						
DI01	O																						
OR01	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
AI01	O	O																					
OD01	R	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
RA01		O	O	O	O			O	O	O	O	O	O		O	O	O	O	O				
RS01						O																	
ENDS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

Table: TransUnion Product Codes

The table below lists the product codes for the TransUnion standalone and add-on products that are available in TU40.

Standalone Products

Standalone Product Name	Product Code
ACQUIRE Select	09900
ACQUIRE Express	09910
ACQUIRE Review	09920
ACQUIRE Connect	09930
Credit Report	07000
FACT	07700
Fraud Detect/Fraud ID-Tect	06600
GAD	07003
GLANCE	08890
HAWKey	06510
IDSearch	07760
IDSearchplus	07770
LOOK UP	07600
PEER	06000
ReTRACE	07400
ReTRACEplus	07450
Reverse Phone Append	07040
SCORE REPORT	08000
ScoreSearch	07750
Total ID	06710
TRACE	07200
TRACEplus	07300
WATCH Delete	07112
WATCH Satisfaction	07113
WATCH Set	07111

Add-on Products

Add-on Product Name	Product Code
Geo Code	07011
HAWK	06500
Inquiry Analysis	07640
LOOK	07500
OFAC Advisor	06800
Phone Append	07030
Score Model: DELPHI (Redeveloped – 1997)	00501
Score Model: Dwelling Fire ASSIST (1.0)	00935
Score Model: Dwelling Fire ASSIST (2.0)	00889
Score Model: EDGE 1	00X01
Score Model: EDGE 2	00X02
Score Model: EMPIRICA	00950
Score Model: EMPIRICA AU	00990
Score Model: EMPIRICA BC	00993
Score Model: EMPIRICA IL	00991
Score Model: EMPIRICA PF	00992

Add-on Product Name	Product Code
Score Model: EMPIRICA 95	00002
Score Model: EMPIRICA AU 95	00008
Score Model: EMPIRICA BC 95	00256
Score Model: EMPIRICA IL 95	00016
Score Model: EMPIRICA PF 95	00004
Score Model: FACETS	00138
Score Model: Fraud Model	00401
Score Model: Fraud Model II	00356
Score Model: GEM	00241
Score Model: Home Owners 1 ASSIST (1.0)	00906
Score Model: Home Owners 1 ASSIST (2.0)	00875
Score Model: Home Owners 2 ASSIST (1.0)	00913
Score Model: Home Owners 2 ASSIST (2.0)	00876
Score Model: Home Owners 3 ASSIST (1.0)	00919
Score Model: Home Owners 3 ASSIST (2.0)	00877
Score Model: Home Owners 4 ASSIST (1.0)	00924
Score Model: Home Owners 4 ASSIST (2.0)	00878
Score Model: Home Owners 6 ASSIST (1.0)	00930
Score Model: Home Owners 6 ASSIST (2.0)	00879
Score Model: HORIZON	00601
Score Model: LINK-EMPIRICA/TRNA	00C01
Score Model: New DELPHI	00032
Score Model: Nonstandard Auto ASSIST	00820
Score Model: Old Preferred Auto ASSIST	00882
Score Model: Old Preferred Minimal Auto ASSIST	00900
Score Model: Old Standard Auto ASSIST	00842
Score Model: Old Standard Minimal Auto ASSIST	00864
Score Model: PRECISION	00227
Score Model: Preferred Auto ASSIST	00980
Score Model: Preferred Minimal Auto ASSIST	00979
Score Model: REWARD	00300
Score Model: RPM	00133
Score Model: Spectrum	00315
Score Model: Spectrum 2002	00R13
Score Model: Standard Auto ASSIST	00978
Score Model: Standard Minimal Auto ASSIST	00977
Score Model: Telescope	00336
Score Model: TIE	00064
Score Model: TransRecovery	00R07
Score Model: TransRisk Auto	00701
Score Model: TransRisk-AM	00730
Score Model: TransRisk Bankruptcy	00896
Score Model: TransRisk New Account 1.0	00219
Score Model: TransRisk New Account 2.0	00R59
Score Model: TransUnion Data Connect	00R14
Score Model: TransUnion Links (EMPIRICA/TRNA)	00C01

AD01—Address Segment

The AD01 segment provides an address for the subject, employer, or requested product. If multiple addresses are sent, the order in which they are sent is important because TU40 assumes the **addresses are positional**. That is, the first AD01 segment is assumed to be the current address, the second AD01 segment is assumed to be the previous address, and so on.

If the address is personal, it must follow the subject header segment (SH01). If the address is an employer's, it must follow the employment segment (EM01).

Note

If the address is a future address, use FA01 as the segment type. All other segment fields and the business rules remain the same.

Address (AD01) Segment				Total Length: 97 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is AD01 unless the customer is sending a future address. The future address segment type is FA01 . <i>Required field.</i>
Filler	5	1	A/N	Value is a space.
House Number	6	10	A/N	Identifies the subject's house number. This field currently accepts only 6 characters. <i>Required field.</i> An embedded 1- or 2-character directional (N, S, NW, etc.) is allowed in this field. The directional can have up to 3 numbers in front of and behind it, but the house number cannot begin or end with a directional. Any other non-numeric characters, including blanks, are edited out. Examples of acceptable house numbers are 20W301 and 468N19. Examples of unacceptable house numbers are W20301 and 46819N. Refer to Appendix A, "Name, Address, and Phone Codes," for more detailed examples of how to code addresses for TU40.
Predirectional	16	2	A	Specifies the street directional (N, S, E, W, NE, SE, NW, SW) if there is one. TU40 ignores any other value in this field.
Street Name	18	27	A	Specifies the street name in the address. Special characters and fractions are edited out. <i>Required field.</i> Refer to Appendix A, "Name, Address, and Phone Codes," for sample addresses. Refer to Appendix E for Puerto Rico/ Hispanic address conventions.
Postdirectional	45	2	A	Specifies a street directional (N, S, E, W, NE, SE, NW, SW) that appears after a street name if there is one. TU40 ignores any other value in this field.
Street Type	47	2	A	Specifies the type of street. Refer to Appendix A, "Name, Address, and Phone Codes," for a list of valid street types. TU40 ignores an invalid value in this field.
Apartment/Unit Number	49	5	A/N	Specifies an apartment or unit number. Special characters, blanks, and fractions are edited out.

Address (AD01) Segment				Total Length: 97 bytes
Field	Displacement	Length	Type	Description
City Name	54	27	A	Specifies the name of the city in the address. This value must be at least 3 characters long. Embedded special characters or numbers are edited out. <i>Required field.</i>
State	81	2	A	Specifies the code for the subject's state. Refer to Appendix A, "Name, Address, and Phone Codes," for a list of valid state codes. <i>Required field.</i>
ZIP Code	83	10	A/N	Specifies the subject's ZIP Code. This field is left-justified. <i>Required field.</i>
Length of Residence	93	4	A/N	Specifies in years and months the length of the subject's residence at the address identified in this segment. The format for this value is YYMM. For example, a residence length of 4 years and 3 months is added as 0403. If this an employment address, this field does not apply.
Residential Status	97	1	A/N	Specifies whether the subject owns or rents the residence at this address. Valid values are: 1 Own 2 Rent 3 Other

AF01—Access File Segment

The AF01 segment contains an access code that enables a subscriber to access a consumer’s credit file that is inaccessible without permission. The credit grantor obtains the access code from the consumer.

Place this segment immediately after the SH01 segment in the FFI.

Access File (AF01) Segment				Total Length: 22 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is AF01 . <i>Required field.</i>
Access Code	5	8	A/N	Indicates the security code required for access to a consumer’s frozen credit file. Provided by the consumer.
Filler	13	10	A/N	

AI01—Additional Information Segment

The AI01 segment specifies a loan type and amount used for credit products. If the loan type in this segment is invalid, the segment is ignored.

Additional Information (AI01) Segment				Total Length: 15 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is AI01 . <i>Required field.</i>
Loan Type	5	2	A	Specifies a code that identifies the loan type. For a list of valid loan type codes, refer to Appendix C, "Trade and Loan Type Codes."
Loan Amount	7	9	A/N	Specifies the amount of the loan. The amount appears in whole dollar amount (for example, an amount of \$160,000 is specified as 000160000).

CC01—Credit Card Segment

The CC01 segment lists the company name, account number, and expiration date for a credit card account.

Credit Card (CC01) Segment				Total Length: 60 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is CC01 . <i>Required field.</i>
Company Name	5	24	A/N	Specifies the name of the company that issued the card.
Credit Card Account Number	29	24	A/N	Lists the account number that appears on the credit card. <i>Required field.</i>
Expiration Date	53	8	A/N	Specifies the credit card's expiration date in CCYYMMDD format.

CD01—Customer Data Segment

The CD01 segment contains subscriber information not found in the subscriber code. Subscribers can use this segment in product requests to further identify their customer.

Place this segment immediately before the SH01 segment. If the FFI contains no VN01 or EU01 segments, the CD01 segment immediately follows the TU4I segment.

Customer Data (CD01) Segment				Total Length: 38 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is CD01 . <i>Required field.</i>
Customer Identifier Qualifier	5	2	A/N	1 DecisionPoint Customer Number 2 DecisionPoint Agent Number 3 DecisionPoint Vendor Number 4 AISG Subscriber Code 5 Customer's Internal User ID 6 Product Requestor <i>Required field.</i>
Customer Identifier	7	24	A/N	<i>Required field.</i>
Password	31	8	A/N	

DB01—Decision Systems Customer Branch Segment

The DB01 segment includes information that helps to identify Decision Systems clients. If this segment is provided in the FFI, it is also returned in the FFR.

Decision Systems Customer Branch (DB01) Segment				Total Length: 56 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is DB01 . <i>Required field.</i>
Branch	5	10	A/N	Identifies the branch of the requesting subscriber.
Branch Type	15	2	A/N	<i>For future use.</i>
Client Use 1	17	20	A/N	Provides additional information specific to the client.
Client Use 2	37	20	A/N	Provides additional information specific to the client.

DI01—Decision Systems Custom Information Segment

The DI01 segment provides additional information from Decision Systems clients. If this segment is included in the FFI, it is also returned in the FFR.

Decision Systems Custom Information (DI01) Segment				Total Length: 30 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is DI01 . <i>Required field.</i>
Input Type	5	2	A/N	Consists of two positions that help identify the type of custom input. Valid values for position 1 are: S Short L Long Valid values for position 2 are: 1-8 Short 1-4 Long
Custom Input	7	24	A/N	For custom use. Positions 1-10 are used if Input Type is Short; positions 1-24 are used if Input Type is Long.

EM01—Employment Segment

The EM01 segment identifies the subject’s employer and employment statistics such as date hired and income. The inquiry transaction can include only one EM01 segment per subject.

Employment (EM01) Segment				Total Length: 91 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is EM01 . <i>Required field.</i>
Employer Name	5	35	A/N	Identifies the name of the employer. <i>Required field.</i>
Occupation	40	22	A/N	Identifies the subject’s occupation.
Date Hired	62	8	A/N	Identifies the date the subject was hired by this employer. Valid format is CCYYMMDD. The use of any other format causes TU40 to ignore this field.
Date Separated	70	8	A/N	Identifies the date the subject stopped working for this employer. Valid format is CCYYMMDD. The use of any other format causes TU40 to ignore this field.
Income	78	9	A/N	Identifies the subject’s amount of income. Valid format is whole dollars for all amounts except for hourly pay, for which a dollars and cents format is used. For example, an income of \$15.50 an hour is entered as 000001550.
Pay Basis	87	1	A	Lists the subject’s pay schedule. Valid values are: B Bimonthly (every other month) D Daily H Hourly M Monthly S Semimonthly (twice a month) W Weekly Y Yearly
Length of Employment	88	4	A/N	Specifies the number of years and months subject has worked for this employer. Valid format is YYMM. For example, an employment of 3 and a half years is listed as 0306.

EU01—End Usage Segment

The EU01 segment identifies the end use of a product to be sure it meets permissible purpose requirements. This segment is required if a request **for a permissible purpose product** is submitted by one of the following subscribers:

- An insurance company
- An individual certification subscriber
- A broker for insurance companies
- A broker for non-insurance companies. These brokers must also identify their customers in the End User field if their inquiry does not include a member code that identifies their customer.

These are the TransUnion products that require a permissible purpose code:

- Credit Report
- FACT
- GAD
- IDSearchplus
- PEER
- ReTRACEplus
- Score Report
- ScoreSearch
- TRACEplus
- WATCH Set

The EU01 segment, if required, must immediately follow the TU4I segment. Only one EU01 segment is permitted for each transaction.

The table below shows the field descriptions for the EU01 segment.

End Usage (EU01) Segment				Total Length: 26 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is EU01 . <i>Required field.</i>
End User Name	5	20	A/N	Identifies the end user of the product being requested by the reseller. <i>Required field for broker only if inquiry member code does not identify broker's customer.</i>
Permissible Purpose Code	25	2	A	Indicates the permissible purpose for obtaining the report. <i>Required field.</i> Refer to Appendix B, "Industry and Permissible Purpose Codes," for a list of valid codes.

ENDS—Transaction Ending Segment

The ENDS segment indicates the end of the current inquiry transaction. This segment is required for every transaction.

End (ENDS) Segment				Total Length: 7 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ENDS . <i>Required field.</i>
Total Number of Segments	5	3	N	Specifies the total number of segments contained in this transaction, including TU4I and ENDS.

FA01—Future Address Segment

The FA01 segment is used by Geo Code. The fields and field attributes are identical to those of the AD01 segment except that the Segment Type is **FA01**. Refer to the AD01 segment description for more details.

ID01—Identification Segment

The ID01 segment describes the driver's license, state ID, or tax ID number of the subject of the inquiry transaction. This segment can also describe any other type of ID used by the product.

Identification (ID01) Segment				Total Length: 54 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ID01 . <i>Required field.</i>
ID Type	5	2	A/N	Specifies the type of ID that this segment identifies. Valid values are: 01 Driver's License 02 State ID 03 Tax ID
ID Number or Value	7	30	A/N	Lists the contents of the ID, such as a driver's license number or a tax identification number. <i>Required field.</i>
State of Issuance	37	2	A	Identifies the state that issued the ID. Refer to Appendix A, "Name, Address, and Phone Codes," for a list of valid state codes. <i>Required field.</i>
Date of Issue	39	8	A/N	Specifies the date the ID was issued. The date format is CCYYMMDD.
Expiration Date	47	8	A/N	Specifies the date the ID expires. The date format is CCYYMMDD.

LK01—LOOK UP Request Segment

The LK01 segment identifies the subscriber for whom LOOK UP information is requested.

LOOK UP Request (LK01) Segment				Total Length: 20 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is LK01 . <i>Required field.</i>
Segment Indicator	5	2	A	Specifies the type of FFR segment for which the transaction sender wants identifying information. Valid values are: PR Public record TR Trade IN Inquiry CL Collection <i>Required field.</i>
Bureau Market	7	2	N	Specifies the bureau market of the subscriber code being decoded. <i>Required field if the Segment Indicator type is IN (inquiry).</i>
Bureau Submarket	9	2	A/N	Specifies the bureau submarket of the subscriber code being decoded. <i>Required field if the Segment Indicator type is IN (inquiry).</i>
Industry Code	11	2	A/N	Specifies the industry code of the subscriber code to be disclosed. <i>Required field.</i>
Member Code	13	8	A/N	Specifies the member code to be decoded. <i>Required field.</i>

MD01—Model Data Segment

The MD01 segment identifies and specifies the value of a single model attribute for a subject. A maximum of fifty (50) MD01 segments can be provided for each subject in the transaction.

Model Data (MD01) Segment				Total Length: 37 Bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is MD01 . <i>Required field.</i>
Product Code	5	5	A/N	Identifies the score model for which the data element will be used. <i>Required field.</i>
Model Attribute ID	10	8	A/N	Identifies the model attribute transmitted in this segment. <i>Required field.</i> If the value is missing or not valid for the model, then a default is used.
Model Attribute Value	18	20	A/N	Specifies the actual value for this attribute. Valid values are dependent upon the attribute id. <i>Required field.</i> If the value is missing or not valid for the attribute, then a default is used.

Note

Data in alphanumeric fields is left-justified and the remainder of the field is filled with blanks.

Valid attribute IDs, values, and other rules will be defined for each score model.

NM01—Name Segment

The NM01 segment identifies the name—primary, secondary, or alias—of the subject. The inquiry transaction must include this segment if the requested product’s input requires a name. Refer to Chapter 5, “Standalone Product Descriptions,” and Chapter 6, “Add-on Product Descriptions,” to determine whether the requested product requires this segment.

The subject can have up to five NM01 segments: one segment for a primary name, one for a secondary name, and three for alias names. If additional segments are received (more than one primary or secondary segment or more than three alias name segments) the inquiry transaction is terminated and an error code is returned.

Name (NM01) Segment				Total Length: 66 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is NM01 . <i>Required field.</i>
Name Type	5	1	A/N	Specifies the type of name identified in this segment. Valid values are: <ol style="list-style-type: none"> 1 Primary name 2 Secondary name 3 Alias name <p>The default is 1. The secondary name is <i>required</i> to specify a Puerto Rico maternal surname. The transaction can include up to five NM01 segments: one primary name segment, one secondary name segment, and three alias name segments. <i>Required field.</i></p>
Last Name	6	25	A	Specifies the last name of this subject. Embedded blanks, special characters, and numeric values are edited out. <i>Required field.</i>
First Name	31	15	A	Specifies the first name of this subject. Embedded blanks, special characters, and numeric values are edited out. <i>Required field if the Name Type value is 1 (primary name).</i>
Middle Name	46	15	A	Specifies the middle name or initial of this subject. Embedded blanks, special characters, and numeric values are edited out.
Prefix	61	3	A/N	Specifies the name prefix for this subject. Refer to Appendix A, “Name and Address Codes,” for a list of prefix codes.
Suffix	64	3	A/N	Specifies the name suffix for this subject. Refer to Appendix A, “Name, Address, and Phone Codes,” for a list of suffix codes.

OD01—Output Delivery Segment

By default, the results of a TU40 inquiry are returned as an FFR in the standard (electronic response) distribution method. If a TU40 inquiry contains a valid OD01 segment, the default is ignored and whatever value is sent in this segment determines the output results.

To receive results in printed form or through a different distribution method (such as electronic mailbox), the inquiry must include an OD01 segment to specify that output type or method. To receive both an FFR **and** a printed form, the inquiry must include two OD01 segments, one for each output type. The inquiry can include one OD01 segment for each type of output requested for each product.

Note

You do **not** need to include an OD01 segment unless you want an output format other than the default FFR and standard/electronic response.

Output Delivery (OD01) Segment				Total Length: 64 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is OD01 . <i>Required field.</i>
Type of Output Requested	5	2	A/N	Specifies the type of output requested. Valid values are: 01 FFR 02 Printed form 03 (Internal use only/Decision Systems) 04 (Internal use only/Total ID) The default is 01. Note that if the customer wants both a printed form and an FFR, the inquiry must contain two OD01 segments, one for each output type. <i>Required field.</i>
Form Type	7	2	A/N	Identifies the type of form to use if output is printed. Valid values are: 01 Continuous with headers 02 Cut sheet with headers 03 Cut sheet without headers 04 Not applicable The default is 01 for printed forms or 04 for FFRs. <i>Required field.</i>
Distribution Method	9	3	A/N	Identifies the method by which the transaction results are delivered. Valid values are: 001 Standard (electronic response) 002 (not used) 003 (not used) 004 Fax (future use) 005 Email (future use) 006 MQ (future use) 010 Printer (internal use only) 011 Mailbox (currently WATCH only) 012 Vendor Mailing (WATCH only) 013 Fax via a Vendor (WATCH only) <i>Required field.</i>

Output Delivery (OD01) Segment				Total Length: 64 bytes
Field	Displacement	Length	Type	Description
Output Block Size Requested	12	1	A	<p>Specifies the maximum output block size requested. This field is supported only for tape-to-tape users. Valid values are:</p> <p>S 4096 bytes E 2048 bytes O 1024 bytes N 950 bytes F 512 bytes</p> <p>The default block size is 32K. If this block size does not work in the user's processing environment, the user must select one of the above options.</p>
Address to Deliver	13	50	A/N	<p>Specifies a delivery address. This address may be a printer ID or electronic mailbox ID, depending on the value specified in the Distribution Method field. This field is <i>required</i> if the Distribution Method option is any value except 001.</p>
Turnaround Time	63	2	A/N	<p>Specifies the required turnaround time for this transaction. Valid values are:</p> <p>01 Immediate delivery 02 24 hours (<i>future use</i>) 03 36 hours (<i>future use</i>) 04 48 hours (<i>future use</i>)</p> <p>Options 02, 03, and 04 are product-dependent. This field is optional but any character other than those listed above causes a default to option 01.</p>

OR01—Optional Request Segment

The OR01 segment requests the return of additional product data such as owning bureau information, a text error segment, or an edit segment.

Optional Request (OR01) Segment				Total Length: 9 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is OR01 . <i>Required field.</i>
Owning Bureau Identification of Credit File	5	1	A	Specifies that the returned record identify the owning bureau. This is an option only for credit reports, FACT, GAD, PEER, and the Score report. Valid values are: Y Return an OB segment on all subjects N Do not return an OB segment W Return an OB02 segment on all subjects The default is N.
Error Text Segment Request	6	1	A	Specifies how error messages are displayed to users. Valid values are: B Return error code (ERRC segment) T Return the error text and error code in the same segment (ERRT segment) The default is to return only the error code.
Edit Response Segment Requested	7	1	A	Determines whether an edit segment is returned in the FFR. Valid values are: Y Return an edit segment N Do not return an edit segment The default is N.
Trade MOP Totals Segment Requested	8	1	A	Specifies whether the trade MOP totals (TM01) segment is returned in the FFR. Valid values are: Y Return the trade MOP totals segment N Do not return the trade MOP totals segment The default is N.
Summary Segment Requested	9	1	A	Determines whether the credit summary segments (SM01 and SD01) are returned. Valid values are: Y Return the credit summary segments. A setting in the subscriber's predefined options determines whether the summary is for 12 months or is the consumer's total file history. N Do not return the credit summary segments. The default is the value that appears in the subscriber's predefined options.

PI01—Personal Information Segment

The PI01 segment identifies the subject's social security number and date of birth or age. Only one PI01 segment can be included for a subject. If more than one PI01 segment per subject is received, the inquiry transaction terminates and the submitter receives an error code.

Personal Information (PI01) Segment				Total Length: 25 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is PI01 . <i>Required field.</i>
Social Security Number	5	9	N	Identifies the social security number of the transaction subject. Do not include embedded dashes or blanks. This field is <i>required</i> for certain products. Chapter 5, "Product Descriptions," and Chapter 6, "Add-on Product Descriptions," specify whether a product request requires this field. TU40 ignores this field if the format is invalid. If the customer requests an edit segment, the reason TU40 ignored the field is explained there.
Date of Birth	14	8	A/N	Specifies the subject's date of birth. The DOB format is CCYYMMDD.
Age	22	3	N	Specifies the subject's age in years.
Gender	25	1	A/N	Specifies whether the subject is male or female. Valid values are: M Male F Female

PN01—Phone Number Segment

The PN01 segment lists the subject's phone number and identifies the type of phone (telephone, fax, pager, and so on).

Phone (PN01) Segment				Total Length: 21 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is PN01 . <i>Required field.</i>
Phone Type	5	2	A/N	Identifies the type of phone number provided. Valid values are: 01 Telephone (voice, standard) 02 Fax 03 Cellular 04 Pager 05 Toll-free 06 Mobile/PCs 07 Non-geographic 08 Special services 09 Undefined 10 New 11 Pay phone
Area Code	7	3	N	Specifies the area code of the phone number. <i>Required field.</i>
Telephone Number	10	7	N	Specifies the phone number, which should have <i>no</i> embedded dashes. <i>Required field.</i>
Extension	17	5	N	Specifies a phone extension.

RA01—Request Add-on Product Segment

The RA01 segment is used to request an add-on product with a product request. If no RA01 segment is provided for an add-on, TU40 defaults to the options defined in the subscriber file.

Request Add-on Product (RA01) Segment				Total Length: 12 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is RA01 . <i>Required field.</i>
Add-on Product Code	5	5	A/N	Specifies a code that identifies add-on products to include in this transaction. The add-on product codes are listed in Chapter 6, "Add-on Product Descriptions." <i>Required field.</i>
Processing Request	10	2	A/N	Requests special processing for certain products. The product descriptions in Chapters 5 and 6 describe how to use this field for the products that require it. If this field is not used, default to subscriber code validation option.
Product Type	12	1	A	Specifies whether the requested add-on product is a score model. Valid values are: A Score model P All other products The default is P, indicating the requested add-on product is not a score model.

RP01—Request Product Segment

The RP01 segments specify which standalone TransUnion products the inquiry is requesting. Each RP01 segment specifies one product. The inquiry must contain at least 1 RP01 segment.

If a product is requested in an inquiry that includes multiple subjects, the product is returned for both subjects if all required subject data is included and if the product allows joint processing.

Request Product (RP01) Segment				Total length: 15 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is RP01 . <i>Required field.</i>
Product Code	5	5	A/N	Identifies the product requested. Refer to the table at the beginning of this chapter for a list of product codes. <i>Required field.</i> If the product code is accurate but the subscriber is not signed up for the product, TransUnion returns an error code. TransUnion also returns an error code if the product code is missing or invalid.
Bundle Default Indicator	10	1	A/N	Specifies that TU40 default to the subscriber's predefined settings unless a different value is submitted in this transaction. Valid values are: Y Default to the subscriber's bundle for this product N Do not default to the subscriber's bundle The default is N. <i>For future use.</i>
Specialty Code	11	2	A/N	Identifies inquiries that need special processing. <i>For internal use only.</i>
Processing Request	13	2	A/N	Specifies processing options to use for the requested product. The options available for each product are described in Chapter 5, "Standalone Product Descriptions." The default for this field is the subscriber validation file option.
Inquiry Type	15	1	A	Identifies the inquiry type. The subscriber should provide this value for products that require permissible purpose. The product descriptions in Chapter 5 specify which products require permissible purpose. Valid values are: I Individual C Contractually liable A Authorized or spouse user P Participating This field defaults to I if one subject is provided or P if 2 subjects are provided.

RP02—Request Product Segment (ACQUIRE)

The RP02 segment specifies which standalone TransUnion product the inquiry is requesting and the subscriber information to use for that inquiry. RP02 segments immediately follow an RP01 segment requesting an ACQUIRE Bundled Product.

Request Product (RP02) Segment				Total length:33 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is RP02 . <i>Required field.</i>
Product Code	5	5	A/N	Identifies the product requested. Refer to the table at the beginning of this chapter for a list of product codes. <i>Required field.</i> If the product code is accurate but the subscriber is not signed up for the product, TU returns an error code. TU also returns an error code if the product code is missing or invalid.
Bundle Default Indicator	10	1	A/N	Specifies that TU40 default to the subscriber's predefined settings unless a different value is submitted in this transaction. Valid values are: Y Default to the subscriber's bundle for this product N Do not default to the subscriber's bundle The default is N. <i>For future use.</i>
Specialty Code	11	2	A/N	Identifies inquiries that need special processing. <i>For internal use only.</i>
Processing Request	13	2	A/N	Specifies processing options to use for the requested product. The options available for each product are described in Chapter 5, "Standalone Product Descriptions." The default for this field is the subscriber validation file option.
Inquiry Type	15	1	A	Identifies the inquiry type. The subscriber should provide this value for products that require permissible purpose. The product descriptions in Chapter 5 specify which products require permissible purpose. Valid values are: I Individual C Contractually liable A Authorized or spouse user P Participating This field defaults to I if one subject is provided or P if 2 subjects are provided.
Bureau Market	16	2	N	Refer to the local bureau for this code. <i>Required field.</i>
Bureau Submarket	18	2	A/N	Refer to the local bureau for this code. <i>Required field.</i>
Industry Code	20	2	A/N	Identifies the customer's type of business. If the industry code is one character, place it in the left position followed by a space. Refer to the local bureau for the correct industry code. <i>Required field.</i>
Member Code	22	8	A/N	Identifies the customer's member code. Refer to the local bureau for this code. <i>Add leading zeroes to right-justify the code. Required field.</i>
Subscriber Password	30	4	A/N	Identifies the customer's password. Refer to the local bureau for the password. <i>Add leading zeroes to right-justify the code. Required field.</i>

RS01—Reporting Subscriber Segment

The RS01 segment is optional and identifies the reporting base code of the subscriber. To search for a reporting subscriber code or a specific account, include an RS01 segment in the FFI that contains the reporting subscriber base code, base and suffix codes, and/or account number. This segment currently is used only by GLANCE.

Reporting Subscriber (RS01) Segment				Total Length: 38 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is RS01 . <i>Required field.</i>
Industry Code	5	2	A/N	Specifies the industry code of the reporting subscriber.
Member Code	7	8	A/N	Specifies the member code of the reporting subscriber. The first four characters of this field are <i>required</i> if this data is included.
Account Number	15	24	A/N	Specifies the number of the account that is the subject of this inquiry.

SH01—Subject Header Segment

The SH01 segment signifies the beginning of information specific to one subject. That information is contained in the segments (Name, Address, and so on) following the SH01 segment. If the inquiry transaction contains a second SH01 segment, the segments **before** the second SH01 apply to the first subject and the segments **after** the second SH01 describe a second subject.

Most inquiries must include at least one SH01 segment and can include two. A few products, such as LOOK UP, do not require this segment.

Subject Header (SH01) Segment				Total Length: 5 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SH01 . <i>Required field.</i>
Subject Identifier	5	1	N	Indicates to which subject the following information applies. Valid values are: 1 First subject 2 Second subject <i>Required field.</i>

TU4I—Transaction Control Segment

Every inquiry transaction must begin with a TU4I segment. If this segment is missing, inquiry processing stops and an error response is returned. This segment contains transaction control information such as subscriber code, user reference number, market/submarket, and so on. Each inquiry transaction can have only one TU4I segment.

Note

The bureau that assigns the subscriber code and password also provides the bureau market, bureau submarket, and industry code values. Bureaus sometimes use the term subscriber code, which consists of the customer’s industry code followed by the member code. In the subscriber code F12345, for example, F is the industry code and 12345 is the member code.

The setting in the Version Switch field determines which version of TU40 processes the customer’s requests.

Transaction Control (TU4I) Segment				Total length: 52 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is TU4I . <i>Required field.</i>
Version Switch	5	1	N	Defines the TU40 record version. Valid values are: 0 Version 0 1 Version 1 <i>Required field.</i> Note: If you send a Version 0 FFI with this switch set to 1, you will receive a Version 1 FFR.
Special Routing Indicator	6	1	N	Routes the transaction to the test region. Valid values are: 0 None (production region) 1 Standard test region The current value for this field, and the field default, is 0.
Country Code	7	1	A/N	Accommodates Canadian access. Valid values are: 1 United States 2 Canada The default is 1. <i>Required field.</i> Note: Refer to the Canadian version of the TransUnion <i>Automated Inquiry User Manual</i> for special Canadian segments, table definitions, and so on.
Language Indicator	8	1	N	Defines the language used for print image reports and error message text: 1 English 2 Spanish 3 French (Canada only) The default is 1. <i>Required field.</i>

Transaction Control (TU4I) Segment				Total length: 52 bytes
Field	Displacement	Length	Type	Description
User Reference Number	9	24	A/N	Associates an FFI with an FFR. This field is returned on your output.
Bureau Market	33	2	N	Refer to the local bureau for this code. <i>Required field.</i>
Bureau Submarket	35	2	A/N	Refer to the local bureau for this code. <i>Required field.</i>
Industry Code	37	2	A/N	Identifies the customer's type of business. If the industry code is one character, place it in the left position followed by a space. Refer to the local bureau for the correct industry code. <i>Required field.</i>
Member Code	39	8	A/N	Identifies the customer's member code. Refer to the local bureau for this code. <i>Add leading zeroes to right-justify the code. Required field.</i> Note: Do not repeat the Industry Code within the Member Code field.
Subscriber Password	47	4	A/N	Identifies the customer's password. Refer to the local bureau for the password. <i>Add leading zeroes to right-justify the code. Required field.</i>
Contractual Indicator	51	1	N	Identifies whether or not the subjects provided in the transaction have a contractual relationship. Valid values are: 1 One subject only or two subjects with no contractual relationship 2 Two subjects with contractual relationship The default is 1 .
Point of Sale Indicator	52	1	A	Identifies whether the inquiry is a point-of-sale transaction and, if so, what subject selection processing should be applied to the transaction. Valid values are: Y The inquiry is a point-of-sale transaction and requires special subject selection processing for all input or returned files with a California address C The inquiry is a point-of-sale transaction and requires special subject selection processing for all files regardless of address N The inquiry is not a point-of-sale transaction. The default is the value specified in the subscriber option file.

VN01—Vendor Information Segment

The VN01 segment helps TransUnion to collect statistics about the software our customers are using and to investigate problems. Place this segment immediately after the TU4I segment or, if one is included, the EU01 segment.

Vendor Information (VN01) Segment				Total Length: 41 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is VN01 . <i>Required field.</i>
Vendor Name	5	20	A/N	Specifies the name of the vendor that supplies software that works with TransUnion FFIs.
Vendor ID	25	10	A/N	Specifies a unique vendor identifier that is assigned by TransUnion.
Vendor Release Number	35	7	A/N	Specifies the release number of the vendor's software product.

Chapter 3. TU40 FFR Segments

This chapter contains descriptions of the TU40 FFR segments. The segments appear in alphabetic order. Below is a list of all the segments, including segment length, in a concise and complete table.

These segments are not all returned for any one product. For the segments and segment order returned for specific TransUnion products, refer to Chapter 5, “Standalone Product Descriptions” and Chapter 6, “Add-on Product Descriptions.” For examples of FFRs returned for joint inquiries, refer to Chapter 4, “TU40 Processing.”

Segment ID	Segment Name	Segment Length (bytes)
AD01	Address	105
AD02	Extended Address	127
AO01	Add-on Status	17
CC01	Credit Card	41
CD01	Customer Data	41
CH01	Characteristic	30
CI01	Consumer Identifier	19
CL01	Collection	160
CORR	CORR	48
CO01	County Information	65
CP01	Compliance	95
CS01	Consumer Statement	109
DA01	Data Analysis	22
DB01	Decision Systems Customer Branch	59
DC01	Deceased Information	139
DI01	Decision Systems Custom Information	33
DR01	Decision Systems Response	193
ED01	Edit	61
EM01	Employment	100
ENDS	Transaction Ending	10
ERRC	Error Code	11
ERRT	Error Text	90
FA01	Future Address (see AD01 description)	105
FI01	FACT Special Indicators	23
FT01	FACT	84
GC01	Geo Code	54
ID01	Identification	49
IN01	Inquiry	65
IN02	FACT Inquiry	56
LK01	LOOK	48
MC01	Message Code	29
MI01	Miscellaneous Statement	77
ML01	Mileage	26
ML02	Mileage	40
MT01	Message Text	171
NM01	Name	70
NU01	Number Of	12
OB01	Owning Bureau Identification	148
OB02	Owning Bureau Identification	198

Segment ID	Segment Name	Segment Length (bytes)
PH01	Product Header	12
PH02	Product Header	15
PH03	Product Header	15
PI01	Personal Information	29
PN01	Phone Number	27
PR01	Public Record	168
PS01	Points Summary	127
QH01	Inquiry History	21
RE01	Region Analysis	20
SA01	Subscriber Address	106
SC01	Scoring	34
SD01	Credit Summary Description	56
SH01	Subject Header	27
SH02	WATCH Subject Header	12
SH04	Subject Header	28
SH05	Subject Header	13
SM01	Credit Summary	41
SV01	Subject Verification	67
SV02	Subject Verification	31
TA01	Trans Alert	12
TC01	TIE Score	30
TM01	Trade MOP Totals	40
TR01	Trade	288
TR02	WATCH Trade	101
TR03	GLANCE Trade	315
TU4E	Error Control	62
TU4R	Transaction Control	62
TX01	Text Statement	172
WS01	WATCH Satisfaction	10
YI01	Year of Issuance	36
ZC01	ZIP Code	22

The remainder of this chapter displays layouts of the TU40 FFR segments. Information in the segment layouts includes:

Field name	Describes the field value.
Displacement	Identifies the segment column where this field begins.
Length	Identifies the maximum number of characters the field can have.
Type	Identifies the type of character used for the field value. Possible character types are: <ul style="list-style-type: none"> A For alphabetic data. Data in alphabetic fields is left-justified and the remainder of the field is filled with blanks. N For numeric data. Data in numeric fields is right-justified and left-filled with zeroes. A/N For alphanumeric data. Data in A/N fields is left-justified and the remainder of the field is filled with blanks except for currency amounts and certain occurrences of the member code. <ul style="list-style-type: none"> • Currency values are right-justified and preceded by zeroes, unless the field contains no data. A currency field with no data is blank-filled to distinguish between a zero amount and an amount not reported. • The member code in the CL01, IN01, LK01, PR01, and TR01 segments is right-justified with leading zeroes. In all other segments, it is returned left-justified and blank-filled.
Description	Describes the purpose of the field, possible field values, and contains special notes about field usage. Values described in the field are the only ones that can currently be returned. We reserve the right to add new values and, if we do so, will make every effort to notify you.

Note

The format for all date fields is CCYYMMDD. If there is no day present on the database, a value of 01 is returned in the day field.

Table: Standalone Products and Associated FFR Segments

The table below lists the FFR segments that may be returned for each standalone product. The actual segments returned depend on the subscriber input. The codes used in this table are:

P Product segment
A Add-on segment
E Edit or Error segment
T Transaction Control segment

	ACQUIRE	Credit Report	FACT	Fraud Detect/ Fraud ID-TECT	GAD	GLANCE	HAWKEYE	IDSearch	IDSearchplus	LOOK UP	PEER	RETRACE	RETRACEplus	Reverse Phone Append	Score Report	Score- Search	Total ID	TRACE	TRACEplus	WATCH Delete	WATCH Satisfaction	WATCH Set	
AD01		P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	
AD02					P																		
AO01	A	A	A	A	A			A	A		A	A	A		A	A	A	A	A			A	
CC01				P													P						
CD01	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
CH01	A	A	A												A	A							
CI01		P				P																	
CL01		P				P					P												
CO01				P													P						
CP01			P												P	P							
CS01		P	P						P		P		P		P	P						P	
DA01				P													P						
DB01	P																						
DC01		A	A	P			P	A	A		A	A	A		A	A	P	A	A				
DI01	P																						
DR01	P																						
ED01		E	E	E	E	E		E			E	E			E	E		E	E				
EM01		P	P		P						P				P	P	P		P				
ENDS	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
ERRC	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
ERRT	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
FI01			P																				

Chapter 3. TU40 FFR Segments

	ACQUIRE	Credit Report	FACT	Fraud Detect/ Fraud ID-TECT	GAD	GLANCE	HAWKEYE	IDSearch	IDSearchplus	LOOK UP	PEER	RTRACE	RTRACEplus	Reverse Phone	Score Report	Score- Search	Total ID	TRACE	TRACEplus	WATCH Delete	WATCH Satisfaction	WATCH Set		
FT01			P																					
GC01																								
ID01				P													P							
IN01		P									P										P			
IN02			P																					
LK01		A								P	A													
MC01		A	A		A		P	A	A		A	A	A		A	A	A	A	A					
MI01		P	P								P											P		
ML01		P		P													P							
ML02																	P							
MT01		A	A		A		P	A	A		A	A	A		P	A	A	A	A					
NM01		P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	
NU01									P				P							P				
OB01		P	P		P				P		P				O									
OB02		P	P		P				P		P				P	P								
PH01	P	P	P	P	P		P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	
PH02						P																		
PH03														P			P							
PI01		P	P	P		P	P	P	P		P	P	P		P	P	P	P	P	P	P	P	P	
PN01		P	P	P			P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
PR01		P	P								P											P		
PS01																	P							
QH01		A	A												A									
RE01				P													P							
SA01		A								P	A											P		
SC01	A	A	A	A											A	A	A	A						
SD01		P									P				P									
SH01		P	P	P	P	P	P				P	P	P		P	P	P	P	P	P	P	P	P	
SH02																						P	P	P

	ACQUIRE	Credit Report	FACT	Fraud Detect/ Fraud ID-TECT	GAD	GLANCE	HAWKEYE	IDSearch	IDSearchplus	LOOK UP	PEER	RETRACE	RETRACEplus	Reverse Phone	Score Report	Score- Search	Total ID	TRACE	TRACEplus	WATCH Delete	WATCH Satisfaction	WATCH Set	
SH04								P	P							P							
SH05														P			P						
SM01		P									P				P								
SV01				P																			
SV02																	P						
TA01		P	P		P		P	P	P		P	P	P		P	P		P	P				
TC01		A	A								A				A	A							
TM01		P									P												
TR01		P									P												
TR02																						P	
TR03																							
TU4E	E	E	E	E	E	E		E		E	E	E			E	E		E	E	E	E	E	
TU4R	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
TX01	P										P												
WS01																						P	
YI01		A	A	P			P	A	A			A	A		A	A	P	A	A				
ZC01				P													P						

Table: Add-on Products and Associated FFR Segments

The table below shows which FFR segments may be returned for each add-on product. The actual segments returned depend on the subscriber input.

	HAWK	Inquiry Analysis	LOOK	Geo Code	OFAC Advisor	Phone Append	Score Models	TIE Model
AD01		X		X				
AO01	X	X	X	X	X	X	X	X
CH01							X	
DC01	X							
EM01		X						
FA01				X				
GC01				X				
IN01		X						
LK01			X					
MC01	X							
MT01	X				X			
NM01		X						
PN01		X	X			X		
QH01	X							
SA01			X					
SC01							X	
TC01								X
YI01	X							

AD01—Address Segment

The AD01 segment displays the subject's or employer's address. An AD01 segment that contains the employment address is returned after the EM01 segment. If multiple addresses are returned, the first AD01 segment is the current address, the second AD01 segment is the previous address, and so on.

Note

If the address is a future address, FA01 is returned as the segment type. All other segment fields and the business rules for addresses remain the same.

Extended addresses, such as Puerto Rican addresses, are returned in the AD02 segment.

Address (AD01) Segment				Total Length: 105 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is AD01 unless the address is a future address. The segment type for a future address is FA01 .
Segment Length	5	3	N	Value is 105 .
Source Indicator	8	1	A	Indicates whether the address was sent in the FFI or is the address that appears in the file. Possible values are: I Address received in the inquiry F Address that appears on the database A Address that appears on the RPA database D Address that appears on vendor database
Address Qualifier	9	1	A/N	Indicates whether the returned address is personal or employment. Possible values are: 1 Personal 2 Employment 3 Credit grantor 4 For future use 5 Business 6 Both Residential and Business Address or not known P Previous personal address (previous addresses are positional: the most recent previous address always precedes the second most recent)
Filler	10	1	A/N	<i>For future use.</i>
House Number	11	10	A/N	Identifies the subject's house number in a street address.
Predirectional	21	2	A	Specifies the street directional (N, S, E, W, NE, SE, NW, SW) in a street address.
Street Name	23	27	A/N	Specifies the subject's street name in a street address.
Postdirectional	50	2	A	Specifies a street directional (N, S, E, W, NE, SE, NW, SW) that appears after a street name.
Street Type	52	2	A	Specifies the type of street in a street address.
Apartment/Unit Number	54	5	A/N	Specifies an apartment or unit number in a street address.
City	59	27	A	Specifies the name of the subject's city.
State	86	2	A	Specifies the name of the subject's state.
ZIP Code	88	10	A/N	Specifies the subject's ZIP Code. This field is left justified.
Date Reported	98	8	A/N	Specifies the date this address was reported in the format CCYYMMDD.

AD02—Extended Address Segment

The AD02 segment returns the subject's extended address. The extended address is the raw Street Address that is received for a subject. Generally, these addresses do not conform to U.S. address parsing conventions.

The character in displacement field 10 indicates that the Street Address is unparsed. The FFR can include one AD02 segment for each subject.

Address (AD02) Segment				Total Length: 127 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is AD02 .
Segment Length	5	3	N	Value is 127 .
Source Indicator	8	1	A	Indicates whether the address was sent in the FFI or is the address that appears in the file. Possible values are: I Address received in the inquiry F Address that appears on the database
Address Qualifier	9	1	A/N	Indicates that the returned address is an extended address. The value is: 4 Extended Address
Filler	10	1	A/N	<i>For future use.</i>
Street Address	11	70	A/N	Lists the street address, which is displayed in an unparsed format.
City	81	27	A	Specifies the name of the subject's city.
State	108	2	A	Specifies the name of the subject's state.
ZIP Code	110	10	A/N	Specifies the subject's ZIP Code. This field is left justified.
Date Reported	120	8	A/N	Specifies the date this address was reported in the format CCYYMMDD.

AO01—Add-on Status Segment

The AO01 segment identifies whether the subscriber is authorized to use the requested add-on product and displays the processing status of the add-on product (such as HAWK or LOOK). The FFR includes one AO01 segment for each occurrence of an add-on product.

Add-on Status (AO01) Segment				Total length: 17 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is AO01 .
Segment Length	5	3	N	Value is 017 .
Product Code	8	5	A/N	Displays the code for the requested add-on product. Refer to page 2-4 for a list of codes for add-on products.
Product Status	13	2	A/N	Specifies whether the product is available. Possible values are: 01 Requested product delivered 02 Requested product not available 03 Subscriber code not authorized for requested product 04 Default product delivered 05 Invalid score request 06 Requested information cannot be scored or returned because data is suppressed or cannot be evaluated.
Search Status	15	3	A/N	Displays the result of special processing for the add-on product. This field applies only to certain add-ons. The product descriptions in Chapter 6, "Add-on Product Descriptions," indicate which add-on products use this field.

CC01—Credit Card Segment

The CC01 segment displays detailed information about a specific credit card. The FFR can include one CC01 segment for each of the subject's credit cards.

Credit Card (CC01) Segment				Total length: 41 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is CC01 .
Segment Length	5	3	N	Value is 041 .
Credit Card Type	8	2	A/N	<i>Reserved for future use.</i>
Credit Card Number	10	24	A/N	Displays the account number on the credit card.
Date of Expiration	34	8	A/N	Displays the date the credit card expires. The date format is CCYYMMDD.

CD01—Customer Data Segment

The CD01 segment returns information sent in the FFI from subscribers.

Customer Data (CD01) Segment				Total Length: 41 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is CD01 .
Segment Length	5	3	N	Value is 041 .
Customer Identifier Qualifier	8	2	A/N	Identifies the type of information sent in the Customer Identifier field. Possible values are: 5 Customer's Internal User ID 6 Product Requestor
Customer Identifier	10	24	A/N	Contains the value sent in the FFI.
Password	34	8	A/N	Contains the value sent in the FFI.

CH01—Characteristic Segment

The CH01 segment displays information about Score model characteristics. This segment is returned only for designated Score models.

Characteristic (CH01) Segment				Total length: 30 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is CH01 .
Segment Length	5	3	N	Value is 030 .
Product Code	8	5	A/N	Identifies the algorithm ID associated with the characteristic.
Characteristic ID	13	8	A/N	Displays the model characteristic.
Characteristic Value	21	10	A/N	Identifies the characteristic value (attribute).

CI01—Consumer Identifier Segment

The CI01 segment returns the consumer's permid, a permanent identifier that is assigned to the consumer file on the CRONUS¹ database. If returned, it appears after the SH01 segment.

Consumer Identifier (CI01) Segment				Total length: 19 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is CI01 .
Segment Length	5	3	N	Value is 019 .
Permanent ID	8	12	A/N	Displays the unique permanent identifier (permid) that is assigned to the consumer file on the CRONUS database.

¹ CRONUS, the Credit Reporting Online Network Utility System, is the current TransUnion information database.

CL01—Collection Segment

The CL01 segment displays information about a collection record for this subject. This segment is returned only if the subscriber code has a KOB of Y.

Collection (CL01) Segment				Total length: 160 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is CL01 .
Segment Length	5	3	N	Value is 160 .
Industry Code	8	2	A/N	Identifies the subscriber's industry code.
Member Code	10	8	A/N*	Displays the subscriber's member code.
Collection Agency Name	18	24	A/N	Displays the name of the subscriber.
Account Type	42	1	A	Displays the type of account being collected. Possible values are: R Revolving account O Open account C Overdraft/reserve checking account/line of credit I Installment account M Mortgage account
Account Number	43	24	A/N	Displays the number of the account.
Account Designator	67	1	A	Displays the contractual ownership of the account. Possible values are: U Undesignated account I Individual account C Joint contractual liability on account A Authorized user on account P Participant on account S Co-signer on account M Primary borrower on account T Account relationship terminated X Consumer deceased
Creditor's Name	68	36	A/N	Displays the name of the original credit grantor.
Date Opened (previously Date Reported)	104	8	A/N	Displays the date the account was placed with the collector. The date format is CCYYMMDD.
Date Verified	112	8	A/N	Displays the date the collection data was last verified or updated. The date format is CCYYMMDD.

Collection (CL01) Segment				Total length: 160 bytes
Field	Displacement	Length	Type	Description
Verification Indicator	120	1	A	Displays the verification indicator code. Possible values are: A Automated account V Manual account M Manual account that has been frozen R Refused N No record X No reply E Earnings verified I Indirect S Slow answering D Declined T Account disputed
Date Closed	121	8	A/N	Displays the date the account was closed by the collector. This date should appear only for one of the following reasons: 1) The account has a zero balance, 2) The account is paid in full, 3) The account was closed by the collector and returned to the original owner, 4) The account was settled for less than the amount owed. The date format is CCYYMMDD.
Date Closed Indicator	129	1	A	Indicates how the account was closed. Possible values are: C Account was closed normally F Account was closed because of charge-off or repossession
Date Paid Out	130	8	A/N	Displays the date the collection was paid out. The date format is CCYYMMDD.
Current Manner of Payment	138	2	A/N	Displays the account's current MOP code. Refer to Appendix C, "Trade and Loan Type Codes," for a list of MOP codes.
Current Balance	140	9	A/N	Displays in whole dollars the balance remaining in this account.
Original Balance	149	9	A/N	Displays in whole dollars the original balance owed on this account.
Remarks Code	158	3	A/N	Displays the remarks code that applies to this account. Refer to Appendix C, "Trade and Loan Type Codes," for a list of these codes.

* Member code in this segment is returned right-justified with leading zeroes.

CORR Segment

The CORR segment is returned for low-level errors when TU40 cannot read enough of the FFI to return a TU4E segment. The CORR segment returns the same TU40 error codes as the TU4E segment.

CORR (CORR) Segment				Total length: 48 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A	Value is CORR .
Segment Length	5	3	N	Value is 048 .
Version switch	8	1	N	Defines the TU40 FFR record version. Possible values are: 0 TU40 version 0 1 TU40 version 1
User reference number	9	24	A/N	Associates an FFI with an FFR. This field contains the value sent in the FFI.
First or second inquiry error response record	33	1	A	Indicates to which subject the displayed consumer information applies. Possible values are: F = First subject S = Second subject
First error condition encountered	34	3	N	Displays the error code. Refer to Appendix F, "Edit and Error Codes," for a list of possible error codes.
Second error condition encountered	37	3	N	Displays the error code. Refer to Appendix F, "Edit and Error Codes," for a list of possible error codes.
Third error condition encountered	40	3	N	Displays the error code. Refer to Appendix F, "Edit and Error Codes," for a list of possible error codes.
Fourth error condition encountered	43	3	N	Displays the error code. Refer to Appendix F, "Edit and Error Codes," for a list of possible error codes.
Fifth error condition encountered	46	3	N	Displays the error code. Refer to Appendix F, "Edit and Error Codes," for a list of possible error codes.

CO01—County Information Segment

The CO01 segment displays information about the county associated with a specified phone number or ZIP Code. The FFR can include one CO01 segment for each phone number or ZIP Code.

County Information (CO01) Segment				Total length: 65 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is CO01 .
Segment Length	5	3	N	Value is 065 .
Source Indicator	8	1	A	Specifies the source in which the phone number or ZIP Code appears. Possible values are: I Input F File
Source Qualifier	9	1	A/N	Specifies the source with which the county is associated. Possible values are: 1 Phone number 2 ZIP Code
City Name	10	28	A	Specifies the city that is associated with the source phone number or ZIP Code.
State Code	38	2	A	Specifies the state that is associated with the source phone number or ZIP Code.
County	40	25	A	Specifies the county that is associated with the source phone number or ZIP Code.
County Type	65	1	A	Specifies population information about the county. Possible values are: A County is within one of the 25 largest MSAs B Population is over 150,000 C Population is over 35,000 D Population is under 35,000 <i>Blank</i> Indeterminate information X Not Requested or No Derogatory Information

CP01—Compliance Segment

The CP01 segment contains information that must be returned with a product for compliance reasons when certain conditions exist on a consumer's file.

Compliance (CP01) Segment				Total length: 95 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is CP01 .
Segment Length	5	3	N	Value is 95 .
Information Type	8	1	A/N	Displays the type of information being reported. Possible values are: T Tradeline P Public record
Subscriber/Source Name	9	24	A/N	Displays the name of the source of the information. For example, if the information is a tradeline, the name of the reporting subscriber is returned.
Account/Docket Number	33	24	A/N	Displays one of these values: <ul style="list-style-type: none"> The number of the account if the information reported is a tradeline The docket number if the information is a public record
Remarks/Public Record Type Code	57	3	A/N	Displays the remarks code or the public record. type code that applies to the information reported
Wording of the Remarks or Public Record Type	60	36	A/N	Contains the text translation of the remarks or public record type code.

CS01—Consumer Statement Segment

The CS01 segment displays the text of a consumer statement and/or a security alert submitted by the subject. The FFR can include multiple consumer statements or security alerts. Each statement or alert can reside in multiple CS01 segments.

Consumer Statement (CS01) Segment				Total length: 109 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is CS01 .
Segment Length	5	3	N	Value is 109 .
Content Type	8	2	A/N	Indicates whether the statement exists because the consumer was a fraud victim. Possible values are: 01 Regular consumer statement 02 Statement added because consumer was a victim of true-name fraud 03 Security Alert
Information	10	100	A/N	Displays the free-form text of the consumer statement. The FFR may include multiple CS01 segments that together comprise one complete consumer statement or security alert message. The FFR can contain multiple content types, each returned in multiple CS01 segments.

DA01—Data Analysis Segment

The DA01 segment displays the results of a series of comparison checks performed on the subject's input identification or customer number data. This segment is currently used only by Fraud Detect.

Data Analysis (DA01) Segment				Total length: 22 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is DA01 .
Segment Length	5	3	N	Value is 022 .
Identification or Customer Number Qualifier	8	2	N	Indicates the type of number checked. Possible values are: 1 SSN 2 Federal tax ID 3 State ID 4 Driver's license 5 Credit card number 6 Phone number
Invalid Format	10	2	N	Indicates whether the format provided is valid. If not, specifies the invalid element. Possible values are: 1 Valid 2 Too short 3 Too long 4 Invalid characters 5 Invalid format with separators
Soundex Check	12	1	N	Specifies whether the soundex value is valid. Possible values are: 1 Valid 2 Invalid 3 N/A 4 Unavailable 9 Not requested or no derogatory information
Last Name Check	13	1	N	Specifies whether the last name is valid. Possible values are: 1 Valid 2 Invalid 3 N/A 4 Unavailable 9 Not requested or no derogatory information
First Name Check	14	1	N	Specifies whether the first name is valid. Possible values are: 1 Valid 2 Invalid 3 N/A 4 Unavailable 9 Not requested or no derogatory information
Middle Name Check	15	1	N	Specifies whether the middle name is valid. Possible values are: 1 Valid 2 Invalid 3 N/A 4 Unavailable 9 Not requested or no derogatory information

Data Analysis (DA01) Segment				Total length: 22 bytes
Field	Displacement	Length	Type	Description
SSN Check	16	1	N	Specifies whether the social security number is valid. Possible values are: 1 Valid 2 Invalid 3 N/A 4 Unavailable 9 Not requested or no derogatory information
DOB Check	17	1	N	Specifies whether the date of birth is valid. Possible values are: 1 Valid 2 Invalid 3 N/A 4 Unavailable 9 Not requested or no derogatory information
Gender Check	18	1	N	Displays the gender specified on the ID. Possible values are: 1 Male 2 Female 3 N/A 9 Not requested or no derogatory information
Eye Color Check	19	1	N	Displays the eye color specified on the ID. Possible values are: 1 Black 2 Brown 3 Gray 4 Blue 5 Hazel 6 Green 7 Other 8 N/A 9 Not requested or no derogatory information
Expiration Date Check	20	1	N	Indicates whether the expiration date is valid. Possible values are: 1 Valid 2 Card is expired 3 N/A 9 Not requested or no derogatory information
Match Evaluation	21	2	A/N	Indicates whether the input data matches the data contained on the database. Match values are: 01 Identification or number equals input name 02 Identification or number does not equal input name 03 Identification or number equals input address 04 Identification or number does not equal input address 05 Identification or number partially matches input name 06 Identification or number partially matches input address

DB01—Decision Systems Customer Branch Segment

The DB01 segment returns information sent in the FFI that helps to identify Decision Systems clients.

Decision Systems Customer Branch (DB01) Segment				Total Length: 59 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is DB01 .
Segment Length	5	3	N	Value is 59 .
Branch ID	8	10	A/N	Identifies the branch of the requesting subscriber. This field contains the value sent in the FFI.
Branch Type	18	2	A/N	<i>For future use.</i>
Client Use 1	20	20	A/N	Provides additional information specific to the client. This field contains the value sent in the FFI.
Client Use 2	40	20	A/N	Provides additional information specific to the client. This field contains the value sent in the FFI.

DC01—Deceased Information Segment

The DC01 segment contains information received from the Social Security Administration (SSA) and reported by funeral directors across the USA. Note that the SSA does not guarantee the veracity of this file.

Deceased Information (DC01) Segment				Total length: 139 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is DC01 .
Segment Length	5	3	N	Value is 139 .
Message Code	8	6	A/N	Displays the HAWK message code 6000 when HAWK add-on is requested. This field is blank when Fraud Detect is requested.
Source Indicator	14	1	A/N	Indicates the source of the message code. Possible values are: I Input F Subject file
Last Name	15	15	A	Displays the last name of the subject who has been reported deceased.
First Name	30	15	A	Displays the first name of the subject who has been reported deceased.
City Last Residency	45	27	A	Displays the city where the subject last resided when the claim payments were made. City name is derived from ZIP Code on the file.
State Last Residency	72	2	A	Displays the state where the subject last resided when the claim payments were made. State name is derived from ZIP Code on the file.
ZIP Code Last Residency	74	10	A/N	Displays the ZIP Code for the subject's last residence when the claim payments were made.
City Location of Payments	84	27	A	Displays the city that is the location where claim payments were made. City name is derived from ZIP Code on the file.
State Location of Payments	111	2	A	Displays the state that is the location where claim payments were made. State name is derived from ZIP Code on the file.
ZIP Code Location of Payments	113	10	A	Displays the ZIP Code that is the location where claim payments were made.
Date of Birth of Deceased	123	8	A/N	Displays the reported date of birth. Date format is CCYYMMDD.
Date of Death	131	8	A/N	Displays the date on which death benefits were applied for. Date format is CCYYMMDD.
Deceased Information File Searched	139	1	A	Specifies whether a Deceased Information File search was performed. Possible values are: Y Search performed N Search not performed

DI01—Decision Systems Custom Information Segment

The DI01 segment returns information sent in the FFI from Decision Systems clients.

Decision Systems Custom Information (DI01) Segment				Total Length: 33 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is DI01 .
Segment Length	5	3	N	Value is 33 .
Input Type	8	2	A/N	Contains the value sent in the FFI. Possible values for position 1 are: S Short L Long Possible values for position 2 are: 1-8 Short 1-4 Long
Custom Input	10	24	A/N	Contains the value sent in the FFI. Positions 1-10 are used if Input Type is Short; positions 1-24 are used if Input Type is Long.

DR01—Decision Systems Response Segment

The DR01 segment returns information that identifies client settings in Decision Systems products. Only one DR01 segment is usually returned with a product. However, a customer who uses multiple matrices in decisioning can choose to receive a DR01 for each matrix.

Decision Systems Response (DR01) Segment				Total Length: 193 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is DR01 .
Segment Length	5	3	N	Value is 193 .
Reference Number	8	12	A/N	Specifies a unique reference identifier assigned to each applicant through a TransUnion Decision Systems product.
Decision Class	20	1	A/N	Specifies the decision class of the applicant. Possible values are: A Pass (approval) D Complete (decline) R Review X None/Complete
Decision Text	21	10	A/N	Specifies the decision text of applicant. Possible values are: Pass Complete Review None
Level	31	2	N	Specifies the final decision level number.
Level Code	33	1	A/N	Specifies an alphabetic code that denotes the final decision level.
Timestamp	34	14	N	Specifies the date and time at which the Decision Systems product returned a decision. The value is returned in the CCYYMMDDHHMMSS format.
Maximum Level	48	2	N	Specifies the maximum level attainable. This value depends on the client.
Level Reasons	50	44	A/N	Designates the fail reason from each credit level (credit level processed).
DS Reasons	94	44	A/N	Designates the fail reasons in compressed format (no duplicates), or reason codes specific to the client.
Credit Limit	138	9	N	Specifies the credit line that the Decision Systems product assigned to approval records.
Bureau ID	147	1	N	Specifies the bureau ID that was used to process the applicant. Possible values are: 1 Equifax 2 TransUnion 3 Experian
Credit Bureau Error Code	148	5	A/N	Identifies the error code returned by the credit bureau in response to invalid input in the FFI.

Decision Systems Response (DR01) Segment				Total Length: 193 bytes
Field	Displacement	Length	Type	Description
Credit Data Status	153	1	A/N	This field may contain the following values: Y Credit data suppressed N Credit data not suppressed P Do not promote F Frozen by consumer as allowed by state law. To obtain access you must obtain authorization from the consumer and provide the required identifier with your inquiry. E Frozen by consumer as allowed by state law. File is returned due to exempted use. X Frozen by consumer as allowed by state law. File is returned due to exempted use. Do Not Promote.
Account Number	154	24	A/N	Specifies the account number that the ACQUIRE product assigned to the applicant record.
Criteria Name	178	6	A/N	Name of final criteria matrix; used only if process is multi-matrix.
Special Use	184	10	A/N	Used for special customer requests.

ED01—Edit Segment

The ED01 segment displays information that was removed or changed to avoid rejection of the inquiry. One ED01 segment is returned for each edit action.

Edit (ED01) Segment				Total length: 61 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ED01 .
Segment Length	5	3	N	Value is 061 .
Subject Identifier	8	1	N	Indicates the subject that was edited. Possible values are: 1 First subject 2 Second subject
Original Value	9	50	A/N	Contains the original value in the FFI subject input field that was edited.
Edit Code Number	59	3	A/N	Displays a code that describes the edit. Refer to Appendix F, "Edit and Error Codes," for a list of possible codes.

EM01—Employment Segment

The EM01 segment contains the subject's employment information.

Employment (EM01) Segment				Total length: 100 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is EM01 .
Segment Length	5	3	N	Value is 100 .
Employer Name	8	35	A/N	Identifies the name of the subject's employer.
Source Indicator	43	1	A/N	Indicates the source of the employment information. Possible values are: I Input F Subject file
Occupation	44	22	A/N	Identifies the subject's type of employment.
Date Hired	66	8	A/N	Displays the date the employer hired the subject. Date appears in the format CCYYMMDD.
Date Separated	74	8	A/N	Displays the date the subject left this employment. Date appears in the format CCYYMMDD.
Date Verified/ Reported	82	8	A/N	Displays the date that this information was verified or reported. If both dates are available, the date verified is displayed instead of the date reported. Date appears in the format CCYYMMDD.
Date Verified/ Reported Code	90	1	A/N	Specifies which date appears in the Date Verified/ Reported field. Possible values are: V Date Verified is displayed R Date Reported is displayed N Neither date is displayed
Income	91	9	A/N	Displays subject's salary at this employment. The figure appears in dollars unless the Pay Basis is H (hourly). Hourly pay appears as dollars and cents.
Pay Basis	100	1	A	Lists the subject's pay schedule. Possible values are: B Bimonthly (every other month) D Daily H Hourly M Monthly S Semimonthly (twice a month) W Weekly Y Yearly

ENDS—Transaction Ending Segment

The ENDS segment signifies the end of the FFR.

Transaction Ending (ENDS) Segment				Total length: 10 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ENDS .
Segment Length	5	3	N	Value is 010 .
Total Number of Segments	8	3	N	Specifies the total number of segments contained in this transaction, including TU4R and ENDS.

ERRC—Error Code Segment

The ERRC segment displays the code of the error that occurred while this transaction was being processed.

Error Code (ERRC) Segment				Total length: 11 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ERRC .
Segment Length	5	3	N	Value is 011 .
Subject Identifier	8	1	N	Indicates to which subject the displayed consumer information applies. Possible values are: 1 First subject 2 Second subject
Error Code Number	9	3	A/N	Displays the error code. Refer to Appendix F, "Edit and Error Codes," for a list of possible error codes.

ERRT—Error Text Segment

The ERRT segment displays the full message text of an error code that was returned to the customer.

Error Description/Text (ERRT) Segment				Total length: 90 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ERRT .
Segment Length	5	3	N	Value is 090 .
Subject Identifier	8	1	N	Indicates to which subject the displayed consumer information applies. Possible values are: 1 First subject 2 Second subject
Error Code Number	9	3	A/N	Specifies the error code for the error that was found. Refer to Appendix F, "Edit and Error Codes," for a list of possible error codes.
Error Description	12	79	A/N	Contains the text corresponding to the error code that was returned.

FA01—Future Address Segment

The FA01 segment is used by Geo Code. The fields and field attributes are identical to those of the AD01 segment except that the Segment Type is **FA01**. Refer to the AD01 segment description for more details.

A subject record can contain only one FA01 segment.

FI01—FACT Special Indicators Segment

The FI01 segment displays additional information for FACT customers.

FACT Special Indicators (FI01) Segment				Total length: 23 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is FI01 .
Segment Length	5	3	N	Value is 023 .
Subject Deceased	8	1	A	Specifies whether the subject is deceased. Possible values are: Y Deceased N Not deceased
Last Activity Type	9	1	A	Specifies the type of activity that was last performed by or for this subject. Possible values are: P Public record T Tradeline I Inquiry If this field is blank, no activity occurred within the last 12 months.
Date of Last Activity in the Last 12 Months	10	8	A/N	Specifies the date (within the last 12 months) of the subject's last activity. The date format is CCYYMMDD.
Number of Trades	18	3	N	Specifies the total number of tradelines in the file.
Number of Inquiries	21	3	N	Specifies the total number of inquiries in the file.

FT01—FACT Segment

The FT01 segment displays trade and collection account information for FACT.

FACT (FT01) Segment				Total length: 84 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is FT01 .
Segment Length	5	3	N	Value is 084 .
Subscriber Short Name	8	12	A/N	Displays the subscriber's short name.
Subscriber Area Code	20	3	A/N	Displays the subscriber's area code.
Subscriber Phone Number	23	7	A/N	Displays the subscriber's phone number. The number contains no embedded dashes. If the subscriber prefers to be contacted by mail only, the letters BMO are returned in this field.
Account Type	30	1	A	Specifies the type of trade account. Possible values are: R Revolving account O Open account C Overdraft/reserve checking account I Installment account M Mortgage account
Account Number	31	30	A/N	Displays the trade's account number.
Date of Last Activity	61	8	A/N	Specifies the date (within the last 12 months) of the subject's last activity. The date format is CCYYMMDD.
Trade Status	69	3	A	Specifies the status of the account. Possible values are: COL Collection set (if KOB is Y or MOP is 9B) CLS Paid or closed (if Date Paid or Date Closed is not equal to spaces) DLQ Delinquent (if rating or MOP is greater than or equal to 02) CUR Current (if rating or MOP is equal to 01) NRT No rating (this is the default if none of the above statuses is true)
Available Credit	72	9	A/N	Specifies the amount of credit balance available after subtracting the current balance from the credit limit.
New Trade Indicator	81	1	A	Specifies whether the trade is new (less than 4 months old). Possible values are: Y Trade has been open less than 4 months N Trade has been open for 4 or more months
Debt Counseling Indicator	82	3	A/N	Specifies the type of counseling involved in servicing this debt. Possible values are: MCC Account managed by Credit Counseling Service CCA Consumer Counseling Account If neither of these services is involved, the field is blank.

GC01—Geo Code Segment

The GC01 segment contains address and Geo Code data. One or two GC01 segments may be returned for each consumer's primary file.

Geo Code (GC01) Segment				Total length: 54 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is GC01 .
Segment Length	5	3	N	Value is 054 .
Address Indicator	8	1	A/N	Indicates whether the address is current or future. Possible values are: C Current Address F Future Address
ZIP Code	9	9	A/N	Specifies the subject's ZIP Code. The format is: NNNNNNNNN
GEO Status	18	2	A/N	Indicates the status of the Geo Code search. Possible values are: 0 Geo Code No Match 1 ZIP Code Invalid 2 Geo Code Match 3 Geo Code Search Not Performed When No Subject Found 4 No Future Address Entered 5 No Current Address Entered 6 Insufficient Future Address 7 Insufficient Current Address 8 Geo Code Search Error 9 Geo Code Not Available
Block Group Status	20	1	A/N	Returns status of block search. Possible values are: 0 No match of Block Group 1 Matches 1 Block Group 2 Matches more than 1 Block Group
Census Tract Status	21	1	A/N	Returns status of census tract search. Possible values are: 0 No match of Census Tract 1 Matches 1 Census Tract 2 Matches more than 1 Census Tract
Filler	22	1	A/N	<i>For future use.</i>
MSA Code	23	4	N	Returns the Metropolitan statistical area number.
State Code	27	2	A/N	Returns subject's state code. Refer to Appendix A for a list of state codes.
County Code	29	3	A/N	Returns the subject's county code.
Census Tract Code	32	4	A/N	Returns the subject's 4-character census tract code.
Census Tract Suffix	36	2	A/N	Returns the subject's census tract suffix.
Block Code	38	1	A/N	Returns the subject's census block code number.
Latitude	39	8	A/N	Returns the latitude of the subject's address as it appears in the Demographic Codes record. The format is 999v9999.
Longitude	47	8	A/N	Returns the longitude of the subject's address as it appears in the Demographic Codes record. The format is 999v9999.

ID01—Identification Segment

The ID01 segment displays the number or value of a specified ID. The FFR can include one ID01 segment for each subject identification item (driver's license, federal tax ID, or state ID).

Identification (ID01) Segment				Total length: 49 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ID01 .
Segment Length	5	3	N	Value is 049 .
Source Indicator	8	1	A	Specifies the source in which the ID appears. Possible values are: I Input F File
ID Type	9	1	N	Specifies the type of ID described in this segment. Possible values are: 1 Driver's License 2 Federal Tax ID 3 State ID
ID Number or Value	10	30	A/N	Displays the number or value of the specified ID.
Date of Expiration	40	8	A/N	Displays the date the specified ID expires. The date format is CCYYMMDD.
State of Issuance	48	2	A	Identifies the state that issued the ID.

IN01—Inquiry Segment

The IN01 segment identifies the origin of an inquiry that appears on this subject file.

Inquiry (IN01) Segment				Total length: 65 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is IN01 .
Segment Length	5	3	N	Value is 065 .
Bureau Market	8	2	N	Identifies the subscriber's market.
Bureau Submarket	10	2	A/N	Identifies the subscriber's submarket.
Industry Code	12	2	A/N	Specifies the subscriber's industry code. Refer to Appendix B for a list of industry codes.
Member Code	14	8	A/N*	Specifies the subscriber's member code.
Subscriber Name	22	24	A	Identifies the subscriber making the inquiry if the inquiry is less than 6 months old.
Inquiry Type	46	1	A	Identifies the inquiry type. Possible values are: I Individual C Contractually liable A Authorized or spouse user P Participating
Loan Type	47	2	A	Identifies the type of loan for which the inquiry was made. Refer to Appendix C, "Trade and Loan Type Codes," for a list of loan type codes.
Loan Amount	49	9	A/N	Lists the whole dollar amount of the loan for which this inquiry was made.
Date of Inquiry	58	8	A/N	Displays the date on which the inquiry was made. The date format is CCYYMMDD.

* Member code in this segment is returned right-justified with leading zeroes.

IN02—FACT Inquiry Segment

The IN02 segment is used for FACT and identifies the origin of an inquiry on this subject file.

FACT Inquiry (IN02) Segment				Total length: 56 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is IN02 .
Segment Length	5	3	N	Value is 056 .
Subscriber Name	8	24	A	Identifies the subscriber making the inquiry.
Subscriber Area Code	32	3	N	Specifies the area code for the subscriber's phone number.
Subscriber Phone Number	35	7	A/N	Specifies the phone number, which should have no embedded dashes. If the subscriber prefers to be contacted by mail only, the letters BMO are returned in this field.
Extension	42	5	N	Specifies a telephone extension.
Loan Type	47	2	A	Identifies the type of loan for which the inquiry was made. Refer to Appendix C, "Trade and Loan Type Codes," for a list of loan type codes.
Date of Inquiry	49	8	A/N	Displays the date on which the inquiry was made. The date format is CCYYMMDD.

LK01—LOOK Segment

The LK01 segment contains information that describes the results of a LOOK or LOOK UP request. The FFR can include one LK01 segment per decoded segment.

LOOK (LK01) Segment				Total length: 48 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is LK01 .
Segment Length	5	3	N	Value is 048 .
Segment Decoded	8	2	A/N	Identifies the type of segment that LOOK or LOOK UP is decoding. Possible values are: PR Public record TR Trade IN Inquiry CL Collection
Bureau Market	10	2	N	Identifies the retailing credit bureau market.
Bureau Submarket	12	2	A/N	Identifies the retailing credit bureau submarket.
Industry Code	14	2	A/N	Identifies the industry code of the subscriber being looked up. Refer to Appendix B for a list of industry codes.
Member Code	16	8	A/N*	Specifies the subscriber's member code.
Subscriber Name	24	24	A/N	Displays the name of the subscriber being looked up.
Method of Contact	48	1	A/N	Specifies the method by which to contact the subscriber. Possible values are: P Phone M Mail O Other

* Member code in this segment is returned right-justified with leading zeroes.

MC01—Message Code Segment

The MC01 segment displays a message code that identifies the message returned. The FFR includes an MC01 segment for each message returned. Only the HAWK product currently uses this segment. In ARPT 3.1, the HC segment contained this information.

Message Code (MC01) Segment				Total length: 29 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is MC01 .
Segment Length	5	3	N	Value is 029 .
Message Code	8	6	A/N	Displays the message code.
Source Indicator	14	1	A/N	Indicates the source of the message code. Possible values are: I Input F Subject file
Address Match Flag	15	1	A/N	Indicates which address was used in the matching process. Possible values are: C Current address P Previous address
POB, Apartment Number, Unit, or Telephone Indicator	16	1	A/N	Specifies the type of number returned. Possible values are: U Unit or apartment number P Post Office Box number T Telephone number
POB, Apartment Number, Unit, or Telephone Number	17	10	A/N	Displays the number returned.
Threshold Number	27	3	A/N	Specifies the threshold number used to return the message.

MI01—Miscellaneous Statement Segment

The MI01 segment displays the text of a miscellaneous statement, which contains additional information about a subject's credit history.

Miscellaneous Statement (MI01) Segment				Total length: 77 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is MI01 .
Segment Length	5	3	N	Value is 077 .
Information	8	70	A/N	Displays the free-form text of a miscellaneous statement about the subject's credit history.

ML01—Mileage Segment

The ML01 segment displays mileage between the subject’s home and business by comparing the home and business phone numbers or ZIP Codes.

Mileage (ML01) Segment				Total length: 26 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ML01 .
Segment Length	5	3	N	Value is 026 .
Source Indicator	8	1	A	Specifies the source in which the phone numbers or ZIP Codes appear. Possible values are: I Input F File
Max Mileage	9	8	A/N	Specifies the maximum mileage between the home and business. The mileage is displayed in the format NNNN.NNN.
Max Mileage Indicator	17	1	N	Specifies the comparison used to determine the Max Mileage value. Possible values are: 1 Home vs. business phone numbers 2 Home phone number vs. business ZIP Code 3 Home ZIP Code vs. business phone number 4 Home vs. business ZIP Codes 5 Not available 9 Not requested or no derogatory information
Min Mileage	18	8	A/N	Specifies the minimum mileage between the home and business. The mileage is displayed in the format NNNN.NNN.
Min Mileage Indicator	26	1	N	Specifies the comparison used to determine the Min Mileage value. Possible values are: 1 Home vs. business phone numbers 2 Home phone number vs. business ZIP Code 3 Home ZIP Code vs. business phone number 4 Home vs. business ZIP Codes 5 Not available 9 Not requested or no derogatory information

ML02—Mileage Segment

Note

This segment will be available as a future enhancement of TU40.

The ML02 segment displays mileage calculations between the subject’s home and business by comparing the home and business phone numbers or ZIP Codes. Only the Total ID product uses this segment.

Mileage (ML02) Segment				Total length: 40 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ML02 .
Segment Length	5	3	N	Value is 040 .
Source Indicator	8	1	A	Specifies the source in which the phone numbers or ZIP Codes appear. Possible values are: I Input F File
Home Vs. Business Phone Numbers Mileage	9	8	A/N	Specifies the mileage between the home phone and business phone number. The mileage is displayed in the format NNNN.NNN. This field is blank when the data is not available.
Home Phone Number Vs. Business ZIP Code Mileage	17	8	A/N	Specifies the mileage between the home phone number and business ZIP Code. The mileage is displayed in the format NNNN.NNN. This field is blank when the data is not available.
Home ZIP Code Vs. Business Phone Number Mileage	25	8	A/N	Specifies the mileage between the home ZIP Code and business phone number. The mileage is displayed in the format NNNN.NNN. This field is blank when the data is not available.
Home Vs. Business ZIP Code Mileage	33	8	A/N	Specifies the mileage between the home ZIP Code and business ZIP Code. The mileage is displayed in the format NNNN.NNN. This field blank when the data is not available.

MT01—Message Text Segment

The MT01 segment contains message text. The FFR includes an MT01 segment for each message returned. If the message is longer than 150 characters, multiple MT01 segments are returned to hold the message.

Message Text (MT01) Segment				Total length: 171 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is MT01 .
Segment Length	5	3	N	Value is 171 .
Message Code	8	6	A/N	Identifies the message issued.
Actual Message Length	14	3	N	Indicates the message length (in number of characters). If more than one segment is required, this value is the sum of the characters in all the segments.
Current Segment Number	17	1	N	Identifies the position (or sequence number) of the current MT01 segment. If the message text requires more than one segment, this value allows the segments to appear in the correct order. For example, if two MT01 segments are returned, the first segment has a value of 1 in this field and the second MT01 segment has a value of 2 .
Total Segment Number	18	1	N	Specifies the total number of MT01 segments returned to hold this message.
Threshold Number	19	3	A/N	Specifies the threshold number used to return the message. This field is currently returned only for Score Report.
Message Text	22	150	A/N	Contains the message text associated with the message code.

NM01—Name Segment

The NM01 segment lists the name of the subject and indicates whether this name is the primary, secondary, or alias name. For each subject in a file, the FFR can include up to 5 NM01 segments: 1 primary name segment, 1 secondary name segment, and 3 alias name segments.

Name (NM01) Segment				Total length: 70 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is NM01 .
Segment Length	5	3	N	Value is 070 .
Source Indicator	8	1	A	Indicates whether the listed name was sent in the FFI or is the name that appears in the file. Possible values are: I Name that was part of operator input F Name that appears in the returned file A Name that appears on the RPA database D Name that appears on vendor database
Name Indicator	9	1	A/N	Defines the type of name that is returned. Possible values are: 1 Primary name 2 Secondary name 3 Alias name 4 Currently not used 5 Business name 6 Both Residential and Business name or not known
Last Name	10	25	A	Specifies the subject's last name unless the returned name is an alias or a business. The complete unparsed alias name is returned in this field. Note: If Name Indicator is 5 (business) or 6 (unknown), then the complete name is displayed beginning in displacement 10 and spanning the Last Name, First Name, Middle Name, Prefix, and Suffix fields. The total length for such a name is 61 bytes.
First Name	35	15	A	Specifies the subject's first name, as a full name or as an initial.
Middle Name	50	15	A	Specifies the subject's middle name, as a full name or as an initial.
Prefix	65	3	A/N	Specifies the prefix that is part of the subject's name.
Suffix	68	3	A/N	Specifies the suffix that is part of the subject's name.

NU01—Number Of Segment

The NU01 segment identifies the number of occurrences on the subject file of a certain data type, such as inquiries or matching subjects. The Number Type field indicates which data type the number applies to.

Note

If applicable to a product, the NU01 segment will always be returned.

Number Of (NU01) Segment				Total length: 12 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is NU01 .
Segment Length	5	3	N	Value is 012 .
Number Type	8	2	N	Indicates the type of count that this segment contains. Possible values are: 01 Number of inquiries on subject's file 02 Number of matching subjects on file
Number	10	3	N	Indicates the number or character that applies to the Number Type field.

OB01—Owning Bureau Identification Segment

The OB01 segment identifies the name, address, and phone number of the owning bureau for this subject. The FFR can include only one OB01 segment per subject.

Owning Bureau Identification (OB01) Segment				Total length: 148 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is OB01 .
Segment Length	5	3	N	Value is 148 .
Bureau Name	8	50	A/N	Displays the name of the owning bureau.
Bureau Address	58	40	A/N	Displays the address of the owning bureau.
Bureau City/State/Zip	98	29	A/N	Displays the city, state, and ZIP Code of the owning bureau.
Bureau Telephone Number	127	22	A/N	Displays in free-form the telephone number of the owning bureau, including the area code and extension.

OB02—Owning Bureau Identification Segment

The OB02 segment identifies the name, address, and phone number of the owning bureau for this subject. It also identifies the URL to access for an adverse action report. The FFR can include only one OB02 segment per subject.

Owning Bureau Identification (OB02) Segment				Total length: 198 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is OB02 .
Segment Length	5	3	N	Value is 198 .
Bureau Name	8	50	A/N	Displays the name of the owning bureau.
Bureau Address	58	40	A/N	Displays the address of the owning bureau.
Bureau City/State/Zip	98	29	A/N	Displays the city, state, and ZIP Code of the owning bureau.
Bureau Telephone Number	127	22	A/N	Displays in free-form the telephone number of the owning bureau, including the area code and extension.
Adverse Action URL	149	50	A/N	Displays the URL for consumers to access for free adverse action reports. Customers are encouraged to display this URL in their adverse-action notices. Only available for Credit Report, PEER, Score Report, and FACT.

PH01—Product Header Segment

The PH01 segment identifies a product requested in this transaction. There will be one PH01 for each product used.

Product Header (PH01) Segment				Total length: 12 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is PH01 .
Segment Length	5	3	N	Value is 012 .
Product Code	8	5	A/N	Specifies the product code. This field contains the value that was sent in the FFI.

PH02—Product Header Segment

The PH02 segment identifies a product requested in this transaction and returns a specific result status for the product.

Product Header (PH02) Segment				Total length: 15 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is PH02 .
Segment Length	5	3	N	Value is 015 .
Product Code	8	5	A/N	Specifies the product code. This field contains the value that was sent in the FFI.
Product Results	13	3	A/N	Specifies a particular result that may be returned for a product. Refer to product description for valid values.

PH03—Product Header Segment

The PH03 segment identifies a product requested in this transaction and returns a specific result status for the product.

Product Header (PH03) Segment				Total length: 15 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is PH03 .
Segment Length	5	3	N	Value is 015 .
Product Code	8	5	A/N	Specifies the product code. This field contains the value that was sent in the FFI.
Product Result 1 Phone status	13	1	A/N	Specifies the status of the phone number returned. Possible values are: 0 Non-dialable 1 Dialable
Product Result 2 Address status	14	1	A/N	Specifies the mailability status of the address. <i>For future use.</i>
Product Result 3 Address type	15	1	A/N	Specifies the type of address returned. Possible values are: S Street R Rural Route H High Rise P P. O. Box F Firm G General Delivery

PI01—Personal Information Segment

The PI01 segment displays the subject's social security number and date of birth. For each subject in a file, the FFR can include one PI01 segment.

Personal Information (PI01) Segment				Total length: 29 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is PI01 .
Segment Length	5	3	N	Value is 029 .
Source Indicator	8	1	A	Indicates whether the listed data was sent in the FFI or is the data that appears in the file. Possible values are: I Data was received in inquiry F Data that appears on the database
Social Security Number	9	9	N	Lists the subject's social security number. No dashes are included.
Date of Birth	18	8	A/N	Specifies the subject's date of birth in one of these formats: CCYYMMDD Year, month, and day of birth CCYY-E Estimated year of birth followed by a dash and the letter E
Age	26	3	A/N	Displays the subject's age in years.
Gender	29	1	A	Specifies whether the subject is male or female. Possible values are: M Male F Female Blank No information available

PN01—Phone Number Segment

The PN01 segment displays a phone number, indicates the owner and type of phone to which the number belongs. The FFR can include up to 9 PN01 segments for each subject.

Phone Number (PN01) Segment				Total length: 27 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is PN01 .
Segment Length	5	3	N	Value is 027 .
Source Indicator	8	1	A	Indicates whether the listed data was sent in the FFI or is the data that appears in the file. Possible values are: I Data that was part of the inquiry F Data that appears in the returned file A Phone number that appears on the RPA database D Address that appears on vendor database
Phone Qualifier	9	1	A/N	Indicates the relationship of the phone number assignee to the subject. Possible values are: 1 Personal 2 Employment 3 Inquiry credit grantor 4 Reporting credit grantor 5 Business 6 Both residential and business number or not known
Phone Type	10	2	A/N	Specifies the type of communication device to which this number is assigned. Possible values for Fraud Detect , Fraud ID-TECT , and Total ID are: 01 Phone (voice, standard) 02 Fax* 03 Cellular 04 Pager 05 Toll-free 06 Mobile 07 Non-geographic 08 Special services 09 Undefined* 10 New 11 Pay phone* 99 Not requested or no derogatory information For a list of the phone type codes returned by RPA , refer to Appendix A, "Name, Address, and Phone Codes."
Availability Indicator	12	1	A	Indicates whether this phone number is listed. Possible values are: L Listed U Unlisted
Area Code	13	3	A/N	Lists the phone number's area code.
Telephone Number	16	7	A/N	Lists the phone number.
Extension	23	5	A/N	Lists the phone number extension.

* These values are not used in Fraud Detect

PR01—Public Record Segment

The PR01 segment displays public record data for the subject.

Public Record (PR01) Segment				Total length: 168 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is PR01 .
Segment Length	5	3	N	Value is 168 .
Industry Code	8	2	A/N	Identifies the industry code of the source of the public record.
Member Code	10	8	A/N*	Identifies the member code of the source of the public record.
Public Record Type	18	2	A	Identifies the type of public record this segment describes. Refer to Appendix D, "Public Record Codes," for a list of the public record type codes.
Docket Number	20	11	A/N	Displays the docket number as shown on the court records.
Attorney	31	36	A/N	Displays the name of either the attorney or the attorney's firm.
Plaintiff	67	36	A/N	Displays the name of the plaintiff in the case.
Date Reported	103	8	A/N	Displays the date this public record became part of the subject's file. The date format is CCYYMMDD.
Date Paid	111	8	A/N	Displays the date the subject paid the assessed amount. The date format is CCYYMMDD.
Assets	119	9	A/N	Displays in whole dollars the amount of the subject's assets.
Liabilities/Amount	128	9	A/N	Displays in whole dollars the subject's liabilities or amount owed in the case. Note: If Public Record Type is a bankruptcy, this field shows the subject's liabilities; for all other types, this field shows an amount.
Account Designator	137	1	A	Displays the contractual ownership of an account. Possible values are: U Undesignated account I Individual account C Joint account A Authorized account P Participant on account S Co-signer on account M Primary borrower on account T Account relationship terminated X Consumer deceased
Court Type	138	2	A	Identifies the type of court in which the case occurred. Refer to Appendix D, "Public Record Codes," for a list of the court type codes.
Court Location City	140	27	A	Identifies the city in which the court is located.
Court Location State	167	2	A	Identifies the state in which the court is located.

* Member code in this segment is returned right-justified with leading zeroes.

PS01—Points Summary Segment

The PS01 segment accumulates the results of the verification matches used with various databases.

Points Summary (PS01) Segment				Total length: 127 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is PS01
Segment Length	5	3	N	Value is 127
First Name Sources	8	2	A/N	Number of sources used to verify first name
Last Name Sources	10	2	A/N	Number of sources used to verify last name
Address Sources	12	2	A/N	Number of sources used to verify address
Previous Address Sources	14	2	A/N	Number of sources used to verify previous address
Area Code Sources	16	2	A/N	Number of sources used to verify phone's area code
Phone Number Sources	18	2	A/N	Number of sources used to verify telephone number
SSN Sources	20	2	A/N	Number of sources used to verify social security number
Total Sources	22	2	A/N	Number of sources used in verification.
First Name Summary	24	2	A/N	Number of sources matched
	26	2	A/N	Number of sources partially matched
	28	2	A/N	Number of sources not matched
	30	2	A/N	Number of sources in which name not found
Last Name Summary	32	2	A/N	Number of sources matched
	34	2	A/N	Number of sources partially matched
	36	2	A/N	Number of of sources not matched
	38	2	A/N	Number of sources in which name not found
Current Address Summary	40	2	A/N	Number of sources matched
	42	2	A/N	Number of sources partially matched
	44	2	A/N	Number of of sources not matched
	46	2	A/N	Number of sources in which address not found
Previous Address Summary	48	2	A/N	Number of sources matched
	50	2	A/N	Number of sources partially matched
	52	2	A/N	Number of of sources not matched
	54	2	A/N	Number of sources in which address not found
Area Code Summary	56	2	A/N	Number of sources matched
	58	2	A/N	Number of sources partially matched
	60	2	A/N	Number of of sources not matched
	62	2	A/N	Number of sources in which area code not found
Phone Number Summary	64	2	A/N	Number of sources matched
	66	2	A/N	Number of sources partially matched
	68	2	A/N	Number of of sources not matched
	70	2	A/N	Number of sources in which phone number not found
SSN Summary	72	2	A/N	Number of sources matched
	74	2	A/N	Number of sources partially matched
	76	2	A/N	Number of sources not matched
	78	2	A/N	Number of sources in which SSN not found
Total Match Summary	80	2	A/N	Number of sources matched
	82	2	A/N	Number of sources partially matched
	84	2	A/N	Number of sources not matched

Points Summary (PS01) Segment				Total length: 127 bytes
Field	Displacement	Length	Type	Description
	86	2	A/N	Number of sources in which items not found
First Name Total Points	88	2	A/N	Total points for First Name
Last Name Total Points	90	2	A/N	Total points for Last Name
Current Address Total Points	92	2	A/N	Total points for Address
Previous Address Total Points	94	2	A/N	Total points for Previous Address
Area Code Total Points	96	2	A/N	Total points for Area Code
Phone Number Total Points	98	2	A/N	Total points for Phone Number
SSN Total Points	100	2	A/N	Total points for SSN
Total Points	102	2	A/N	Total points scored
First Name Percent	104	3	A/N	First Name Verification Percentage
Last Name Percent	107	3	A/N	Last Name Verification Percentage
Current Address Percent	110	3	A/N	Address Verification Percentage
Previous Address Percent	113	3	A/N	Previous Address Verification Percentage
Area Code Percent	116	3	A/N	Telephone Area Code Verification Percentage
Phone Number Percent	119	3	A/N	Telephone Number Verification Percentage
SSN Percent	122	3	A/N	SSN Verification Percentage
Total Percent	125	3	A/N	Total Verification Percentage

QH01—Inquiry History Segment

The QH01 segment displays an inquiry history message. The FFR can include one QH01 segment for each input element (address, SSN, and so on). In ARPT 3.1, the HK segment contained this information.

Inquiry History (QH01) Segment				Total length: 21 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is QH01 .
Segment Length	5	3	N	Value is 021 .
Message Code	8	6	A/N	Displays the inquiry history message code.
Address Match Flag	14	1	A/N	Indicates the address that the inquiry matched. Possible values are: C Current address P Previous address
Number of Times Input Was Used on Other Inquiries	15	3	A/N	Specifies how many times the current input was used to request a Credit report or a Score report.
Threshold Chosen	18	2	A/N	Specifies the maximum number of inquiries. Number specified must be from 01 to 99.
Time Frame of Occurrences	20	2	A/N	Specifies the time frame for which this data was gathered. Possible values are: 30 30 days 60 60 days 90 90 days

RE01—Region Analysis Segment

The RE01 segment displays the results of comparisons of various elements—such as ZIP Code and city or phone number and state—in the input or file address. This segment is currently used only by Fraud Detect.

Region Analysis (RE01) Segment				Total length: 20 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is RE01 .
Segment Length	5	3	N	Value is 020 .
Source Indicator	8	1	A	Specifies the source in which the address appears. Possible values are: I Input F File
ZIP Code vs. City	9	1	N	Specifies the results of comparing the source ZIP Code to the source city. Possible values are: 1 Valid 2 Invalid 3 Not available 4 ZIP Code not issued 5 New ZIP Code, check not performed 9 Not requested or no derogatory information
ZIP Code vs. State	10	1	N	Specifies the results of comparing the source ZIP Code to the source state. Possible values are: 1 Valid 2 Invalid 3 Not available 4 ZIP Code not issued 5 New ZIP Code, check not performed 9 Not requested or no derogatory information
Phone Number vs. State	11	1	N	Specifies the results of comparing the source phone number to the source state. Possible values are: 1 Valid 2 Invalid 3 Not available 4 Phone number not issued 5 New phone number, check not performed 9 Not requested or no derogatory information
Phone Number vs. ZIP Code	12	1	N	Specifies the results of comparing the source phone number to the source ZIP Code. Possible values are: 1 Valid 2 Invalid 3 Not available 4 Phone number not issued 5 New phone number, check not performed 6 ZIP Code not issued 7 Mileage is a mismatch 8 New ZIP Code, check not performed 9 Not requested or no derogatory information
Mileage	13	8	A/N	Displays the mileage between the phone number and ZIP Code. The format is NNNN.NNN.

SA01—Subscriber Address Segment

The SA01 segment lists the Subscriber Address returned for a satisfied WATCH and for LOOK and LOOK UP.

Subscriber Address (SA01) Segment				Total length: 106 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SA01 .
Segment Length	5	3	N	Value is 106 .
Subscriber Address1	8	30	A/N	Specifies the first line of the subscriber's unparsed street address.
Subscriber Address2	38	30	A/N	Specifies the second line of the subscriber's unparsed street address.
City	68	27	A	Specifies the name of the subscriber's city.
State	95	2	A	Specifies the name of the subscriber's state. Refer to Appendix A, "Name, Address, and Phone Codes," for a list of valid state codes.
ZIP Code	97	10	A/N	Specifies the subscriber's ZIP Code. This field is left justified.

SC01—Scoring Segment

The SC01 segment displays the results of scoring the subject and lists the highest-scoring factors. The FFR can include only one SC01 segment per score delivered except for a TIE score. TIE scores are returned in the TC01 segment.

Scoring (SC01) Segment				Total length: 34 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SC01 .
Segment Length	5	3	N	Value is 034 .
Product Code	8	5	A/N	Displays the algorithm ID of the input or of the returned score. Refer to Chapter 6, “Add-on Product Descriptions,” for a list of algorithm IDs.
Sign	13	1	A/N	Contains a plus sign (+) or a minus sign (-) to indicate whether the score is positive or negative. A score of zero is always positive.
Score	14	5	A/N	Displays the results of the scoring process. If the file is not scored, this field will be blank.
Scoring Indicator Flag	19	1	A/N	Displays the reason a file could not be scored. Possible values are: 2 File not scored because subject is deceased 3 File not scored because subject does not have sufficient credit 4 Not processed 5 Requirements not met C Cascading model M Missing required risk models
Score Derogatory Alert Flag	20	1	A/N	Indicates whether derogatory alert information was found in the file. Possible values for this field are: A Alert information is found in the file N No alert information is found in the file
First Factor	21	3	A/N	Identifies the highest-scoring factor in the calculation. For a list of scoring factors, refer to the Score Model section of Chapter 6, “Add-on Product Descriptions.”
Second Factor	24	3	A/N	Identifies the second highest-scoring factor in the calculation.
Third Factor	27	3	A/N	Identifies the third highest-scoring factor in the calculation.
Fourth Factor	30	3	A/N	Identifies the fourth highest-scoring factor in the calculation.
Score Card Indicator	33	2	A/N	Identifies the score card used in the scoring process.

SD01—Credit Summary Description Segment

The SD01 segment summarizes credit data for a specific type of credit account included in the consumer file. The FFR can include up to 6 SD01 segments per subject, one for each account type on the credit file and one for **all** account types.

Note

An SD01 segment is returned for an account type **only** if the credit file contains that type of account. For example, an SD01 with a Summary Type of M is returned only if the credit file includes a mortgage account.

Credit Summary Description (SD01) Segment				Total length: 56 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SD01 .
Segment Length	5	3	N	Value is 056 .
Summary Type	8	1	A	Specifies the type of credit account for which this segment contains data. Possible values are: R Revolving or check credit account I Installment account M Mortgage account O Open account B Closed with balance T Totals
High Credit	9	9	A/N	Displays the maximum amount of credit that the subject incurred in this account type.
Credit Limit	18	9	A/N	Displays the subject's credit limit on this account type.
Balance	27	9	A/N	Displays the balance the subject owes on this account type.
Amount Past Due	36	9	A/N	Displays the amount past due on this account type.
Monthly Payment	45	9	A/N	Displays the minimum monthly payment required of the subject for this account type.
% of Credit Available	54	3	A/N	Displays the percent of credit available to the subject in revolving, check credit, or open accounts. If the account type is installment, mortgage, closed with balance, or totals, this field is blank.

SH01—Subject Header Segment

The SH01 segment specifies which subject the returned file describes, identifies how the file and subject match, and lists the bureau that owns the file.

Subject Header (SH01) Segment				Total length: 27 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SH01 .
Segment Length	5	3	N	Value is 027 .
Subject Identifier	8	1	N	Indicates to which subject the displayed consumer information applies. Possible values are: 1 First subject 2 Second subject
File Number	9	2	N	Specifies the file number (of those returned for this subject).
File Hit	11	1	A	Specifies whether this file is a no-hit. Possible values are: Y Regular hit on file—all files are returned C Hit on file, but one or more files not returned because of failure to pass California subject selection criteria—more identification information is needed N Regular no-hit—a no-hit file is returned X No-hit file is returned, but files exist that do not pass California subject selection criteria—more identification information is needed H Subject hit (Fraud Detect only) P Clear for all searches performed (Fraud Detect only)
SSN Match Indicator	12	2	A/N	Describes how the file matched or did not match on the input SSN. Possible values are: 00 No-hit returned—no match processing performed 01 No match on SSN 02 No SSN on file but SSN appears on input 03 No SSN on input but SSN on file 04 No SSN on input and no SSN on file 05 Exact match between SSN on input and SSN on file 06 Difference of 1 digit between SSN on input and SSN on file 07 Difference of 2 digits between SSN on input and SSN on file
Consumer Statement Indicator	14	1	A/N	Indicates whether a consumer statement was returned with this file. Possible values are: N No consumer statement on file Y Consumer statement present on file
Bureau Market File Control	15	2	A/N	Identifies the market code of the owning credit bureau (the contact for Consumer Relations Services). <i>Returned only for permissible purpose products.</i>
Bureau Submarket File Control	17	2	A/N	Identifies the submarket code of the owning credit bureau (the contact for Consumer Relations Services). <i>Returned only for permissible purpose products.</i>

Subject Header (SH01) Segment				Total length: 27 bytes
Field	Displacement	Length	Type	Description
Suppression Indicator	19	1	A	<p>Indicates whether the credit data in the file is returned. If suppressed, the remaining credit data fields will be blank or filled with zeroes and no credit segments are returned. Contact the owning bureau for more information. Possible values are:</p> <p>Y Credit data suppressed N Credit data not suppressed P Do not promote F Frozen by consumer as allowed by state law. To obtain access, you must obtain authorization from the consumer and provide the required identifier with your inquiry. E Frozen by consumer as allowed by state law. File is returned due to exempted use. X Frozen by consumer as allowed by state law. File is returned due to exempted use. Do not promote.</p>
In File Since Date	20	8	A/N	Defines in the CCYYMMDD format the date the subject was first placed on file.

SH02—Subject Header Segment for Special Products

The SH02 segment identifies the subject and action performed for a product.

WATCH Subject Header (SH02) Segment				Total length: 12 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SH02 .
Segment Length	5	3	N	Value is 012 .
Subject Identifier	8	1	N	Indicates for which subject WATCH information is returned. Possible values are: 1 First subject 2 Second subject
File Number	9	2	N	Specifies the file number (of those returned for this subject).
Product Action	11	2	A	Identifies the action associated with this WATCH report. Possible values are: 01 WATCH set 02 WATCH deleted 03 Subject no-hit 04 WATCH does not exist 05 WATCH not set—file suppressed 06 WATCH satisfaction 07 WATCH satisfaction—file frozen as allowed by state law. File is returned due to exempt use.

SH04—Subject Header Segment

The SH04 segment specifies which subject the returned file describes, identifies how the file and subject match, returns Best Match information if applicable, and lists the bureau that owns the file. This segment is currently returned only for ScoreSearch and IDSearch.

Subject Header (SH04) Segment				Total length: 28 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SH04 .
Segment Length	5	3	N	Value is 028 .
Subject Identifier	8	1	N	Indicates to which subject the displayed consumer information applies. Possible values are: 1 First subject 2 Second subject
File Number	9	2	N	Specifies the file number (of those returned for this subject).
File Hit	11	1	A	Specifies whether this file is a no-hit. Possible values are: Y Regular hit on file—all files are returned C Hit on file, but one or more files not returned because of failure to pass California subject selection criteria—more identification information is needed N Regular no-hit—a no-hit file is returned X No-hit file is returned, but files exist that do not pass California subject selection criteria—more identification information is needed
SSN Match Indicator	12	2	A/N	Describes how the file matched or did not match on the input SSN. Possible values are: 00 No hit returned—no match processing performed 01 No match on SSN 02 No SSN on file but SSN appears on input 03 No SSN on input but SSN on file 04 No SSN on input and no SSN on file 05 Exact match between SSN on input and SSN on file 06 Difference of 1 digit between SSN on input and SSN on file 07 Difference of 2 digits between SSN on input and SSN on file)
Match Indicator	14	1	A/N	Describes how the file matched the input subject data provided: M Best Match H Hit— File is a Hit but not a Best Match file. N No-Hit—No files are selected.
Consumer Statement Indicator	15	1	A/N	Indicates whether a consumer statement was returned with this file. Possible values are: N No consumer statement on file Y Consumer statement present on file

Subject Header (SH04) Segment				Total length: 28 bytes
Field	Displacement	Length	Type	Description
Bureau Market File Control	16	2	A/N	Identifies the market code of the owning credit bureau (the contact for Consumer Relations Services). <i>Returned only for permissible purpose products.</i>
Bureau Submarket File Control	18	2	A/N	Identifies the submarket code of the owning credit bureau (the contact for Consumer Relations Services). <i>Returned only for permissible purpose products.</i>
Suppression Indicator	20	1	A	Indicates whether the credit data in the file is returned. If suppressed, the remaining credit data fields will be blank or filled with zeroes and no credit segments are returned. Contact the owning bureau for more information. Possible values are: Y Credit data suppressed N Credit data not suppressed P Do not promote F Frozen by consumer as allowed by state law. To obtain access, you must obtain authorization from the consumer and provide the required identifier with your inquiry. E Frozen by consumer as allowed by state law. File is returned due to exempted use. X Frozen by consumer as allowed by state law. File is returned due to exempted use. Do not promote.
In File Since Date	21	8	A/N	Defines in the CCYYMMDD format the date the subject was first placed on file.

SH05—Subject Header Segment

The SH05 segment specifies which subject the returned file describes and how the file and input phone matched.

Subject Header (SH05) Segment				Total length: 13 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SH05 .
Segment Length	5	3	N	Value is 013 .
Subject Identifier	8	1	N	Indicates for which subject the information is returned. Possible values are: 1 First subject 2 Second subject
File Number	9	2	N	Specifies the file number (of those returned for this subject).
Subject Hit Status	11	1	A/N	Specifies the hit status of the request. Possible values are: 1 Subject found (hit) and returned 2 Subject not found (no-hit) 3 Private listing found but not selected (no-hit) 4 Residential listing found but not selected (no-hit) 5 Business listing found but not selected (no-hit) 6 Listing with no name found but not selected (no-hit) 7 Non-mail-able address found but not selected (no-hit)
Subject Restriction Status	12	1	A/N	Specifies whether the listing information has restrictions for use. Possible values are: Blank - Restriction Unknown 1 No solicitation restrictions for use 2 Phone solicitation restricted 3 Mail solicitation restricted 4 Both phone and mail solicitation restricted
Subject Country	13	1	A/N	Specifies the subject's country. Possible values are: U US C Canada

SM01—Credit Summary Segment

The SM01 segment displays the totals of the public records, inquiries, and different types of trades included in this consumer file. The FFR can include only one SM01 segment per subject.

Credit Summary (SM01) Segment				Total length: 41 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SM01 .
Segment Length	5	3	N	Value is 041 .
Credit Summary Reporting Period	8	1	N	Specifies the time period for which the figures in this segment apply to the consumer file. Possible values are: 1 Total history 2 12 months
Number of Public Records	9	3	N	Displays the number of public records contained in this file.
Number of Collections	12	3	N	Displays the number of collections contained in this file.
Number of Negative Trades	15	3	N	Displays the number of negative trades contained in this file.
Trades with any Historical Negative	18	3	N	Displays the number of trades contained in this file that have any previous negative data.
Occurrence of Historical Negatives	21	3	N	Displays the number of occurrences of negative data in this file's history.
Number of Trades	24	3	N	Displays the total number of trades contained in this file. The total includes revolving/check credit, installment, mortgage, and open trade accounts.
Number of Revolving and Check Credit Trades	27	3	N	Displays the number of revolving trades and check credit tradelines contained in this file.
Number of Installment Trades	30	3	N	Displays the number of installment tradelines contained in this file.
Number of Mortgage Trades	33	3	N	Displays the number of mortgage tradelines contained in this file.
Number of Open Trade Accounts	36	3	N	Displays the number of open tradelines (tradelines with an O account type) contained in this file.
Number of Inquiries	39	3	N	Displays the number of inquiries contained in this file.

SV01—Subject Verification Segment

The SV01 segment handles the results of Fraud Detect subject verification. Each SV01 segment displays a Fraud Detect Verification Analysis code and message.

Subject Verification (SV01) Segment				Total length: 67 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SV01 .
Segment Length	5	3	N	Value is 067
Verification Status	8	2	A/N	Values are: 01 Insufficient Input Data Provided 02 No Subject Found 03 Subject Data Verified 04 Verification Discrepancy 08 Subject Verification not available
Results of Name Verification	10	2	A/N	01 Matched 02 Not Matched 03 Not Performed
Results of Address Verification	12	2	A/N	01 Matched 02 Not Matched 03 Not Performed
Results of SSN Verification	14	2	A/N	01 Matched 02 Not Matched 03 Not Performed
Results of DOB Verification	16	2	A/N	01 Matched 02 Not Matched 03 Not Performed
Results of Suffix Verification	18	2	A/N	01 Matched 02 Not Matched 03 Not Performed
Message Text	20	48	A/N	Displays the message text associated with the verification status of the subject. Valid values are: For status: This message is returned: 01 Insufficient Input Data Provided 02 No Subject Found 03 Subject Data Verified 04 [Name, Address, SSN, DOB, Suffix] Not Matched * 08 Subject Verification Not Available * Could also be a combination of these items—program creates a string based on the returned match codes

SV02—Subject Verification Segment

The SV02 segment is used to identify the response obtained from opening individual databases.

Subject Verification (SV02) Segment				Total length: 31 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is SV02 .
Segment Length	5	3	N	Value is 031 .
File Source	8	2	A/N	Specifies the database that is the source of the file. Values are: 01 CRONUS 02 RPA 03 Vendor Database
File Number	10	2	N	Specifies the file number (of those returned for this subject).
Subject Hit Status	12	2	A/N	Specifies the result of the subject search. Valid values are: 01 Subject found (hit) 02 Subject not found 03 Private listing found but not selected 04 Residential listing found but not selected 05 Business listing found but not selected 06 Listing with no name found but not selected 07 Non-mailable address found but not selected. 90 Phone number not entered 99 Database not available Values 03 through 07 are only available with RPA logic
Subject Restriction Status	14	1	A/N	Specifies whether the listing information has restrictions for use. Valid values are: Blank Not available 1 No solicitation restrictions for use 2 Phone solicitation restricted 3 Mail solicitation restricted 4 Both phone and mail solicitation restricted
Phone Status	15	1	A/N	Specifies the status of the phone number returned. Valid values are: Blank Not available * 0 Non-dialable 1 Dialable *This field is used with Total ID RPA logic only.
Address Status	16	1	A/N	<i>For future use.</i>
Address Type	17	1	A/N	Specifies the type of address returned. Valid values are: Blank – not available * S Street R Rural Route H High Rise P P. O. Box F Firm G General Delivery *This field is used with Total ID RPA logic only

Subject Verification (SV02) Segment				Total length: 31 bytes
Field	Displacement	Length	Type	Description
First Name	18	2	A/N	Specifies results of first name verification. Possible values are: Blank Match not performed 00 Not Found 01 No Match 02 Partial Match 03 Match 09 Input data not available
Last Name	20	2	A/N	Specifies results of last name verification. Possible values are: Blank Match not performed 00 Not Found 01 No Match 02 Partial Match 03 Match 09 Input data not available
Current Address	22	2	A/N	Specifies results of current address verification. Possible values are: Blank Match not performed 00 Not Found 01 No Match 02 Partial Match 03 Match 09 Input data not available
Previous Address	24	2	A/N	Specifies results of previous address verification. Possible values are: Blank Match not performed 00 Not Found 01 No Match 02 Partial Match 03 Match 09 Input data not available
Area Code	26	2	A/N	Specifies results of area code verification. Possible values are: Blank Match not performed 00 Not Found 01 No Match 02 Partial Match 03 Match 09 Input data not available
Phone Number	28	2	A/N	Specifies results of phone verification. Possible values are: Blank Match not performed 00 Not Found 01 No Match 02 Partial Match 03 Match 09 Input data not available
SSN	30	2	A/N	Specifies results of SSN verification. Possible values are: Blank Match not performed 00 Not Found 01 No Match 02 Partial Match 03 Match 09 Input data not available

TA01—Trans Alert Segment

Each TA01 segment displays a Trans Alert message.

Trans Alert (TA01) Segment				Total length: 12 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is TA01 .
Segment Length	5	3	N	Value is 012 .
Address Type	8	1	A/N	Indicates whether the Trans Alert message refers to a current address or a previous address. Possible values are: C Current address P Previous address This field will be blank if the Message Type value is 2, 4, or 5.
Message Type	9	1	A/N	Indicates the type of Trans Alert message that this segment contains. Possible values are: 1 Address alert 2 SSN alert 3 ZIP Code alert (transaction can contain two TA01 segments of this type, one each for current and previous ZIP Codes) 4 Surname alert 5 Recorded inquiries alert
Alert Condition	10	1	A/N	Indicates the condition that invoked the Trans Alert message. Possible values are: 1 Mismatch—input does not match file 2 Invalid information
Number of Inquiries in Last 60 Days	11	2	A/N	Indicates the number of inquiries on this file in the last 60 days.

TC01—TIE Score Segment

The TC01 segment displays TIE data about the subject.

TIE Score (TC01) Segment				Total length: 30 bytes																
Field	Displacement	Length	Type	Description																
Segment Type	1	4	A/N	Value is TC01 .																
Segment Length	5	3	N	Value is 030 .																
Product Code	8	5	A/N	Identifies the product that returned income information used for the TIE score model.																
Debt to Income Percentage Indicator	13	1	A/N	Indicates whether a debt to income percentage was calculated. Possible values are: Y Yes N No An N in this field indicates one of these conditions: <ul style="list-style-type: none"> • Income is equal to 0 • No trade verified in the last 12 months • Total number of trades is less than 2 • Total for balance, credit limit, and high credit is 0 																
Debt to Income Percentage	14	3	A/N	Displays the subject's debt to income percentage.																
Low Range	17	7	N	Displays the lower number in the subject's income range. Commas are not included. For example, an income range figure of \$25,000 is displayed as 0025000. These are the income ranges available: <table border="0" style="margin-left: 20px;"> <thead> <tr> <th style="text-align: left;">Low Range</th> <th style="text-align: left;">Upper Range</th> </tr> </thead> <tbody> <tr> <td>\$ 000,000 -</td> <td>14,999</td> </tr> <tr> <td>\$ 15,000 -</td> <td>24,999</td> </tr> <tr> <td>\$ 25,000 -</td> <td>34,999</td> </tr> <tr> <td>\$ 35,000 -</td> <td>49,999</td> </tr> <tr> <td>\$ 50,000 -</td> <td>74,999</td> </tr> <tr> <td>\$ 75,000 -</td> <td>99,999</td> </tr> <tr> <td>\$ 100,000+</td> <td></td> </tr> </tbody> </table>	Low Range	Upper Range	\$ 000,000 -	14,999	\$ 15,000 -	24,999	\$ 25,000 -	34,999	\$ 35,000 -	49,999	\$ 50,000 -	74,999	\$ 75,000 -	99,999	\$ 100,000+	
Low Range	Upper Range																			
\$ 000,000 -	14,999																			
\$ 15,000 -	24,999																			
\$ 25,000 -	34,999																			
\$ 35,000 -	49,999																			
\$ 50,000 -	74,999																			
\$ 75,000 -	99,999																			
\$ 100,000+																				
Upper Range	24	7	N	Displays the upper number in the subject's income range. The above row displays the list of possible income ranges.																

TM01—Trade MOP Totals Segment

The TM01 segment lists, for each MOP level, the number of the subject's tradelines that have that MOP rating. The FFR can include only one TM01 segment per subject.

Trade MOP Totals (TM01) Segment				Total length: 40 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is TM01 .
Segment Length	5	3	N	Value is 040 .
MOP 09/9B/9P Counter	8	3	N	Specifies the number of returned tradelines that have a MOP of 09, 9B, or 9P.
MOP 08/8A/8D/8R/8P Counter	11	3	N	Specifies the number of returned tradelines that have a MOP of 08, 8A, 8D, 8R, or 8P.
MOP 07 Counter	14	3	N	Specifies the number of returned tradelines that have a MOP of 07.
MOP 05 Counter	17	3	N	Specifies the number of returned tradelines that have a MOP of 05.
MOP 04 Counter	20	3	N	Specifies the number of returned tradelines that have a MOP of 04.
MOP 03 Counter	23	3	N	Specifies the number of returned tradelines that have a MOP of 03.
MOP 02 Counter	26	3	N	Specifies the number of returned tradelines that have a MOP of 02.
MOP 01 Counter	29	3	N	Specifies the number of returned tradelines that have a MOP of 01.
MOP 00 Counter	32	3	N	Specifies the number of returned tradelines that have a MOP of 00.
All Other Counter	35	3	N	Specifies the number of returned tradelines that do not have any of the above MOP values.
Number of Accounts in Dispute	38	3	N	Specifies the number of returned tradelines that are in dispute. These tradelines are included in the above MOP totals.

TR01—Trade Segment

The TR01 segments display information about the subject's trade accounts.

Trade (TR01) Segment				Total length: 288 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is TR01 .
Segment Length	5	3	N	Value is 288 .
Industry Code	8	2	A/N	Identifies the industry code of the subscriber whose account is included.
Member Code	10	8	A/N*	Displays the reporting subscriber's member code.
Subscriber Name	18	24	A/N	Displays the subscriber's name.
Account Type	42	1	A	Displays the account type. Possible values are: R Revolving account O Open account C Overdraft/reserve checking account I Installment account M Mortgage account
Account Number	43	24	A/N	Displays the number of the account.
Account Designator	67	1	A	Displays the contractual ownership of the account. Possible values are: U Undesignated account I Individual account C Joint account A Authorized account P Participant on account S Co-signer on account M Primary borrower on account T Account relationship terminated X Consumer deceased
Date Opened	68	8	A/N	Displays the date the account was opened. The date format is CCYYMMDD.
Date Verified	76	8	A/N	Displays the date the trade was last verified. The date format is CCYYMMDD.
Trade Verification Indicator	84	1	A	Displays verification indicator code. Possible values are: A Automated account V Manual account M Manual account that has been frozen N No record X No reply E Earnings verified I Indirect S Slow answering D Declined T Account disputed
Date Closed	85	8	A/N	Displays the date the account was closed. The date format is CCYYMMDD.

Trade (TR01) Segment				Total length: 288 bytes
Field	Displacement	Length	Type	Description
Date Closed Indicator	93	1	A	Indicates how the account was closed. Possible values are: C Account was closed normally F Account was closed because of charge-off or repossession (that is, if the MOP is 08, 8A, 8D, 8P, 8R, 09, 9B, or 9P)
Date Paid Out	94	8	A/N	Displays the date the account was paid out. The date format is CCYYMMDD.
Date of Last Activity	102	8	A/N	Displays the last date that activity occurred in this account. The date format is CCYYMMDD.
Current Manner of Payment	110	2	A/N	Displays the account's current MOP code. Refer to Appendix C, "Trade and Loan Type Codes," for a list of MOP codes.
Currency	112	1	A/N	Displays the type of currency used in this account. Possible values are: 1 United States currency 2 Canadian currency
Balance	113	9	A/N	Displays in whole dollars the balance remaining in this account.
High Credit	122	9	A/N	Displays in whole dollars either the highest amount ever owed in the account or the original balance owed.
Credit Limit	131	9	A/N	Displays in whole dollars the subject's credit limit for this account.
Terms: Duration	140	3	A/N	Displays the contract length for installment and mortgage loans. The number specified here relates to the schedule specified in the Frequency of Payment field. For example, a 24 in this field means 24 months if the Frequency of Payment is M but it means 24 years if the Frequency of Payment is Y. For minimum payments on revolving accounts, the value in this field is MIN.
Terms: Frequency of Payment	143	1	A/N	Specifies the frequency of payments required for this installment or mortgage loan. Possible values are: D Deferred P Payroll or deduction W Weekly (due every week) B Biweekly (due every two weeks) E Semimonthly (due twice a month) M Monthly (due every month) L Bimonthly (due every two months) Q Quarterly (due every three months) T Triennially (due every four months) S Semiannually (due twice a year) Y Annually (due every year) X Unspecified V Variable payment

Trade (TR01) Segment				Total length: 288 bytes
Field	Displacement	Length	Type	Description
Terms: Amount of Payment	144	9	A/N	Specifies the amount the subject must pay on this installment or mortgage loan at the scheduled times (as specified in the Frequency of Payment field). The amount is specified in whole dollars. If there is no payment amount, this field is blank-filled. Note: ACB Metro Format standards require the figure in this field to be the monthly amount due regardless of the actual payment frequency. For example, a 30-year mortgage is expressed as 000000590 (the monthly amount due) even if the consumer makes annual payments of \$7080 or quarterly payments of \$1770.
Collateral	153	36	A/N	Displays the type of collateral provided by the subject.
Loan Type	189	2	A	Indicates the type of loan made by the credit grantor to the subject. Refer to Appendix C, "Trade and Loan Type Codes," for a list of loan types.
Remarks Code	191	3	A/N	Displays the remarks code that applies to this account. Refer to Appendix C, "Trade and Loan Type Codes," for a list of these codes.
Amount Past Due	194	9	A/N	Displays in whole dollars the amount that is past due on this account.
Number of Payments Past Due	203	2	N	Lists the number of payments that the subject is past due as reported by the credit grantor.
Maximum Delinquency Amount	205	9	A/N	Displays in whole dollars the amount the subject owed at maximum delinquency.
Maximum Delinquency Date	214	8	A/N	Displays the date when the subject's highest delinquency was reported.
Maximum Delinquency MOP	222	2	A/N	Displays the MOP that was in effect at the time of the subject's maximum delinquency.
Payment Pattern Start Date	224	8	A/N	Displays the start date of the subject's payment pattern. The date format is CCYYMMDD.
Payment Pattern	232	48	A/N	Displays the subject's payment history. Refer to Appendix C, "Trade and Loan Type Codes," for a description of the payment pattern logic.
Number of Months Reviewed	280	2	N	Displays the number of months for which the subject's payment history was reviewed. The results of the review are listed in the following three fields.
Times 30 Days Late	282	2	A/N	Displays the number of times in this time period the subject's payment was 30-59 days late.
Times 60 Days Late	284	2	A/N	Displays the number of times in this time period the subject's payment was 60-89 days late.
Times 90 Days Late	286	2	A/N	Displays the number of times in this time period the subject's payment was 90 or more days late.
Historical Counters Verification Indicator	288	1	A/N	Displays the method by which the above historical counters were verified. Possible values are: 1 Historical counters were provided by the credit grantor. 2 Historical counters were calculated.

* Member code in this segment is returned right-justified with leading zeroes.

TR02—WATCH Trade Segment

The TR02 segment displays information about a subject's trade account that satisfied a subscriber's WATCH.

WATCH Trade (TR02) Segment				Total length: 101 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is TR02 .
Segment Length	5	3	N	Value is 101 .
Industry Code	8	2	A/N	Displays the subscriber's industry code. Refer to Appendix B, "Industry Codes," for a list of industry codes.
Member Code	10	8	A/N	Displays the subscriber's member code.
Subscriber Long Name	18	24	A/N	Displays the subscriber's long name.
Account Type	42	1	A	Specifies the type of trade account that satisfied the WATCH. Possible values are: R Revolving account O Open account C Overdraft/reserve checking account I Installment account M Mortgage account
Account Number	43	24	A/N	Displays the account number of the trade that satisfied the WATCH.
Balance	67	9	A/N	Displays in whole dollars the balance remaining in this account. Amount is not shown for derogatory trades.
Current Manner of Payment	76	2	A/N	Displays the subject's current MOP. Refer to Appendix C, "Trade and Loan Type Codes," for a list of MOP code definitions.
Current Amount Past Due	78	9	A/N	Displays in whole dollars the amount that is past due on this account. The amount is not shown for improved accounts.
Previous Manner of Payment	87	2	A/N	Displays the subject's previous MOP. Refer to Appendix C, "Trade and Loan Type Codes," for a list of MOP code definitions.
Previous Amount Past Due	89	9	A/N	Displays in whole dollars the amount that was previously past due on this account. The amount is not shown for improved accounts.
Remarks Code	98	3	A/N	Displays the remarks code for this account. Refer to Appendix C, "Trade and Loan Type Codes," for a list of Remarks code definitions.
Method of Contact	101	1	A	Displays the method by which the subscriber wants to be contacted. Possible values are: P Phone (voice) M Mail only O Other

TR03—GLANCE Trade Segment

The TR03 segments display information about the subject's trade accounts. It differs from the standard TR01 segment because it displays suppression information.

GLANCE Trade (TR03) Segment				Total length: 315 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is TR03 .
Segment Length	5	3	N	Value is 315 .
Industry Code	8	2	A/N	Identifies the industry code of the subscriber whose account is included.
Member Code	10	8	A/N	Displays the reporting subscriber's member code.
Subscriber Name	18	24	A/N	Displays the subscriber's name.
Account Type	42	1	A	Displays the account type. Possible values are: R Revolving account O Open account C Overdraft/reserve checking account I Installment account M Mortgage account
Account Number	43	24	A/N	Displays the number of the account.
Account Designator	67	1	A	Displays the contractual ownership of the account. Possible values are: U Undesignated account I Individual account C Joint account A Authorized account P Participant on account S Co-signer on account M Primary borrower on account T Account relationship terminated X Consumer deceased
Date Opened	68	8	A/N	Displays the date the account was opened. The date format is CCYYMMDD.
Date Verified	76	8	A/N	Displays the date the trade was last verified. The date format is CCYYMMDD.
Trade Verification Indicator	84	1	A	Displays verification indicator code. Possible values are: A Automated account V Manual account M Manual account that has been frozen N No record X No reply E Earnings verified I Indirect S Slow answering D Declined T Account disputed
Date Closed	85	8	A/N	Displays the date the account was closed. The date format is CCYYMMDD.

GLANCE Trade (TR03) Segment				Total length: 315 bytes
Field	Displacement	Length	Type	Description
Date Closed Indicator	93	1	A	Indicates how the account was closed. Possible values are: C Account was closed normally F Account was closed because of charge-off or repossession (that is, if the MOP is 08, 8A, 8D, 8P, 8R, 09, 9B, or 9P)
Date Paid Out	94	8	A/N	Displays the date the account was paid out. The date format is CCYYMMDD.
Date of Last Activity	102	8	A/N	Displays the last date that activity occurred in this account. The date format is CCYYMMDD.
Current Manner of Payment	110	2	A/N	Displays the account's current MOP code. Refer to Appendix C, "Trade and Loan Type Codes," for a list of MOP codes.
Currency	112	1	A/N	Displays the type of currency used in this account. Possible values are: 1 United States currency 2 Canadian currency
Balance	113	9	A/N	Displays in whole dollars the balance remaining in this account.
High Credit	122	9	A/N	Displays in whole dollars either the highest amount ever owed in the account or the original balance owed.
Credit Limit	131	9	A/N	Displays in whole dollars the subject's credit limit for this account.
Terms: Duration	140	3	A/N	Displays the contract length for installment and mortgage loans. The number specified here relates to the schedule specified in the Frequency of Payment field. For example, a 24 in this field means 24 months if the Frequency of Payment is M but it means 24 years if the Frequency of Payment is Y. For minimum payments on revolving accounts, the value in this field is MIN.
Terms: Frequency of Payment	143	1	A/N	Specifies the frequency of payments required for this installment or mortgage loan. Possible values are: D Deferred P Payroll or deduction W Weekly (due every week) B Biweekly (due every two weeks) E Semimonthly (due twice a month) M Monthly (due every month) L Bimonthly (due every two months) Q Quarterly (due every three months) T Triennially (due every four months) S Semiannually (due twice a year) Y Annually (due every year) X Unspecified V Variable payment

GLANCE Trade (TR03) Segment				Total length: 315 bytes
Field	Displacement	Length	Type	Description
Terms: Amount of Payment	144	9	A/N	Specifies the amount the subject must pay on this installment or mortgage loan at the scheduled times (as specified in the Frequency of Payment field). The amount is specified in whole dollars. If there is no payment amount, this field is blank-filled. Note: ACB Metro Format standards require the figure in this field to be the monthly amount due regardless of the actual payment frequency. For example, a 30-year mortgage is expressed as 000000590 (the monthly amount due) even if the consumer makes annual payments of \$7080 or quarterly payments of \$1770.
Collateral	153	36	A/N	Displays the type of collateral provided by the subject.
Loan Type	189	2	A	Indicates the type of loan made by the credit grantor to the subject. Refer to Appendix C, "Trade and Loan Type Codes," for a list of loan types.
Remarks Code	191	3	A/N	Displays the remarks code that applies to this account. Refer to Appendix C, "Trade and Loan Type Codes," for a list of these codes.
Amount Past Due	194	9	A/N	Displays in whole dollars the amount that is past due on this account.
Number of Payments Past Due	203	2	N	Lists the number of payments that the subject is past due as reported by the credit grantor.
Maximum Delinquency Amount	205	9	A/N	Displays in whole dollars the amount the subject owed at maximum delinquency.
Maximum Delinquency Date	214	8	A/N	Displays the date when the subject's highest delinquency was reported.
Maximum Delinquency MOP	222	2	A/N	Displays the MOP that was in effect at the time of the subject's maximum delinquency.
Payment Pattern Start Date	224	8	A/N	Displays the start date of the subject's payment pattern. The date format is CCYYMMDD.
Payment Pattern	232	48	A/N	Displays the subject's payment history. Refer to Appendix C, "Trade and Loan Type Codes," for a description of the payment pattern logic.
Number of Months Reviewed	280	2	N	Displays the number of months for which the subject's payment history was reviewed. The results of the review are listed in the following three fields.
Times 30 Days Late	282	2	A/N	Displays the number of times in this time period the subject's payment was 30-59 days late.
Times 60 Days Late	284	2	A/N	Displays the number of times in this time period the subject's payment was 60-89 days late.
Times 90 Days Late	286	2	A/N	Displays the number of times in this time period the subject's payment was 90 or more days late.
Historical Counters Verification Indicator	288	1	A/N	Displays the method by which the above historical counters were verified. Possible values are: 1 Historical counters were provided by the credit grantor. 2 Historical counters were calculated.
Date Reported	289	8	A/N	Displays the date the information was reported. The date format is CCYYMMDD.

GLANCE Trade (TR03) Segment				Total length: 315 bytes
Field	Displacement	Length	Type	Description
Purge Date	297	8	A/N	Displays the date derogatory information was purged from the account. The date format is CCYYMMDD.
Suppression Date	305	8	A/N	Displays the date the account was suppressed. The date format is CCYYMMDD.
Suppression Indicator	313	3	A/N	Displays IND if this account is suppressed.

TU4E—Error Control Segment

The TU4E segment is the control record for error responses.

Error Control (TU4E) Segment				Total length: 62 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is TU4E .
Segment Length	5	3	N	Value is 062 .
Version Switch	8	1	N	Defines the TU40 FFR record version. T Possible values are: 0 TU40 version 0 1 TU40 version 1
Country Code	9	1	A/N	Accommodates Canadian access. Possible values are: 1 United States 2 Canada Note: Refer to the Canadian version of the TransUnion “Automated Inquiry User Manual” for special Canadian segments, table definitions, and so on.
Language Indicator	10	1	N	Defines the language used for print images and error message text: 1 English 2 Spanish (U.S. only) 3 French (Canada only)
User Reference Number	11	24	A/N	Associates an FFI with an FFR. This field contains the value sent in the FFI.
Bureau Market	35	2	N	Identifies the retailing bureau. This field contains the value sent in the FFI.
Bureau Submarket	37	2	A/N	Identifies the retailing bureau. This field contains the value sent in the FFI.
Industry Code	39	2	A/N	Identifies the customer’s type of business. This field contains the value sent in the FFI.
Member Code	41	8	A/N	Identifies the customer’s member code. This field contains the value sent in the FFI.
Transaction Date	49	8	A/N	Specifies the date the transaction was processed in the format CCYYMMDD.
Transaction Time	57	6	A/N	Specifies the time the transaction was processed in the format HHMMSS (Central Standard/Daylight Savings Time).

TU4R—Transaction Control Segment

Every FFR begins with a TU4R segment. This segment contains transaction identification such as language indicator, user reference number, market/submarket, and so on. Each FFR can have only one TU4R segment.

Transaction Control (TU4R) Segment				Total length: 62 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is TU4R .
Segment Length	5	3	N	Value is 062 .
Version Switch	8	1	N	Defines the TU40 FFR record version. Possible values are: 0 TU40 version 0 1 TU40 version 1
Country Code	9	1	A/N	Accommodates Canadian access. Possible values are: 1 United States 2 Canada Note: Refer to the Canadian version of the TransUnion “Automated Inquiry User Manual” for special Canadian segments, table definitions, and so on.
Language Indicator	10	1	N	Defines the language used for print images and error message text: 1 English 2 Spanish (U.S. only) 3 French (Canada only)
User Reference Number	11	24	A/N	Associates an FFI with an FFR. This field contains the value sent in the FFI.
Bureau Market	35	2	N	Identifies the retailing bureau. This field contains the value sent in the FFI.
Bureau Submarket	37	2	A/N	Identifies the retailing bureau. This field contains the value sent in the FFI.
Industry Code	39	2	A/N	Identifies the customer’s type of business. This field contains the value sent in the FFI.
Member Code	41	8	A/N	Identifies the customer’s member code. This field contains the value sent in the FFI.
Transaction Date	49	8	A/N	Specifies the date the transaction was processed in the format CCYYMMDD.
Transaction Time	57	6	A/N	Specifies the time the transaction was processed in the format HHMMSS.

TX01—Text Statement Segment

The TX01 segment contains text statements that are returned for a product. Multiple TX01 segments are returned if the text statement is too long to be contained in one segment.

Text Statement (TX01) Segment				Total length: 172 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is TX01 .
Segment Length	5	3	N	Value is 172 .
Content Type	8	3	A/N	Identifies the type of text returned. Possible types are: 001 Consumer Bill of Rights statement 002 PEER addendum 004 Decision Systems statement
Statement Identifier	11	3	A/N	Identifies the specific message issued for messages that have unique identifiers.
Filler	14	3	N	
Current Segment Number	17	3	N	Identifies the position, or sequence number, of the current TX01 segment. If the message text requires more than one segment, this value allows the segments to appear in the correct order. For example, if two TX01 segments are returned, the first segment has a value of 1 in this field and the second TX01 segment has a value of 2 .
Total Segment Number	20	3	N	Specifies the total number of TX01 segments in this FFR.
Statement Text	23	150	A/N	Contains the message text associated with the message code.

WS01—WATCH Satisfaction Segment

The WS01 segment identifies a WATCH criterion that was satisfied.

WATCH Satisfaction (WS01) Segment				Total length: 10 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is WS01 .
Segment Length	5	3	N	Value is 010 .
Satisfaction Criteria	8	3	A/N	Specifies the WATCH criterion that the file satisfied. Possible values are: 001 New address 002 New employment 003 New inquiry 004 Derogatory trade 005 New trade 006 Improved trade 007 Tradeline bankruptcy 008 New public record 009 Public record bankruptcy 010 Enhanced new inquiry 011 True name fraud consumer statement

YI01—Year of Issuance Segment

The YI01 segment displays the year that a specific ID was issued to the subject. The FFR can include one YI01 segment for each input subject.

Year of Issuance (YI01) Segment				Total length: 36 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is YI01 .
Segment Length	5	3	N	Value is 036 .
ID Qualifier	8	2	A/N	Specifies the ID to which this segment data applies. Possible values are: 1 SSN 2 Federal Tax ID 3 State ID 4 Driver's License
Message Code	10	6	A/N	Displays the 5503 or 5504 HAWK message code when HAWK is requested. If Fraud Detect is requested, this field is filled with blanks.
Source Indicator	16	1	A/N	Indicates the source of the message code. Possible values are: I Input F Subject file This field is used only for HAWK. If Fraud Detect is requested, the field is filled with blanks.
Number of Years Covered	17	2	A/N	Specifies the number of years covered by this transaction. For the 5503 HAWK message code, these are the valid values: 02 2 years 05 5 years 10 10 years A blank field indicates that no threshold was assigned.
Range of Years Issued: From	19	4	N	Displays the starting year of the range of years that the ID was issued for.
Range of Years Issued: To	23	4	N	Displays the ending year of the range of years that the ID was issued for.
State Code	27	2	A	Specifies the state in which the SSN was issued. Besides state codes, a customer might receive this value: XX Not requested or no derogatory information Note: This value is used only by Fraud ID-Tect and Total ID.
Sign of Age Obtained: From	29	1	A/N	Specifies whether the beginning age of the age range returned is a positive or a negative value. Possible values are: - Negative + Positive

Year of Issuance (YI01) Segment				Total length: 36 bytes
Field	Displacement	Length	Type	Description
Age Obtained: From	30	2	A/N	Specifies the beginning age in an age range. This is only present if the age is present.
Sign of Age Obtained: To	32	1	A/N	Specifies whether the ending age of the age range returned is a positive or a negative value. Possible values are: - Negative + Positive
Age Obtained: To	33	2	A/N	Specifies the ending age in an age range. This is only present if the age is present.
Issuance Year Status	35	2	A/N	Specifies the Fraud Detect message returned for this ID. The message indicates whether any evidence of possible fraud applies to the ID's year of issuance. If HAWK was requested, this field is filled with blanks. Possible Fraud Detect messages are: 01 Clear 02 Not Issued Yet 03 Assigned Before DOB 04 Pocket Book Number 05 SSN Issued Within Last 7 Years 06 Issued After Age 21 09 Not requested or no derogatory information

ZC01—ZIP Code Segment

The ZC01 segment displays information about a listed ZIP Code.

ZIP Code (ZC01) Segment				Total length: 22 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ZC01 .
Segment Length	5	3	N	Value is 022 .
Source Indicator	8	1	A	Specifies the source in which the ZIP Code appears. Possible values are: I Input F File
ZIP Code Qualifier	9	2	A/N	Indicates whether this ZIP Code is for the subject's home or employment. Possible values are: 1 Personal 2 Employment
ZIP Code Indicator	11	1	N	Indicates whether the ZIP Code is literal or estimated. Possible values are: 1 Input 2 Closest ZIP Code 3 Most common
ZIP Code Type	12	1	A/N	Specifies the type of ZIP Code. Possible values are: P PO Box U Unique A APO/FPO R Regular N New M Military* 9 Not requested or no derogatory information
ZIP Code	13	10	A/N	Displays the ZIP Code.

* Value is not used in Fraud Detect

Chapter 4. TU40 Processing Rules

This chapter describes TU40 processing and provides examples of how TU40 FFIs and FFRs look for various types of transactions. Topics in this chapter include:

- Understanding how to construct a TU40 FFI, including the importance of segment order in the TU40 format
- Sample FFI and FFR processing for these transaction types:
 - Single product for single subject
 - Single product for multiple subjects
 - Multiple products for single subject
 - Multiple products for multiple subjects
 - Geo Code for single subject, multiple addresses
 - An FFI that contains an error
 - A no-hit transaction

Understanding TU40 FFI Construction and Error Processing

All segments in the TU40 fixed format inquiry (FFI) have a fixed length and segment type. If you send an FFI that has an incorrect segment length or type, the result is a fatal error: TU40 returns a TU4E (error response) record and terminates the transaction.

Note

A TU4E record is returned instead of an FFR whenever an error occurs that results in the termination of a product request. The TU4E record identifies the product requested and up to five error conditions. Add-on products are not identified or delivered. For more information about generating errors and understanding error codes, refer to Appendix F, “Edit and Error Codes.”

Specific Segment Requirements of the TU40 FFI

Besides the general requirement that all segments must have a correct length and type, FFIs have specific segment requirements. The most important of these is that each FFI must begin with a TU4I (Transaction Control) segment and end with an ENDS segment. The TU4I segment contains subscriber and bureau identification information necessary to allow access to CRONUS², and the ENDS segment signals the end of the transaction. If the TU4I or ENDS segment is missing or invalid, a TU4E record is returned and the transaction is terminated.

The FFI also requires at least one RP01 (Request Product) segment that specifies a TransUnion product. If the product requires permissible purpose, the RP01 must also specify an inquiry type. Products that require permissible purpose include Credit Report, PEER, GAD, GLANCE, Score Report, TRACEplus, FACT, WATCH, ScoreSearch, IDSearch**plus**, ReTRACE**plus**, and ACQUIRE products.

² CRONUS, the Credit Reporting Online Network Utility System, is the current TransUnion information database.

The FCRA requires subscribers who resell credit information to identify the end users of the products they request. If the subscriber code does not contain this information, the FFI must include an EU01 (End Usage) segment, which immediately follows the TU4I segment. If a reseller sends an FFI that does not identify the end user in either the subscriber code or an EU01 segment, a TU4E record is returned.

After a TU40 FFI is sent, the default response is to return an FFR through the standard electronic response distribution method. If a subscriber wants results delivered in a different format or through a different distribution method, the FFI must include an OD01 (Output Delivery) segment. This segment is *not required* unless the subscriber wants to change these default settings.

Note

TU40 Version 0 customers can use the Version Switch field in the TU4I segment to send a TU40 v0 FFI and receive a TU40 v1 FFR.

Understanding TU40 FFI Segment Order

The ordering of the segments is very important. Addresses, for example, need to be positional: TU40 assumes the first address segment contains the current address, the second address segment contains the first previous address, and so on. If the address is personal, it must follow an SH01 (Subject Header) segment; if the address is an employment address, it must follow an EM01 (Employment) segment.

The subject data segments must follow an SH01 segment and each SH01 segment must be followed by at least one subject data segment. All other segment requirements are product-dependent. Refer to Chapters 5 and 6 of this manual for more details regarding required segments for specific products.

Sample Error Transaction

The following example shows an FFI that does not contain an ENDS segment:

Segment ID	Segment Name
TU4I	Transaction Control
SH01	Subject Header
NM01	Name
PI01	Personal Information
AD01	Address (Current)
PN01	Phone Number
AD01	Address (Previous)
RP01	Request Product
OR01	Optional Request
AI01	Additional Information
OD01	Output Delivery
RA01	Request Add-on Product (Score Model)
RA01	Request Add-on Product (Hawk)
RA01	Request Add-on Product (Look)

Transmitting the FFI on the previous page results in this error response:

Segment ID	Segment Name
TU4E	Transaction Error Response
PH01	Product Header
ERRC	Error
ENDS	End

Note

If the system detects an error before the product is identified, the resulting TU4E record does not specify a product in the PH01 segment.

Understanding Processing Rules for Multiple Subjects

For requests that include two subjects, follow these processing rules:

- When multiple subjects are requested for a product, a Subject Header segment (SH01) must be provided for each subject. The FFI must also include corresponding identification segments—Name (NM01), Personal Information (PI01), Address (AD01), Employment (EM01) and Phone (PN01)—for each subject.

The required identification segments vary by product. If a product requires name and address information, the FFI must include a name and address for each subject. There are no spouse fields defined for the NM01 and PI01 segments. This design supports the option of allowing different last names and addresses for different subjects.

- If the input data is valid for one subject but invalid for the other subject, the standalone product requested and any add-ons will be processed for the valid subject only. The invalid subject will be discarded.
- Currently, a maximum of two subjects will be allowed for each transaction. If more than two subjects are received, the first two subjects are processed and the additional subjects are ignored.

The following sections describe how to use the TU40 FFI to send different types of requests to TransUnion and show the FFR that is returned for each of these requests. Be advised that the following examples do not necessarily show all the possible segments that may be returned in the FFR for the products listed. For that information, refer to Chapter 5, “Standalone Product Descriptions,” and Chapter 6, “Add-on Product Descriptions.”

How to Request a Single Product for a Single Subject

The following example is a request for a single product (a Credit Report) for a single subject and shows the order in which these basic segments must be transmitted to TransUnion. This request also includes a request for three add-on products.

Segment ID	Segment Name
TU4I	Transaction Control
EU01	End User
VN01	Vendor
SH01	Subject Header
AF01	Access File
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
AD01	Address (Current)
PN01	Phone Number
AD01	Address (Previous)
EM01	Employment
AD01	Address
PN01	Phone Number
RP01	Request Product (Credit Report)
OR01	Optional Request
AI01	Additional Information
OD01	Output Delivery
RA01	Request Add-on Product (Score Model)
RA01	Request Add-on Product (Hawk)
RA01	Request Add-on Product (Look)
ENDS	End

How A Single Product for a Single Subject is Returned

The following list shows the order of segments that may be returned for a Credit Report with Empirica, HAWK, and LOOK (phone) for an individual subject, two files found.

Segment ID	Segment Name
TU4R	Transaction Control
PH01	Product Header (Credit Report)
SH01	Subject Header (Subject 1, File 1)
NM01	Name
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
SM01	Credit Summary
SD01	Credit Summary Description
PR01	Public Record
CL01	Collection
TR01	Trade
TM01	Trade Mop Totals
MI01	Miscellaneous Statement
CS01	Consumer Statement
IN01	Inquiry
OB01	Owning Bureau Identification
AO01	Add-on Status (Look)
LK01	LOOK
SA01	Subscriber Address
PN01	Phone Number
AO01	Add-on Status (Hawk)
MC01	Message Code
AO01	Add-on Status (Score Model)
SC01	Scoring (Empirica)
SH01	Subject Header (Subject 1, File 2)
NM01	Name
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
SM01	Credit Summary
SD01	Credit Summary Description
PR01	Public Record
CL01	Collection
TR01	Trade
TM01	Trade Mop Totals
CS01	Consumer Statement
IN01	Inquiry
OB01	Owning Bureau Identification

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Segment ID	Segment Name
AO01	Add-on Status (Look)
LK01	LOOK
SA01	Subscriber Address
PN01	Phone Number
AO01	Add-on Status (Hawk)
MC01	Message Code
AO01	Add-on Status (Score Model)
SC01	Scoring (Empirica)
ENDS	End

How to Request a Single Product for Multiple Subjects

The following example demonstrates a request for a single standalone product (Credit Report) for two subjects and shows the order in which these basic segments must be transmitted to TransUnion. The FFI also includes a request for two add-on products (a score model and HAWK).

Segment ID	Segment Name
TU4I	Transaction Control
EU01	End User
VN01	Vendor
SH01	Subject Header (Subject 1)
AF01	Access File
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
AD01	Address (Current)
PN01	Phone Number
AD01	Address (Previous)
EM01	Employment
AD01	Address
PN01	Phone Number
SH01	Subject Header (Subject 2)
AF01	Access File
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
AD01	Address (Current)
PN01	Phone Number
AD01	Address (Previous)
EM01	Employment
AD01	Address
PN01	Phone Number
RP01	Request Product (Credit Report)
OR01	Optional Request
AI01	Additional Information
OD01	Output Delivery
RA01	Request Add-on Product (Score Model)
RA01	Request Add-on Product (Hawk)
ENDS	End

How a Single Product for Multiple Subjects is Returned

The FFR returned in response to a successful multiple-product request identifies the requested product and returns the subject segments in the order in which the SH01 segments appeared in the FFI. Here is the logical order of segments returned in this type of FFR:

- Product Header (PH01) segment that identifies the standalone product delivered
- Segments that identify the first subject (these segments immediately follow the product header)
- Product-specific detail segments for the first subject
- Add-on Product Header (AO01) and associated detail segments for each add-on product returned for the first subject
- Segments that identify the second subject
- Product-specific detail segments for the second subject
- Add-on Product Header (AO01) and associated detail segments for each add-on product returned for the second subject

On the next page is a sample FFR that reflects this segment order.

The following example shows a successfully processed request for a Credit Report, Trans Alert, Empirica Score, and HAWK returned for two subjects:

Segment Id	Segment Name
TU4R	Transaction Control
PH01	Product Header
SH01	Subject Header (1st Subject, 1st File)
NM01	Name
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
SM01	Credit Summary
SD01	Credit Summary Description
TR01	Trade
TM01	Trade Mop Totals
IN01	Inquiry
OB01	Owning Bureau Identification
AO01	Add-on Status (Hawk)
QH01	Inquiry History
MC01	Message Code
AO01	Add-on Status (Empirica)
SC01	Scoring (Empirica)
SH01	Subject Header (2nd Subject, 1st File)
NM01	Name
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
SM01	Credit Summary
SD01	Credit Summary Description
TR01	Trade
TM01	Trade Mop Totals
IN01	Inquiry
OB01	Owning Bureau Identification
AO01	Add-on Status (Hawk)
QH01	Inquiry History
MC01	Message Code
AO01	Add-on Status (Empirica)
SC01	Scoring (Empirica)
ENDS	End

When the FFR Contains Edit Response Segments

The following example shows the result of a Credit Report request for two subjects in which:

- The FFI did not provide an AD01 segment for the second subject and
- The FFI includes a request for Edit Response segments—that is, the Edit Response Segment Requested field of the OR01 segment is set to **Y**

The system returns a product for the valid subject and an ED01 (edit response) segment for the second subject, which does not have an AD01 segment. An edit response segment is returned, however, *only* if an edit response is requested in the OR01 segment of the FFI. If no edit response is requested, nothing is returned for the invalid subject. For more information about the edit response segment, refer to Appendix F, “Edit and Error Codes.”

The following example shows a response that contains an edit response segment for an invalid subject (subject 2):

Segment Id	Segment Name
TU4R	Transaction Control
PH01	Product Header
SH01	Subject Header (1 st Subject, 1st File)
NM01	Name
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
SM01	Credit Summary
SD01	Credit Summary Description
TR01	Trade
TM01	Trade Mop Totals
IN01	Inquiry
OB01	Owning Bureau Identification
AO01	Add-on Status (Hawk)
QH01	Inquiry History
MC01	Message Code
AO01	Add-on Status (Empirica)
SC01	Scoring (Empirica)
SH01	Subject Header (2nd Subject)
ED01	Edit
ENDS	End

How to Request Multiple Products for a Single Subject

To request multiple standalone products, the FFI must include an RP01 segment for each product. If two or more products are requested in a single transaction but not all the products can be processed, the system delivers each product that can be processed and returns an error for each product that cannot be processed.

Products are returned in the order requested except that error records are returned first. For example, if a Credit Report and Fraud Detect are requested in this order but the Fraud Detect product cannot be processed, then the error record for Fraud Detect is returned first, followed by the Credit Report. However, if both products process successfully, then the Credit Report will be returned first followed by Fraud Detect.

The following example shows a request for multiple standalone products—Credit Report, HAWK and a Score Model, and Fraud Detect and the Fraud Model—for an individual subject.

Segment ID	Segment Name
TU4I	Transaction Control
EU01	End User
VN01	Vendor
SH01	Subject Header
AF01	Access File
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
ID01	Identification
CC01	Credit Card
AD01	Address (Current)
PN01	Phone Number
AD01	Address (Previous)
EM01	Employment
AD01	Address
PN01	Phone Number
RP01	Request Product (Credit Report)
OR01	Optional Request
AI01	Additional Information
OD01	Output Delivery
RA01	Request Add-on Product (Score Model)
RA01	Request Add-on Product (Hawk)
RP01	Request Product (Fraud Detect)
OD01	Output Delivery
RA01	Request Add-on Product (Fraud Model)
ENDS	End

How Multiple Products for a Single Subject Are Returned

The following shows an example of the segments that may be returned for a successfully processed Credit Report and Fraud Detect request for a single subject.

Segment ID	Segment Name
TU4R	Transaction Control
PH01	Product Header (Credit Report)
SH01	Subject Header
NM01	Name
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
SM01	Credit Summary
SD01	Credit Summary Description
PR01	Public Record
CL01	Collection
TR01	Trade
TM01	Trade Mop Totals
MI01	Miscellaneous Statement
CS01	Consumer Statement
IN01	Inquiry
OB01	Owning Bureau
AO01	Add-on Status (Hawk)
QH01	Inquiry History
MC01	Message Code
DC01	Deceased Information
YI01	Year Of Issuance
MT01	Message Text
AO01	Add-on Status (Score Model)
SC01	Scoring (Score Model)
ENDS	End
TU4R	Transaction Control
PH01	Product Header (Fraud Detect)
SH01	Subject Header
NM01	Name
PI01	Personal Information
DC01	Deceased Information
YI01	Year Of Issuance
AD01	Address (Home)
ZC01	Zip Code
CO01	County Information
PN01	Phone Number (Home)
ZC01	Zip Code
CO01	County Information
RE01	Region Analysis
EM01	Employment
AD01	Address (Business)

Segment ID	Segment Name
ZC01	Zip Code
CO01	County Information
PN01	Phone Number (Business)
DA01	Data Analysis (Phone)
ZC01	Zip Code
CO01	County Information
RE01	Region Analysis
ML01	Mileage
ID01	Identification
CC01	Credit Card
DA01	Data Analysis (Credit Card)
SV01	Subject Verification
AO01	Add-on Status
SC01	Scoring (Fraud Model)
ENDS	End

How to Request Multiple Products for Multiple Subjects

The following example shows a multiple-subject request that contains multiple RP01 segments, one each for Credit Report and for Fraud Detect. The example also contains multiple RA01 segments to request HAWK, a Score Model, and a Fraud Model as add-on products.

All products—both standalone and add-on—are returned for **both** subjects if all required product data is provided for both subjects.

Segment ID	Segment Name
TU4I	Transaction Control
EU01	End Usage
VN01	Vendor
SH01	Subject Header (Subject 1)
AF01	Access File
NM01	Name
PI01	Personal Information
ID01	Identification
CC01	Credit Card
AD01	Address
PN01	Phone Number
AD01	Address
EM01	Employment
AD01	Address
PN01	Phone Number
SH01	Subject Header (Subject 2)
AF01	Access File
NM01	Name
PI01	Personal Information
ID01	Identification
CC01	Credit Card
AD01	Address
PN01	Phone Number
AD01	Address
EM01	Employment
AD01	Address
PN01	Phone Number
RP01	Request Product (Credit Report)
OR01	Optional Request
AI01	Additional Information
OD01	Output Delivery
RA01	Request Add-on Product (Empirica)
RA01	Request Add-on Product (Hawk)
RP01	Request Product (Fraud Detect)
OD01	Output Delivery
RA01	Request Add-on Product (Fraud Model)
ENDS	End

How Multiple Products for Multiple Subjects Are Returned

The following FFR shows the segments returned for the successfully processed request for Credit Report (with Empirica and HAWK) and Fraud Detect (with the Fraud model) for multiple subjects.

Segment ID	Segment Name
TU4R	Transaction Control
PH01	Product Header (Credit Report)
SH01	Subject Header (Subject 1, File 1)
NM01	Name
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
SM01	Credit Summary
SD01	Credit Summary Description
PR01	Public Record
CL01	Collection
TR01	Trade
TM01	Trade Mop Totals
IN01	Inquiry
OB01	Owning Bureau Identification
AO01	Add-on Status (Hawk)
QH01	Inquiry History
MC01	Message Code
YI01	Year Of Issuance
AO01	Add-on Status (Empirica)
SC01	Scoring (Empirica)
SH01	Subject Header (Subject 2, File 1)
NM01	Name
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
SM01	Credit Summary
SD01	Credit Summary Description
PR01	Public Record
CL01	Collection
TR01	Trade
TM01	Trade Mop Totals
IN01	Inquiry
OB01	Owning Bureau Identification
AO01	Add-on Status (Hawk)
QH01	Inquiry History
MC01	Message Code
YI01	Year Of Issuance
AO01	Add-on Status (Empirica)
SC01	Scoring (Empirica)
ENDS	End
TU4R	Transaction Control
PH01	Product Header (Fraud Detect)

Segment ID	Segment Name
SH01	Subject Header (Subject 1)
NM01	Name
PI01	Personal Information
DC01	Deceased Information
YI01	Year Of Issuance
AD01	Address (Home)
ZC01	Zip Code
CO01	County Information
PN01	Phone Number (Home)
ZC01	Zip Code
CO01	County Information
RE01	Region Analysis
EM01	Employment
AD01	Address (Business)
ZC01	Zip Code
CO01	County Information
PN01	Phone Number (Business)
ZC01	Zip Code
CO01	County Information
RE01	Region Analysis
ML01	Mileage
ID01	Identification
DA01	Data Analysis (Driver's License)
CC01	Credit Card
DA01	Data Analysis (Credit Card)
AO01	Add-on Status
SC01	Scoring (Fraud Model)
SH01	Subject Header (Subject 2)
NM01	Name
PI01	Personal Information
DC01	Deceased Information
YI01	Year Of Issuance
AD01	Address (Home)
ZC01	Zip Code
CO01	County Information
PN01	Phone Number (Home)
ZC01	Zip Code
CO01	County Information
RE01	Region Analysis (Home)
EM01	Employment
AD01	Address (Business)
ZC01	Zip Code
CO01	County Information
PN01	Phone Number (Business)
ZC01	Zip Code
CO01	County Information
RE01	Region Analysis (Business)
ID01	Identification
DA01	Data Analysis (Drivers License)
CC01	Credit Card
DA01	Data Analysis (Credit Card)
SV01	Subject Verification
AO01	Add-on Status
SC01	Scoring (Fraud Model)
ENDS	End

Unsuccessful Request for Multiple Products for Multiple Subjects

The following example shows a request for Credit Report and Fraud Detect for two subjects containing no address information for either subject.

Segment ID	Segment Name
TU4I	Transaction Control
EU01	End Usage
VN01	Vendor
SH01	Subject Header (Subject 1)
AF01	Access File
NM01	Name
PI01	Personal Information
ID01	Identification
CC01	Credit Card
SH01	Subject Header (Subject 2)
AF01	Access File
NM01	Name
PI01	Personal Information
ID01	Identification
CC01	Credit Card
RP01	Request Product (Credit Report)
OR01	Optional Request
AI01	Additional Information
OD01	Output Delivery
RA01	Request Add-on Product (Score Model)
RA01	Request Add-on Product (Hawk)
RP01	Request Product (Fraud Detect)
OD01	Output Delivery
ENDS	End

Response to Unsuccessful Request

The FFI on the previous page requested Credit Report and Fraud Detect for two subjects but did not provide the address information, which is required for the Credit Report. The FFI does, however, provide enough information for the system to return a Fraud Detect product.

The response below shows these results: a TU4E is returned for the Credit Report request and an FFR (beginning with the TU4R segment) is returned for Fraud Detect.

Segment ID	Segment Name
TU4E	Error Control
PH01	Product Header (Credit Report)
ERRC	Error Code
ENDS	End
TU4R	Transaction Control
PH01	Product Header (Fraud Detect)
SH01	Subject Header (Subject 1)
NM01	Name
PI01	Personal Information
YI01	Year Of Issuance
ID01	Identification
DA01	Data Analysis (Driver's License)
CA01	Credit Card
SH01	Subject Header (Subject 2)
NM01	Name
PI01	Personal Information
YI01	Year Of Issuance
ID01	Identification
DA01	Data Analysis (Driver's License)
CC01	Credit Card
DA01	Data Analysis (Credit Report)
ENDS	End

Note

As shown in the example above, all error responses appear at the beginning of the output. If more than one product is requested, the FFR for the successfully processed product follows the error response for the unsuccessfully processed product.

How to Request a Credit Report with Geo Code Add-on

The following list shows the order of segments that may be sent to request a Credit Report with a Geo Code add-on.

Segment ID	Segment Name
TU4I	Transaction Control
EU01	End Usage
VN01	Vendor
SH01	Subject Header
AF01	Access File
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
ID01	Identification
AD01	Address (Current)
AD01	Address (Previous)
FA01	Address (Future)
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
RP01	Request Product
OR01	Optional Request
AI01	Additional Information
OD01	Output Delivery
RA01	Request Add-on
ENDS	End

Response to Geo Code Request

The following list shows the order of segments that may be returned for a Credit Report with Geo Code for an individual subject, with two files found.

Segment ID	Segment Name
TU4R	Transaction Control
PH01	Product Header (Credit Report)
SH01	Subject Header (Subject 1, File 1)
NM01	Name
PI01	Personal Information
TA01	Trans Alert
AD01	Current Address
FA01	Future Address
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
SM01	Credit Summary
SD01	Credit Summary Description
PR01	Public Record
CL01	Collection
TR01	Trade
TM01	Trade Mop Totals
MI01	Miscellaneous Statement
CS01	Consumer Statement
IN01	Inquiry
OB01	Owning Bureau Identification
AO01	Add-on Status (Geo Code- current addr)
GC01	Geo Code (current zip code)
AD01	Current Address
AO01	Add-on Status (Geo Code- future addr)
GC01	Geo Code (future zip code)
FA01	Future Address
SH01	Subject Header (Subject 1, File 2)
NM01	Name
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
PN01	Phone Number
SM01	Credit Summary
SD01	Credit Summary Description
PR01	Public Record
CL01	Collection
TR01	Trade
TM01	Trade Mop Totals
CS01	Consumer Statement
IN01	Inquiry
OB01	Owning Bureau Identification
ENDS	End

How a No-Hit (No Subject Found) Response is Returned

If a *no-hit* occurs (that is, a subject that matches the input information cannot be found), an FFR is returned that contains the original input information and the inquiry posted for the request. No credit segments are returned, however. The File Hit field in the SH01 segment indicates that the result is a no-hit.

The following example shows the FFR returned for a Credit Report request that results in a no-hit.

Segment ID	Segment Name
TU4R	Transaction Control
PH01	Product Header
SH01	Subject Header
NM01	Name
PI01	Personal Information
AD01	Address
IN01	Inquiry
ENDS	End

How to Request a Single Score Model for Two Subjects Using Model Data

The following example shows a request for a single score model on a Standalone product for a multiple subjects and shows the order in which these segments must be transmitted to TransUnion.

Segment ID	Segment Name
TU4I	Transaction Control
EU01	End User
VN01	Vendor
SH01	Subject Header (1 st subject)
AF01	Access File
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
ID01	Identification
CC01	Credit Card Information
MD01	Model Data – Total Gross Monthly Income Amount
MD01	Model Data – Applicant’s Age
MD01	Model Data – Length at Current Residence
MD01	Model Data – Type of Account at Contributor’s Institution
MD01	Model Data – Type of Account at Other Institution
AD01	Address (Current)
PN01	Phone Number
AD01	Address (Previous)
EM01	Employment
AD01	Address
PN01	Phone Number
SH01	Subject Header (2 nd subject)
AF01	Access File
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
ID01	Identification
CC01	Credit Card Information
MD01	Model Data – Total Gross Monthly Income Amount
MD01	Model Data – Applicant’s Age
MD01	Model Data – Length at Current Residence
MD01	Model Data – Type of Account at Contributor’s Institution
MD01	Model Data – Type of Account at Other Institution
AD01	Address (Current)
PN01	Phone Number
AD01	Address (Previous)
EM01	Employment
AD01	Address
PN01	Phone Number
RP01	Request Product (Standalone Product)
OR01	Optional Request
AI01	Additional Information
OD01	Output Delivery
RA01	Request Add-on Product (Custom Score Model)
ENDS	End

How to Request Two Score Models for a Single Subject Using Model Data

The following example shows a request for two score models on a standalone product for a single subject and shows the order in which these segments must be transmitted to TransUnion.

Segment ID	Segment Name
TU4I	Transaction Control
EU01	End User
VN01	Vendor
SH01	Subject Header
AF01	Access File
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
ID01	Identification
CC01	Credit Card
MD01	Model Data – Total Gross Monthly Income Amount
MD01	Model Data – Applicant’s Age
MD01	Model Data – Length at Current Residence
MD01	Model Data – Type of Account at Contributor’s Institution
MD01	Model Data – Type of Account at Other Institution
AD01	Address (Current)
PN01	Phone Number
AD01	Address (Previous)
EM01	Employment
AD01	Address
PN01	Phone Number
RP01	Request Product (Standalone Product)
OR01	Optional Request
AI01	Additional Information
OD01	Output Delivery
RA01	Request Add-on Product (Custom Score Model #1)
RA01	Request Add-on Product (Custom Score Model #2)
ENDS	End

Chapter 5. Standalone Product Descriptions

A standalone product is one that does not depend on any other product for its delivery. This chapter shows, for each TransUnion standalone product, the segments that are required to create an FFI for that product and the FFR segments that are returned in response.

Note

Refer to Chapter 4, “TU40 Processing,” for additional examples of TU40 FFIs, including examples of joint inquiries.

For each product described in this chapter, information is presented in this order:

- Brief description of the product.
- List of the segments that an FFI for this product can include. The segments are listed in the order in which they must be transmitted.
- Processing rules that affect this product’s FFI.
- List of the segments that an FFR returned for this product can include. The actual segments returned depend on the settings and information sent in the FFI.

The FFR segment list also includes segments for all add-on products that are available for return with this standalone product.

Below is a list of the products described in this chapter:

ACQUIRE	PEER
Credit Report	ReTRACE
FACT	ReTRACE plus
Fraud Detect / Fraud ID-Tect	Reverse Phone Append
GAD	SCORE REPORT
GLANCE	ScoreSearch
HAWKey	Total ID
IDSearch	TRACE
IDSearch plus	TRACE plus
LOOK UP	WATCH

ACQUIRE Product Descriptions—Various Product Codes

The ACQUIRE products are decisioning tools that analyze a consumer's credit file. They use more than 105 credit attributes and any online score model to perform either of these tasks:

- Determine whether or not the consumer qualifies for a client's product or service
- Determine whether or not to extend, decrease, restrict, or impose a deposit for delivery of the client's product or service

Clients select a specific set of credit attributes that fit their own credit policies.

These are the ACQUIRE products:

ACQUIRE Select—Product Code 09900

An automated cross-sell marketing tool used for prescreening consumers.

ACQUIRE Express—Product Code 09910

An automated decisioning tool used to decide whether or not a consumer qualifies for a credit product.

ACQUIRE Review—Product code 09920

An automated decisioning tool used to manage risk against a client's existing account holders.

ACQUIRE Connect—Product code 09930

An automated tool used to segment consumers into different levels of credit quality.

ACQUIRE Bundled Product—Product code 0P100

An automated tool that lets customers request two ACQUIRE products in one FFI. The FFI **must** request one of these product combinations:

- Two instances of ACQUIRE Select, or
- ACQUIRE Express and ACQUIRE Select, specified in that order

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request an ACQUIRE product in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Optional
VN01	Vendor	1 Per Transaction	Required
CD01 *	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	1 Per Product	Required
AF01	Access File	1 Per Subject	Conditionally Required
NM01	Name	1 Per Subject	Required
NM01	Secondary Name	1 Per Subject	Optional
NM01	Alias	3 Per Subject	Optional
PI01 **	Personal Information	1 Per Subject	Conditionally Required
ID01	Identification	1 Per Identification	Optional
CC01	Credit Card	1 Per Subject	Optional
AD01	Address	2 Per Subject	Required
PN01	Phone	1 Per Subject	Optional
EM01 **	Employment	1 Per Subject	Conditionally Required
AD01	Address	1 Per Employer	Optional
PN01	Phone	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
RP02 ***	Request Bundled Product	3 Per Product	Conditionally Required
DB01 **	Decision Customer Branch	1 Per Transaction	Conditionally Required
DI01	Decision Custom Information	99 Per Transaction	Optional
OR01	Optional Request	1 Per Product	Optional
AI01	Additional Information	1 Per Product	Optional
OD01 ****	Output Delivery	2 Per Product	Required (2)
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions

** Whether the PI01, EM01, and DB01 segments are required or optional depends on individual customer ACQUIRE policy requirements. Please consult with the project analyst assigned to the account.

*** For use in a Bundled Product transaction only. In the FFI for Bundled Product, the RP01 segment's product code must be 0P100. Specify the codes for the ACQUIRE products being requested in the RP02 segments. The segments following the RP02 are specific to the product being requested.

**** Each ACQUIRE transaction requires two OD01 segments, one for an FFR followed by one for a printed form. If the transaction includes RP02 segments (for Bundled Product), include two OD01 segments for the first RP02 segment and one OD01 for the second RP02 segment.

ACQUIRE Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to ACQUIRE processing rules.

SH01 (Subject Header) Segment

Only one subject is permitted because a Decision is performed only for an individual. To process a joint application, send two separate TU4I requests. An independent decision will be returned for each request.

RP01 (Request Product) Segment

To request a Decision product, one of the following product codes must be provided in the Request Product segment:

Product	Product Code
ACQUIRE Select	09900
ACQUIRE Express	09910
ACQUIRE Review	09920
ACQUIRE Connect	09930
ACQUIRE Bundled Product	0P100

Note

For the ACQUIRE Bundled Product, the RP01 segment's product code must be **0P100**. No FFR is returned specifically for a product code of 0P100. The FFRs returned are for the products requested in the RP02 segments.

RP02 (Request Product) Segment

This segment is used only for the ACQUIRE Bundled Product. To specify the ACQUIRE products desired in the bundled product, one of the following combinations of product codes must be provided in two separate RP02 segments:

RP02 Segment	Product	Product Code
First	ACQUIRE Select	09900
Second	ACQUIRE Select	09900
First	ACQUIRE Express	09910
Second	ACQUIRE Select	09900

The segments following the RP02 are specific to the product requested. If information is used in every product request (RP02), the information segment must be repeated for each product requested.

EM01 (Employment) Segment

The EM01 segment may be required or optional for customer use and is used to report consumer income:

- If the income needs to be reported, a value for the employer name is required. If the employer name is not available, enter NA in the field.

- When providing Income Amount and Pay Basis, use these guidelines:
 1. Provide annual income amount with a pay basis of Y (yearly). This is the preferred input method.
 2. If your input cannot follow guideline #1 above, pass the exact amount provided by the customer and the applicable pay basis. ACQUIRE converts the income amount as needed.
 3. If the amount provided by the customer is converted to a different basis, round up to the nearest 100 to help prevent a negative impact on the customer's decision process.

DB01 (Decision Systems Customer Branch) Segment

The DB01 segment may be required or optional for customer use. This segment, if not otherwise designated, identifies the branch of the requesting subscriber.

For the ACQUIRE Bundled Product, this segment is **required** for both ACQUIRE products in the request.

DI01 (Decision Systems Information Request) Segment

The DI01 segment is optional for customer use.

OD01 (Output Delivery Information) Segment

Customers must send two OD01 segments, one for an FFR delivery and one for a printed form. The segments must be sent in this order:

OD010104001 (for an FFR)

OD010201001 (for a printed form)

For the ACQUIRE Bundled Product, the first ACQUIRE request (RP02) in the transaction requires two OD01 segments, one for an FFR followed by one for a printed form. The second ACQUIRE request (RP02) in the transaction requires only one OD01 segment for an FFR.

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the Decision in the order of return. The shaded segments are the add-on product segments (score models) that can be returned with the Decision if requested. For detailed information regarding each of these segments, see Chapter 3.

For the ACQUIRE Bundled Product, a fixed format response (FFR) will be sent for each product requested. If two products were requested in the FFI using RP02 segments, two separate FFRs will be returned.

Segment ID	Segment Name
TU4R	Transaction Control
PH01	Product Header (Acquire)
DB01	Decision Systems Customer Branch
DI01	Decision Systems Custom Information
DR01*	Decision Systems Response
CS01	Consumer Statement
TX01	Text Statement
AO01	Add-on Status (Score Model)
SC01	Scoring
AO01	Add-on Status (Tie)
TC01	Tie Score
CH01	Characteristic
ENDS	End Segment

ACQUIRE Bundled Product FFRs

The DB01 segment is returned in both the first and the second FFRs. Minimally, the first FFR contains a blank DB01 segment and the second FFR contains a DB01 segment with the Reference Number for the first product that was returned. This allows the two separate FFRs to be linked together as one transaction.

For example, here is information that might be included in two FFRs returned in response to an ACQUIRE Bundled Product FFI:

First FFR	Second FFR
<ul style="list-style-type: none"> Product #1 John Smith SSN=123-45-6789 Decision: Approved Reference ID Product #1: ABCDEFGHIJK1 (Parent Ref ID – see DR01 segment, Reference Number) 	<ul style="list-style-type: none"> Product #2 John Smith SSN=123-45-6789 Decision: Declined Reference ID Product #2: MNOPQRSTUVWXYZ1 (Child Ref ID – see DR01 segment, Ref. Number) Parent Reference ID: ABCDEFGHIJK1 (see DB01 segment, Client Use 1)

The list on the following page shows each possible segment, in the order of return, that may be returned for a Credit Report with a Decision. The shaded segments are the add-on product segments that can be returned with the Decision if requested. For detailed information regarding each of these segments, refer to Chapter 3.

* Customers who use multiple matrices can choose to receive a DR01 segment for each matrix.

Segment ID	Segment Name
TU4R	Transaction Control
PH01	Product Header (ACQUIRE)
DB01	Decision Systems Customer Branch
DI01	Decision Systems Custom Information
DR01*	Decision Systems Response
CS01	Consumer Statement
TX01	Text Statement
AO01	Add-on Status (score model)
SC01	Scoring
AO01	Add-on Status (TIE)
TC01	TIE score
AO01	Add-on Status (characteristic)
CH01	Characteristic
CD01**	Customer Data
PH01	Product Header
SH01	Subject Header
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
SM01	Credit Summary
SD01	Credit Summary Description
PR01	Public Record
CL01	Collection
TR01	Trade
TM01	Trade MOP Totals
MI01	Miscellaneous Statement
CS01	Consumer Statement
IN01	Inquiry
TX01	Text Statement
OB01	Owning Bureau Identification
AO01	Add-on Status (Phone Append)
PN01	Phone Number
AO01	Add-on Status (LOOK)
LK01	LOOK
SA01	Subscriber Address
PN01	Phone Number
AO01	Add-on Status (HAWK)
QH01	Inquiry History
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01***	Message Text
AO01	Add-on Status (Score Model)
SC01	Scoring
ENDS	End Segment

* Customers who use multiple matrices can choose to receive a DR01 segment for each matrix.

** This segment is returned only if the CD01 segment is sent in the FFI.

*** This segment is returned only when requested. The default is to return messages in an MC01 segment.

Credit Report Product Description—Product Code 07000

The Credit Report is a compilation of data on an individual that is helpful in making decisions in many types of consumer transactions. The credit product contains various data about the consumer, including indicative information (name, addresses, and social security number), employment information, and the consumer's credit history. This information is obtained from credit grantors, public records, collection agencies, and employers.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a Credit Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
AF01	Access File	1 Per Subject	Conditionally Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
ID01	Identification	1 Per Subject	Optional
AD01	Address	2 Per Subject	Required
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address	1 Per Employer	Optional
PN01	Phone Number	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
AI01	Additional Information	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

Credit Report Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to Credit Report processing rules.

TU4I (Transaction Control) Segment

If the transaction is a point-of-sale transaction, be sure the Point-of-Sale Indicator field is set to Y.

EU01 (End Usage) Segment

If the Subscriber Code input in the TU4I segment indicates that the subscriber is required to provide end-user information, the FFI must include an EU01 segment directly after the TU4I segment. Only one EU01 segment can be provided. If more than one EU01 segment is received, a TU4E (error) record is returned.

RP01 (Request Product) Segment

To request a Credit Report, the product code 07000 must be provided in the Request Product segment. This product requires permissible purpose.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK, Score Models or LOOK), a Request Add-on Segment can be provided for each add-on product desired. If this segment is not used, the system will revert to the subscriber's default options for add-ons and score models.

The following add-on products can be requested on the Credit Report:

- Phone Append
- Inquiry Analysis
- HAWK
- LOOK
- Score Models
- Geo Code
- Trans Alert

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the Credit Report in the order of return. The shaded segments are the add-on product segments that can be returned for a Credit Report if add-ons are requested. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01	Subject Header
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
TA01	Trans Alert
AD01	Address
AD02	Extended Address
PN01	Phone Number
EM01	Employment
AD01	Address
SM01	Credit Summary
SD01	Credit Summary Description
PR01	Public Record
CL01	Collection
TR01	Trade
TM01	Trade MOP Totals
MI01	Miscellaneous Statement
CS01	Consumer Statement
IN01	Inquiry
OB01	Owning Bureau Identification
AO01	Add-on Status (Phone Append)
PN01	Phone Number
AO01	Add-on Status (LOOK)
LK01	LOOK
SA01	Subscriber Address
PN01	Phone Number
AO01	Add-on Status (HAWK)
QH01	Inquiry History
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01**	Message Text
AO01	Add-on Status (Score Model)
SC01	Scoring
AO01	Add-on Status (Geo Code)
GC01	Geo Code
AD01	Current Address
AO01	Add-on Status (Geo Code)
GC01	Geo Code
FA01	Future Address
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** This segment is returned only when requested. The default is to return messages in an MC01 segment.

FACT Product Description—Product Code 07700

FACT is a summarized and reformatted credit report that focuses on file activity within the past 12 months. FACT targets the skiptracing and collections industries to aid collectors in locating recently delinquent accounts before the accounts become seriously delinquent.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a FACT Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
AD01	Address	3 Per Subject	Required
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address	1 Per Employer	Optional
PN01	Phone Number	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

FACT Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to FACT processing rules.

EU01 (End Usage) Segment

If the Subscriber Code input in the TU4I segment indicates that the subscriber is required to provide end-user information, the FFI must include an EU01 segment directly after the TU4I segment. Only one EU01 segment can be provided. If more than one EU01 segment is received, a TU4E (error) record is returned.

RP01 (Request Product) Segment

To request a FACT Report, the product code 07700 must be provided in the Request Product segment. This product requires permissible purpose.

RA01 (Request Add-on) Segment

To request an add-on product, a Request Add-on segment can be provided for each add-on product desired except for Score Models. If this segment is not used, the system will revert to the subscriber's default options.

Note

Currently, the only way to request a Score Model for FACT is to be set up for the model in the FACT DEFAULT COMBINATION field of the subscriber file. A model cannot be requested at the transaction level for FACT.

The following add-on products can be requested on the FACT Report:

- Phone Append
- Inquiry Analysis
- HAWK
- Score Models
- Trans Alert

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the FACT Report in the order of return. The shaded segments are the add-on product segments that can be returned for a FACT report if add-ons are requested. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01	Subject Header
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
FI01	FACT Special Indicators
PR01	Public Record
FT01	FACT
CP01**	Compliance
MI01	Miscellaneous Statement
CS01	Consumer Statement
IN02	Inquiry
OB01	Owning Bureau Identification
AO01	Add-on Status (Phone Append)
PN01	Phone Number
AO01	Add-on Status (HAWK)
QH01	Inquiry History
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01	Message Text
AO01	Add-on Status (Score Model)
SC01	Scoring
AO01	Add-on Status (Score Model)
TC01	TIE Score
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** Compliance information may be returned when certain conditions are present on the consumer's file.

Fraud Detect/Fraud ID-Tect Product Description—Product Code 06600

Fraud Detect and Fraud ID-Tect are application validation and verification tools that analyze key input elements such as consumer name, home and business addresses, home and business phone numbers, social security number, driver's license number, and credit card number. The Fraud Detect and Fraud ID-Tect products are similar except for the number and types of messages that are returned:

Fraud Detect Returns all available messages, including both positive and negative messages. Fraud Detect **does not** perform subject verification.

Fraud ID-Tect Returns only negative messages, which the customer pre-selects. Fraud ID-Tect does not return message codes such as VALID, N/A, and UNAVAILABLE. Fraud ID-Tect **does** perform subject verification, which compares the input to the indicative information (the consumer's name, address, and social security number) found on the consumer's credit file.

The input information is processed against several databases and algorithmic routines that verify the accuracy of these elements individually and in combination with each other. For example, area code 312 with phone exchange 466 is valid for zip code 60661. Fraud Detect and Fraud ID-Tect are useful tools for all credit and service providers in fighting the perpetration of fraud.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a standalone Fraud Detect or Fraud ID-Tect Report in the order in which the segments must be transmitted.

Segment ID	Segment Name	Maximum Accepted	Required/ Optional
TU4I	Transaction Control	1 Per Transaction	Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	1 Per Transaction	Required
AF01	Access File	1 Per Subject	Conditionally Required
NM01	Name	1 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
ID01	Identification	1 Per Identification	Optional
CC01	Credit Card	1 Per Subject	Optional
AD01	Address	2 Per Subject (current and previous)	Optional
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address (employment)	1 Per Employer	Optional
PN01	Phone Number (employment)	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OD01	Output Delivery	1 Per Product	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

Fraud Detect/Fraud ID-Tect Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to Fraud Detect/Fraud ID-Tect processing rules.

RP01 (Request Product) Segment

To request a Fraud Detect or Fraud ID-Tect Report, the product code 06600 must be provided in the Request Product segment (RP01).

RA01 (Request Add-on) Segment

To request an add-on product (such as the Fraud Model), a Request Add-on Segment can be provided for each add-on product desired. If this segment is not used, the system will revert to the subscriber's default options for add-ons and score models.

This is the only add-on product that can be requested on Fraud Detect or Fraud ID-Tect:

- Fraud Model

* Required for TransUnion Net Access transactions.

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the Fraud Detect or Fraud ID-Tect report in the order of return. The shaded segments are the add-on product segments that can be returned for a Fraud Detect/Fraud ID-Tect report if add-ons are requested. For detailed information about these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01**	Subject Header
NM01	Name
PI01***	Personal Information
DC01	Deceased Information
YI01	Year Of Issuance
AD01	Address
ZC01	Zip Code
CO01	County Information
PN01	Phone Number
ZC01	Zip Code
CO01	County Information
RE01	Region Analysis
EM01	Employment
AD01	Address (employment)
ZC01	Zip Code (employment)
CO01	County Information (employment)
PN01	Phone Number (employment)
ZC01	Zip Code (employment)
CO01	County Information (employment)
RE01	Region Analysis
ML01	Mileage
ID01	Identification
DA01	Data Analysis
CC01	Credit Card
DA01	Data Analysis
SV01	Subject Verification
AO01	Add-on Status
SC01	Scoring (Fraud Model)
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** The SH01 segment returns only the first eleven bytes of information when it is returned for Fraud Detect. The remaining fields of this segment are used only by products that require permissible purpose.

*** No Date of Birth is returned in the Personal Information segment for Fraud Detect.

Fraud Detect/Fraud ID-Tect FFR Processing

The segments returned for Fraud Detect/Fraud ID-Tect depend upon the information provided.

YI01 (Year of Issuance) Segment

The YI01 segment is returned when an SSN is provided in the input. This segment returns information based on matching the input SSN against data received from the Social Security Administration. The resulting information varies, from stating that the SSN has not been issued yet to stating that the SSN is clear (valid).

PN01, ZC01, CO01 (Telephone Analysis) Segments

The Telephone Analysis segments can be returned if the consumer's home or business phone number is provided and matches TU's phone database

The PN01 (Phone Number) segment returns the phone number and type of phone. The ZC01 (ZIP Code) segment returns the city, state, and zip code. The CO01 (County Information) segment returns the city, state and county.

ZC01, CO01 (ZIP Code Analysis) Segments

The ZIP Code Analysis segments can be returned if the consumer's home or business ZIP Code is provided.

The information returned is the result of matching the consumer's ZIP Code against TransUnion's ZIP Code database. The information contained in the ZC01 (ZIP Code) segment includes the ZIP Code and ZIP Code type. The information in the CO01 (County Information) segment includes the city, state, county and county type.

RE01, ML01 (Region Analysis) Segments

Fraud Detect/Fraud ID-Tect performs a region analysis that compares several data elements and can return messages warning of potential fraud. The information is returned if the subscriber code is turned on for region analysis; the data returned is dependent on the input supplied. The Regional Analysis information is returned in the RE01 (Region Analysis) and ML01 (Mileage) segments.

DA01 (Data Analysis) Segment for Driver's License

The Data Analysis segment is returned for a driver's license if a driver's license number and a valid driver's license state code are provided.

Fraud Detect/Fraud ID-Tect determines whether the driver's license number conforms to that state's license format. For some states, Fraud Detect/Fraud ID-Tect compares the elements of the application that are embedded in the driver's license number. The information returned indicates if the driver's license is valid or invalid.

DA01 (Data Analysis) Segment for Credit Card

The Data Analysis segment is returned for a credit card account if the credit card number and expiration date are provided.

Fraud Detect/Fraud ID-Tect performs a check digit routine and determines if the credit card number is valid or not. Note that Fraud Detect/Fraud ID-Tect does not know to whom the card belongs, only if it conforms to the check digit routine.

DC01 (Deceased Information) Segment

Fraud Detect/Fraud ID-Tect returns the Deceased Information segment if the SSN is provided in the input. The SSN is matched to data received from the Social Security Administration.

The information returned is the name, address of last residence, address where death claim benefits were last sent, date-of-birth of the deceased, and the date the claim was filed.

SV01 (Subject Verification)

The SV01 (Subject Verification) segment is returned only for Fraud ID-Tect. The following conditions must exist:

- The subscriber code is turned on for subject verification analysis
- The consumer's name, address, social security number (optional), or suffix (optional) is provided.

The SV01 segment contains the results of the match between the inquiry's name, address, SSN, and suffix data and the same data present on the CRONUS³ database. CRONUS data is **not** returned but Fraud ID-Tect indicates whether or not the inquiry matches the CRONUS database data.

³ CRONUS, the Credit Reporting Online Network Utility System, is the current TransUnion information database.

GAD Product Description—Product Code 07003

The GAD Report was designed for use by federal, state, county, and city agencies that need information for governmental investigative purposes. GAD delivers only identifying information on a consumer, including subject's name, aliases, current and former addresses, and employment.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a GAD Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
AF01	Access File	1 Per Subject	Conditionally Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
AD01	Address	2 Per Subject	Required
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address	1 Per Employer	Optional
PN01	Phone Number	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

GAD Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to GAD processing rules.

RP01 (Request Product) Segment

To request a GAD Report, the product code 07003 must be provided in the Request Product segment. This product requires permissible purpose.

* Required for TransUnion Net Access transactions.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK), a Request Add-on Segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber’s default options for add-ons.

EU01 (End Usage) Segment

If the Subscriber Code input in the TU4I segment indicates that the subscriber is required to provide end-user information, the FFI must include an EU01 segment directly after the TU4I segment. Only one EU01 segment can be provided. If more than one EU01 segment is received, a TU4E (error) record is returned.

The following add-on products can be requested on the GAD Report:

- HAWK
- Trans Alert (no SSN messages are returned for GAD)

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the GAD report in the order returned. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01**	Subject Header
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01***	Personal Information
TA01	Trans Alert
AD01	Address
EM01****	Employment
AD01	Address
OB01	Owning Bureau Identification
AO01	Add-on Status (HAWK)
MC01	Message Code
MT01	Message Text
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.
 ** In File Since Date is not returned on GAD
 *** Neither Social Security Number nor Date of Birth are returned on GAD.
 **** No Salary or Pay Basis information is returned on GAD.

GLANCE Product Description—Product Code 08890

GLANCE allows contributors of tradeline data to access their own information on the TransUnion consumer database. TransUnion restricts the use of GLANCE by an internal validation process that links the customer's inquiry subscriber code to the tradeline subscriber code. This prevents one customer from using GLANCE to view the data of another. The linkage of inquiry to tradeline subscriber is not automatic. Customers who want to use GLANCE must first arrange for this linkage by contacting their local TransUnion bureau representative.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a GLANCE Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
AD01	Address	2 Per Subject	Required
RP01	Request Product	1 Per Product	Required
RS01	Reporting Subscriber	1 Per Product	Optional
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

GLANCE Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to GLANCE processing rules.

RP01 (Request Product) Segment

To request a GLANCE Report, the product code 08890 must be provided in the Request Product segment.

RS01 (Reporting Subscriber) Segment

If this segment is sent and the subscriber code is included, the first four positions of the subscriber code must be provided. To target a specific account for the search, this segment can also include an account number identifying the information to be reviewed.

Fixed Format Response (FFR)

The following list shows the possible segments that may be returned for the GLANCE product in the order of return. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH02**	Product Header
SH01	Subject Header
NM01	Name
NM01	Name (Secondary)
PI01	Personal Information
TA01	Trans Alert
AD01	Address
CL01	Collection
TR03***	Trade
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** Valid product results for GLANCE are:

GL0 No matching trade account found on subject's file

GL1 One or more matching trade accounts found on subject's file

*** Suppression information is returned in the Trade Account segment for GLANCE.

HAWKey Product Description—Product Code 06510

HAWKey is a search of the HAWK (Fraud Prevention) database. A HAWKey response returns HAWK messages related to input social security number, address, and telephone number for the subject being inquired upon. The Trans-alert message for an invalid ZIP Code is also returned.

Fixed Format Inquiry (FFI)

The following lists show each segment that can be used to request a HAWKey Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

To request HAWKey using name and address with (optionally) telephone number, social security number, and date of birth:

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	1 Per Transaction	Required
NM01	Name	1 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
AD01	Address	2 Per Subject (1 current address, 1 previous address)	Required
PN01	Phone Number	1 Per Subject	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
ENDS	End	1 Per Transaction	Required

To request HAWKey using SSN only:

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	1 Per Transaction	Required
PI01	Personal Information	1 Per Subject	Required
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

HAWKeye Processing Rules

This section describes how to use the RP01 segment with HAWKeye.

RP01 (Request Product) Segment

To request a HAWKeye Report, the product code 06510 must be provided in the Request Product segment. One of the following processing request options can also be provided:

Y Perform HAWK-Alert Search. Return Message Code segments only:

MC01 Message Code
DC01 Deceased Information
YI01 Year of Issuance*

M Perform HAWK-Alert Search. Return Message Text (MT01) segment only.

B Perform HAWK-Alert Search. Return both Message Code and Message Text segments:

MC01 Message Code
DC01 Deceased Information
YI01 Year of Issuance*
MT01 Message Text

* To trigger estimated age processing for the Year of Issuance message, the PI01 segment must include a date of birth or estimated age in addition to the subject's SSN.

The following add-on product can be returned for HAWKeye:

- Trans Alert (returns only ZIP Code messages)

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the HAWKey Report in the order returned. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01	Subject Header
NM01	Name (from input)
PI01	Personal Information (from input)
TA01	Trans Alert
AD01	Address (from input)
PN01	Phone Number (from input)
MC01	Message Code
DC01	Deceased Information
YI01	Year Of Issuance
MT01	Message Text
ENDS	End

HAWKey Messages

The HAWKey messages and message codes are listed in the following tables. The message tables are in this order: address, social security number, telephone number, and system messages.

TransUnion anticipates regular additions of new HAWKey messages. We therefore strongly recommend establishing default ranges where indicated (on the following message tables) to handle unrecognized new message codes.

* This segment is returned only if the CD01 segment is sent in the FFI.

HAWKey Address Messages

Address Message Text	Code
Input (Current/Previous) Address Is A Mail Receiving/Forwarding Service	0001
Input (Current/Previous) Address Is A Hotel/Motel Or Temporary Residence	0002
Input (Current/Previous) Address Is A Credit Correction Service	0003
Input (Current/Previous) Address Is A Camp Site	0004
Input (Current/Previous) Address Is A Secretarial Service	0005
Input (Current/Previous) Address Is A Check Cashing Service	0006
Input (Current/Previous) Address Is A Restaurant /Bar/Night Club	0007
Input (Current/Previous) Address Is A Storage Facility	0008
Input (Current/Previous) Address Is An Airport/Airfield	0009
Input (Current/Previous) Address Is A Truck Stop	0010
Input (Current/Previous) Address Is Commercial (<i>Default For Codes 001 - 0500</i>)	0500
Input (Current/Previous) Address Is A Correctional Institution	0501
Input (Current/Previous) Address Is A Hospital Or Clinic	0502
Input (Current/Previous) Address Is A Nursing Home	0503
Input (Current/Previous) Address Is Institutional (<i>Default For Codes 0501 - 1000</i>)	1000
Input (Current/Previous) Address Is A U.S. Post Office	1001
Input (Current/Previous) Address Is Governmental (<i>Default For Codes 1001 - 1500</i>)	1500
Input (Current/Previous) Address Has Been Reported As Suspicious (POB:#)	1501
Input (Current/Previous) Address Is A Multi-Unit Building Reported As Suspicious (Unit: #)	1502
Input (Current/Previous) Address Has Been Reported Misused And Requires Further Investigation (Unit: #)	1503
Input (Current/Previous) Address Is A Multi-Unit Building Reported Misused And Requires Further Investigation	1504
Input (Current/Previous) Address Is Reported Used In True-Name Fraud Or Credit Fraud	2001
Input (Current/Previous) Address Has Been Used (#) Times In The Last (30,60,90) Days On Different Inquiries	2501
Input (Current/Previous) Address Has Been Reported More Than Once (Up To 10 POB Or Unit #S)	2502
Input (Current/Previous) Address Is A Multi-Unit Building	2999
Input (Current/Previous) Address Requires Further Investigation (<i>Default For Codes 1501 - 3000</i>)	3000

Note

A POB or Unit # may follow any of the address messages except for messages 1502 and 1504. These two messages may have a Unit #, but never a POB.

All address messages have a maximum of one POB or Unit # returned with the exception of message 2502, which has a maximum of 10. Unit #s and POBs display in the following format: (Unit: #) or (POB: #). An example of message 2502 output is: (UNIT: 1A, 2B, 3C) or (POB: 22A, 34B).

HAWKey Social Security Number Messages

Social Security Number Message Text	Code
Input SSN reported as suspicious	3001
Input SSN reported misused and requires further investigation	3003
Input SSN reported used in true-name fraud or credit fraud	3501
Input SSN reported deceased	4001
Input SSN is not issued by social security administration	4501
Input SSN may have been issued in error; further investigation recommended	4502
Input SSN has been used (#) times in the last (30,60,90) days on different inquiries	5501
Input SSN issued within last (2,5,10) years; year issued: xxxx-xxxx; state: xx; (est. Age obtained: xx to xx)	5503
Input SSN issued:xxxx-xxxx; state:xx; (est. Age obtained:xx to xx)	5504
Input SSN requires further investigation (<i>Default for codes 3001 - 5999</i>)	
Input/file SSN used in death benefits claim for John Consumer. DOB:01/01/1950. DOC: 02/02/1990. Zip code where benefits were paid is 60657, most likely Chicago, IL. Zip code last residence is 60657, most likely Chicago, IL.	6000

HAWKey Telephone Number Messages

Telephone Number Text	Code
Input telephone number is an answering service	6001
Input telephone number is a cellular telephone	6002
Input telephone number is a public/pay telephone	6003
Input telephone number is commercial	6500
Input telephone number is institutional	7000
Input telephone number is governmental	7500
Input telephone number reported as suspicious	7501
Input telephone number reported misused and requires further investigation	7503
Input telephone number reported used in true-name fraud or credit fraud	8001
Input telephone number requires further investigation (default for codes 6001 – 9000)	9000

Note

All telephone messages are followed by the telephone number that matched the phone number on the HAWK database. The area code is derived from current address zip code and the telephone prefix. Telephone numbers display in the following format: (TEL: Area Code-Telephone Number). An example is (TEL:312-466-8761)

System-Generated Messages

Message Text	Code
Input address(es), SSN and/or telephone number reported together in suspected misuse.	9001
Input addresses, SSN, or telephone number reported by more than one source	9002
Clear for all searches performed	9997

System Availability Messages

Message Text	Code
Hawk system is partially available	9996
Hawk system is temporarily unavailable	9998
Hawk system access not authorized	9999

IDSearch Product Description—Product Code 07760

IDSearch is a specialized search based on input name, address, and social security number. The SSN is not required if the input includes a name and address. IDSearch delivers name and address for up to eight subjects. Additionally, IDSearch selects the subject that best matches the input data.

IDSearch also returns Trans Alert, HAWK, and Phone Append (if the subscriber is authorized for these products).

IDSearch can return an FFR or a print image.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request an IDSearch Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/ Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Required
AD01	Address	2 Per Subject	Optional
PN01	Phone Number	1 Per Subject	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

IDSearch Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to IDSearch processing rules.

RP01 (Request Product) Segment

To request an IDSearch Report, the product code 07760 must be provided in the Request Product segment.

* Required for TransUnion Net Access transactions.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK), a Request Add-on segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber's default options for add-ons.

The following add-on product can be requested on the IDSearch report:

- Phone Append
- HAWK
- Trans Alert

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the IDSearch Report in the order of return. The shaded segments are the add-on product segments that can be returned for an IDSearch report if add-ons are requested. For detailed information regarding these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH04**	Subject Header
NM01***	Name
NM01***	Name (Secondary)
PI01*** ****	Personal Information
TA01	Trans Alert
AD01***	Address
PN01	Phone Number
AO01	Add-on Status (HAWK)
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01	Message Text
AO01	Add-on Status (Phone Append)
PN01	Phone Number
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** One of the following Best Match Indicators is returned in the Subject Header segment for each subject returned:

- M** Best Match
- H** Hit—File is a Hit but not a Best Match file.
- N** No-Hit—No files are selected.

*** The data source value for these fields is always I (input).

**** No Date of Birth is returned in the Personal Information segment for IDSearch.

IDSearchplus Product Description—Product Code 07770

IDSearch**plus** is a specialized search based on input name, address, and social security number (SSN). The SSN is not required if the input includes a name and address. IDSearch**plus** delivers name and address for up to eight subjects. Additionally, IDSearch**plus** selects the subject that best matches the input data.

IDSearch**plus** also returns Trans Alert, HAWK, and Phone Append (if the subscriber is authorized for these products).

IDSearch**plus** differs from IDSearch in that it requires permissible purpose and contains the following data:

- Consumer statement (CS01 segment)
- Number of inquiries on the subject's file (NU01 segment)

IDSearch**plus** is not a credit report but an inquiry is posted.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request an IDSearch**plus** Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/ Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
AF01	Access File	1 Per Subject	Conditionally Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Required
AD01	Address	2 Per Subject	Optional
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address	1 Per Employer	Optional
PN01	Phone Number	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

IDSearchplus Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to IDSearchplus processing rules.

EU01 (End Usage) Segment

If the subscriber code provided in the TU4I segment indicates that the subscriber is required to provide end-user information, the FFI must include an EU01 segment directly following the TU4I segment. Only one EU01 segment can be provided per transaction. If more than one EU01 segment is received, a TU4E (error) record is returned.

RP01 (Request Product) Segment

To request an IDSearchplus Report, the product code 07770 must be provided in the Request Product segment.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK), a Request Add-on segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber's default options for add-ons.

The following add-on products can be requested on the IDSearchplus report:

- Phone Append
- HAWK
- Trans Alert

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the IDSearch**plus** Report in the order of return. The shaded segments are the add-on product segments that can be returned for an IDSearch**plus** report if add-ons are requested. For detailed information regarding these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH04**	Subject Header
NU01***	Number of
NM01	Name
NM01	Name (Secondary)
PI01****	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
CS01	Consumer Statement
OB01	Owning Bureau Information
AO01	Add-on Status (Phone Append)
PN01	Phone Number
AO01	Add-on Status (HAWK)
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01	Message Text
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** One of the following Best Match Indicators is returned in the Subject Header segment for each subject returned:

- M** Best Match
- H** Hit—File is a Hit but not a Best Match file.
- N** No-Hit—No files are selected.

*** One NU01 segment per subject is always included in the product response. If no file is found, the NU01 segment contains a zero (000) in the Number field.

**** No Date of Birth is returned in the Personal Information segment for IDSearch**plus**.

LOOK UP Product Description—Product Code 07600

LOOK UP decodes a single subscriber code and returns the name, address, and, if available, telephone number of the subscriber requested. If the subscriber requests a Phone Search Only, LOOK UP returns only a telephone number. LOOK UP does not generate a print image.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a LOOK UP in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
VN01	Vendor	1 Per Transaction	Optional
CD01 *	Customer Data	1 Per Transaction	Conditionally Required
RP01	Request Product	1 Per Product	Required
LK01	Look Up	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Format Type	Optional
ENDS	End	1 Per Transaction	Required

LOOK UP Processing Rules

This section describes how to use the RP01 (Request Product) segment with LOOK UP.

RP01 (Request Product) Segment

To request a LOOK UP report, the product code 07600 must be provided in the Request Product segment. This segment can also specify one of the following options in the Processing Request field:

- L** Perform Address and Phone Search
- P** Perform Phone Search Only

If neither of these options is specified, the system defaults to **L** and searches for both address and phone number.

* Required for TransUnion Net Access transactions.

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the LOOK UP report in the order of return. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH02**	Product Header
LK01	LOOK
SA01	Subscriber Address
PN01	Phone Number
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** Valid product results for LOOK UP are:

L00 Subscriber not found

Blanks Valid Transaction

PEER Product Description—Product Code 06000

The Pre-Employment Evaluation Report, or PEER, is used to make decisions about hiring, promoting, reassigning, or retaining an employee. It contains employment, tradeline, collection, public record, and inquiry information and provides an overview of how responsible this individual is regarding financial obligations.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a PEER Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
AF01	Access File	1 Per Subject	Conditionally Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
AD01	Address	2 Per Subject	Required
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address	1 Per Employer	Optional
PN01	Phone Number	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

PEER Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to PEER processing rules.

EU01 (End Usage) Segment

If the Subscriber Code input in the TU4I segment indicates that the subscriber is required to provide end-user information, the FFI must include an EU01 segment directly after the TU4I segment. Only one EU01 segment can be provided. If more than one EU01 segment is received, a TU4E (error) record is returned.

RP01 (Request Product) Segment

To request a PEER Report, the product code 06000 must be provided in the Request Product segment. This product requires permissible purpose.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK, Score Models, or LOOK), a Request Add-on segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber's default options for add-ons and score models.

The following add-on products can be requested on PEER:

- Phone Append
- HAWK
- LOOK
- Score Model - TIE only
- Trans Alert

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the PEER report in the order of return. The shaded segments are the add-on product segments that can be returned for a PEER report if add-ons are requested. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01	Subject Header
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01**	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
SM01	Credit Summary
SD01	Credit Summary Description
PR01	Public Record
CL01***	Collection
TR01***	Trade
TM01	Trade MOP Totals
MI01	Miscellaneous Statement
CS01	Consumer Statement
IN01	Inquiry
TX01****	Text Statement
OB01	Owning Bureau Identification
AO01	Add-on Status (Phone Append)
PN01	Phone Number
AO01	Add-on Status (LOOK)
LK01	LOOK
SA01	Subscriber Address
PN01	Phone Number
AO01	Add-on Status (HAWK)
MC01	Message Code
DC01	Deceased Information
MT01	Message Text
AO01	Add-on Status (TIE Score Model)
TC01	TIE Score
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** No Date of Birth is returned in the Personal Information segment for PEER.

*** No account numbers on trade data are returned on the PEER report.

**** A Consumer Rights Statement or Addendum may be returned in multiple text segments for PEER.

ReTRACE Product Description—Product Code 07400

ReTRACE is a special search that matches names and addresses to the TransUnion national database. Although it is not necessary to enter the subject's SSN, doing so greatly enhances the search process. This product is seen as a complement to TRACE because it returns name, address, SSN, and (if authorized) Trans Alert and HAWK messages.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a ReTRACE Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
AD01	Address	2 Per Subject	Required
PN01	Phone Number	1 Per Subject	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

ReTRACE Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to ReTRACE processing rules.

RP01 (Request Product) Segment

To request a ReTRACE report, the product code 07400 must be provided in the Request Product segment.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK), a Request Add-on segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber's default options for add-ons.

The following add-on products can be requested on the ReTRACE report:

- HAWK
- Trans Alert

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the ReTRACE report in the order returned. The shaded segments are the add-on product segments that can be returned for a ReTRACE report if add-ons are requested. For detailed information regarding these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01	Subject Header
NM01**	Name
NM01**	Name (Secondary)
NM01**	Name (Alias)
PI01*	Personal Information
TA01	Trans Alert
AD01**	Address
PN01	Phone Number
AO01	Add-on Status (HAWK)
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01	Message Text
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** The data source value for these fields is always I (input).

ReTRACEplus Product Description—Product Code 07450

ReTRACE**plus** is a special search that matches names and addresses to the TransUnion national database. Although it is not necessary to send the subject's SSN, doing so greatly enhances the search process.

ReTRACE**plus** is distinguished from ReTRACE in that it requires permissible purpose and contains the following data:

- Consumer Statement (CS01 segment)
- Number of inquiries on the subject's file (NU01 segment)

ReTRACE**plus** is not a credit report, but an inquiry is posted.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a ReTRACE**plus** report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
AF01	Access File	1 Per Subject	Conditionally Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
AD01	Address	2 Per Subject	Required
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address	1 Per Employer	Optional
PN01	Phone Number	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

ReTRACEplus Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to ReTRACEplus processing rules.

EU01 (End Usage) Segment

If the Subscriber Code input in the TU4I segment indicates that the subscriber is required to provide end-user information, the FFI must include an EU01 segment directly after the TU4I segment. Only one EU01 segment can be provided. If more than one EU01 segment is received, a TU4E (error) record is returned.

RP01 (Request Product) Segment

To request a ReTRACEplus, the product code 07450 must be provided in the Request Product segment.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK), a Request Add-on segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber's default options for add-ons.

The following add-on products can be requested on the ReTRACEplus:

- Phone Append
- HAWK
- Trans Alert

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the ReTRACE^{plus} in the order returned. The shaded segments are the add-on product segments that can be returned for a ReTRACE^{plus} if add-ons are requested. For detailed information regarding these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01	Subject Header
NU01**	Number Of
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
CS01	Consumer Statement
AO01	Add-on Status (Phone Append)
PN01	Phone Number
AO01	Add-on Status (HAWK)
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01	Message Text
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** One NU01 segment per subject is always included in the product response. If no file is found, the NU01 segment contains a zero (000) in the Number field.

Reverse Phone Append Product Description—Product Code 07040

Reverse Phone Append (RPA) is TransUnion’s non-permissible purpose product that uses only a phone number as input. Customers can use RPA to verify subjects using telephone and indicative information obtained from Acxiom’s Infobase TeleSource database. RPA can return business or residential name and address for the input phone number, specific characteristics of the phone number, and any restrictions associated with the number.

RPA does not return any credit information and does not yet return a print image.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a Reverse Phone Append report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	1 Per Product Request	Required
PN01	Phone	1 Per Subject	Required
RP01	Request Product (Reverse Phone Append)	1 Per Product	Required
OR01	Optional Request (to request error text)	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
ENDS	End	1 Per Transaction	Required

Reverse Phone Append Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to Reverse Phone Append processing rules.

RP01 (Request Product) Segment

To request a Reverse Phone Append report, the product code 07040 must be provided in the Request Product segment.

* Required for TransUnion Net Access transactions.

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for Reverse Phone Append in the order of return. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH03	Product Header
SH05	Subject Header
NM01	Name (data source = 'A' RPA file)
AD01	Address (data source = 'A' RPA file)
PN01	Phone Number (data source = 'A' RPA file)
ENDS	End Segment

If there is no match on the RPA database or the customer chooses not to receive a certain type of listing (such as unlisted subjects, business listings, or listings with no name), then only the input information, the product header, and the subject header are returned.

* This segment is returned only if the CD01 segment is sent in the FFI.

SCORE REPORT Product Description—Product Code 08000

The SCORE REPORT is designed for use by subscribers who do not want the detail supplied by the Credit Report and are primarily interested in summary information that helps to automate their decision-making process. Additionally, SCORE REPORT allows the subscriber to define customized messages that are returned on the report. These customized messages are associated with specific thresholds based on the results of one or two score models.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a SCORE REPORT in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01 *	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
AF01	Access File	1 Per Subject	Conditionally Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
AD01	Address	2 Per Subject	Required
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address	1 Per Employer	Optional
PN01	Phone Number	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
AI01	Additional Information	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

SCORE REPORT Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to SCORE REPORT processing rules.

TU4I (Transaction Control) Segment

If the transaction is a point-of-sale transaction, be sure the Point-of-Sale Indicator field is set to Y.

EU01 (End Usage) Segment

If the Subscriber Code input in the TU4I segment indicates that the subscriber is required to provide end-user information, the FFI must include an EU01 segment directly after the TU4I segment. Only one EU01 segment can be provided. If more than one EU01 segment is received, a TU4E (error) record is returned.

RP01 (Request Product) Segment

To request a Score Report, the product code 08000 must be provided in the Request Product segment. This product requires permissible purpose.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK or Score Models), a Request Add-on Segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber's default options for add-ons and score models.

The following add-on products can be requested on the Score Report:

- Phone Append
- HAWK
- Score Models
- Trans Alert

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the Score Report in the order of return. The shaded segments are the add-on product segments that can be returned for a Score Report if add-ons are requested. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01	Subject Header
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
SM01	Credit Summary
SD01	Credit Summary Description
CP01**	Compliance
CS01	Consumer Statement
MT01***	Message Text
OB01	Owning Bureau Identification
AO01	Add-on Status (Phone Append)
PN01	Phone Number
AO01	Add-on Status (HAWK)
QH01	Inquiry History
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01	Message Text
AO01	Add-on Status (Score Model)
SC01	Scoring
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** Compliance information may be returned when certain conditions are present on the consumer's file.

*** A subscriber's custom message may be returned in this segment.

ScoreSearch Product Description—Product Code 07750

ScoreSearch is a specialized search based on input name and social security number (SSN). ScoreSearch delivers personal information—name, alias, address, SSN, employment, date of birth, phone, and maternal name—for up to eight subjects.

ScoreSearch also returns Trans Alert, HAWK (if the subscriber is authorized for HAWK), a consumer statement if present on the file, and, if requested, score models on the best match file. The best match file is the highest-scoring file that fulfills name-matching requirements.

ScoreSearch can return an FFR or a print image.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a ScoreSearch Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/ Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	2 Per Transaction	Required
AF01	Access File	1 Per Subject	Conditionally Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional if Address is provided.
AD01	Address	2 Per Subject	Optional
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address	1 Per Employer	Optional
PN01	Phone Number	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

ScoreSearch Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to ScoreSearch processing rules.

TU4I (Transaction Control) Segment

If the transaction is a point-of-sale transaction, be sure the Point-of-Sale Indicator field is set to Y.

EU01 (End Usage) Segment

If the Subscriber Code input in the TU4I segment indicates that the subscriber is required to provide end-user information, the FFI must include an EU01 segment directly after the TU4I segment. Only one EU01 segment can be provided. If more than one EU01 segment is received, a TU4E (error) record is returned.

RP01 (Request Product) Segment

To request a ScoreSearch Report, the product code 07750 must be provided in the Request Product segment. This product requires permissible purpose.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK or a Score Model), a Request Add-on segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber's default options for add-ons and score models.

The following add-on products can be requested on the ScoreSearch Report:

- Phone Append
- HAWK
- Score Model
- Trans Alert

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the ScoreSearch report in the order of return. The shaded segments are the add-on product segments that can be returned for a ScoreSearch report if add-ons are requested. For detailed information regarding these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH04**	Subject Header
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
TA01	Trans Alert
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
CP01***	Compliance
CS01	Consumer Statement
OB01	Owning Bureau Information
AO01	Add-on Status (Phone Append)
PN01	Phone Number
AO01	Add-on Status (HAWK)
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01	Message Text
AO01	Add-on Status (Score Model)
SC01	Scoring
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** One of the following Best Match Indicators is returned in the Subject Header segment for each subject returned:

M Best Match

H Hit—File is a Hit but not a Best Match file.

N No-Hit—No files are selected.

*** Compliance information may be returned when certain conditions are present on the consumer's file.

Total ID Product Description—Product Code 06710

Total ID verifies the input data against the TransUnion consumer database, performs fraud analysis, and, if the input includes a telephone number, verifies the input data against data retained on the Reverse Phone Append file.

The Total ID logic compares the input consumer's first and last name, current address, previous address, telephone number, and SSN to the consumer database information. Then Total ID uses fraud analysis to verify the consumer's SSN issuance and home and employment telephone numbers against the consumer's current and employment zip codes, driver's license number format, and credit card number format (if contained in the input). Subscribers can select which negative fraud messages should be returned.

Using the input telephone number, the Reverse Phone Append (RPA) logic obtains the current name and address information associated with that number. The input's name and address is verified for a second time against the name and address associated with the telephone number on the RPA database.

Minimum input for Total ID is the consumer's name and address. The consumer's telephone number is an optional field but without a telephone number Total ID cannot search the RPA database. Additional input is optional.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a Total ID Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Maximum Accepted	Required/ Optional
TU4I	Transaction Control	1 Per Transaction	Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	1 Per Transaction	Required
AF01	Access File	1 Per Subject	Conditionally Required
NM01	Name	1 Per Subject	Required
PI01	Personal Information	1 Per Subject	Optional
ID01	Identification	1 Per Identification	Optional
CC01	Credit Card	1 Per Subject	Optional
AD01	Current address	1 Per Subject	Required
AD01	Previous Address	1 Per Subject	Optional
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address (employment)	1 Per Employer	Optional
PN01	Phone Number (employment)	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OD01	Output Delivery	1 Per Product	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

* Required for TransUnion Net Access transactions.

Total ID Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to Total ID processing rules.

RP01 (Request Product) Segment

To request a Total ID report, the product code 06710 must be provided in the Request Product segment.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK), a Request Add-on segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber's default options for add-ons.

The following add-on products can be requested on the Total ID report:

- HAWK
- Fraud Score Model

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the Total ID report in the order of return. The shaded segments are the add-on product segments that can be returned for a Total ID report if add-ons are requested. Add-ons are returned in this order: HAWK followed by Fraud Model. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01	Subject Header
PS01	Match Results
SV02	Subject Verification
NM01	Name
PI01	Personal Information
DC01	Deceased Information
YI01	Year Of Issuance
AD01	Input Address—Current
AD01	Input Address—Previous
ZC01	Zip Code
CO01	County Information
AD01	File Address—Current Address
AD01	File Address—Previous
PN01	Phone Number
ZC01	Zip Code
CO01	County Information
RE01	Region Analysis
EM01	Employment
AD01	Address (employment)
ZC01	Zip Code (employment)
CO01	County Information (employment)
PN01	Phone Number (employment)
ZC01	Zip Code (employment)
CO01	County Information (employment)
RE01	Region Analysis
ML01	Mileage
ID01	Identification
DA01	Data Analysis
CC01	Credit Card
DA01	Data Analysis
SV02	Subject Verification
NM01	Name
AD01	Address
PN01	Phone Number
AO01	Add-on Status (HAWK)
MC01	Message Code
MT01	Message Text
AO01	Add-on Status (Fraud Model)
SC01	Fraud Detect Model
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

TRACE Product Description—Product Code 07200

The TRACE product delivers each name and address on the database associated with the input social security number.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a TRACE Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	1 Per Transaction	Required
PI01	Personal Information	1 Per Subject	Required
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

TRACE Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to TRACE processing rules.

RP01 (Request Product) Segment

To request a TRACE Report, the product code 07200 must be provided in the Request Product segment.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK), a Request Add-on segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber's default options for add-ons.

The following add-on product can be requested on the TRACE report:

- HAWK

* Required for TransUnion Net Access transactions.

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the TRACE report in the order of return. The shaded segments are the add-on product segments that can be returned for a TRACE report if add-ons are requested. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01	Subject Header
NM01**	Name
NM01**	Name (Secondary)
PI01** ***	Personal Information
AD01**	Address
AO01	Add-on Status (HAWK)
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01	Message Text
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** The data source value for these fields is always F (file).

*** No Date of Birth is returned in the Personal Information segment for TRACE.

TRACEplus Product Description—Product Code 07300

The TRACEplus product delivers a name and address on the credit database associated with the input social security number. TRACEplus also provides alias, employment, date of birth, in-file-since-date, phone information, and consumer statements when available.

If more than one file is found matching the input SSN, no file is returned. In this case, only a field indicating the number of matching SSNs (up to six) is returned in the response.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to request a TRACEplus Report in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01 *	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	1 Per Transaction	Required
AF01	Access File	1 Per Subject	Conditionally Required
PI01	Personal Information	1 Per Subject	Required
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
RA01	Request Add-on	1 Per Add-on Product	Optional
ENDS	End	1 Per Transaction	Required

TRACEplus Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to TRACEplus processing rules.

EU01 (End Usage) Segment

If the Subscriber Code input in the TU4I segment indicates that the subscriber is required to provide end-user information, the FFI must include an EU01 segment directly after the TU4I segment. Only one EU01 segment can be provided. If more than one EU01 segment is received, a TU4E (error) record is returned.

* Required for TransUnion Net Access transactions.

RP01 (Request Product) Segment

To request a TRACEplus Report, the product code 07300 must be provided in the Request Product segment. This product requires permissible purpose.

RA01 (Request Add-on) Segment

To request an add-on product (such as HAWK), a Request Add-on segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber’s default options for add-ons.

The following add-on products can be requested on the TRACEplus report:

- Phone Append
- Inquiry Analysis
- HAWK

Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for the TRACEplus report in the order of return. The shaded segments are the add-on product segments that can be returned for a TRACEplus report if add-ons are requested. For detailed information regarding these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH01	Subject Header
NU01	Number of
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
CS01	Consumer Statement
AO01	Add-on Status (Phone Append)
PN01	Phone Number
AO01	Add-on Status (HAWK)
MC01	Message Code
DC01	Deceased Information
YI01	Year of Issuance
MT01*	Message Text
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

WATCH Product Descriptions—Product Codes 07111 / 07112 / 07113

WATCH is TU's individual level account monitoring service. The WATCH system checks selected consumer files for a series of conditions, such as a new address or a new inquiry. The subscriber selects the conditions from a predefined set of WATCH criteria. A WATCH satisfaction is returned when one or more of the selected criteria are satisfied.

Fixed Format Inquiry (FFI)

The following list shows each segment that can be used to set or delete a WATCH in the order in which the segments must be transmitted to TransUnion. For detailed information regarding each of these segments, see Chapter 2.

Segment ID	Segment Name	Current Maximum Accepted	Required/ Optional
TU4I	Transaction Control	1 Per Transaction	Required
EU01	End Usage	1 Per Transaction	Conditionally Required
VN01	Vendor	1 Per Transaction	Optional
CD01*	Customer Data	1 Per Transaction	Conditionally Required
SH01	Subject Header	1 Per Product	Required
NM01	Name	1 Per Subject	Required
NM01	Name (Secondary)	1 Per Subject	Optional
NM01	Name (Alias)	3 Per Subject	Optional
PI01	Personal Information	1 Per Subject	Optional
AD01	Address	2 Per Subject	Required
PN01	Phone Number	1 Per Subject	Optional
EM01	Employment	1 Per Subject	Optional
AD01	Address	1 Per Employer	Optional
PN01	Phone Number	1 Per Employer	Optional
RP01	Request Product	1 Per Product	Required
OR01	Optional Request	1 Per Product	Optional
OD01	Output Delivery	1 Per Output Type	Optional
ENDS	End	1 Per Transaction	Required

WATCH Set/Delete Processing Rules

Use the FFI segment information in this section to complete an FFI that best conforms to WATCH processing rules.

RP01 (Request Product) Segment

To set a WATCH, the product code 07111 must be provided in the Request Product segment. WATCH criteria are always defined in the subscriber validation file and not on the fixed-format inquiry record.

To delete a WATCH, the product code 07112 must be provided in the Request Product segment.

* Required for TransUnion Net Access transactions.

EU01 (End Usage) Segment

This segment is used for all WATCH Set Criteria. If the Subscriber Code input in the TU4I segment indicates that the subscriber is required to provide end-user information, the FFI must include an EU01 segment directly after the TU4I segment. Only one EU01 segment can be provided. If more than one EU01 segment is received, a TU4E (error) record is returned.

RA01 (Request Add-on) Segment

To request an add-on product (such as Phone Append), a Request Add-on segment can be provided for each add-on product desired. If this segment is not used, the system reverts to the subscriber's default options for add-ons.

The following add-on product can be requested on the WATCH report:

- Phone Append

WATCH Set Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for WATCH Set in the order of return. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH02	Subject Header
NM01	Name
NM01	Name (Secondary)
PI01	Personal Information
AD01	Address
PN01	Phone Number
ENDS	End

WATCH Delete Fixed Format Response (FFR)

The following list shows each possible segment that may be returned for WATCH Delete in the order of return. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH02	Subject Header
NM01	Name
NM01	Name (Secondary)
PI01	Personal Information
AD01	Address
PN01	Phone Number
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

WATCH Satisfaction Fixed Format Response (FFR)**Note**

WATCH Satisfaction criteria and WATCH output delivery information are specified in the subscriber's predefined options.

The following list shows each possible segment that may be returned for WATCH Satisfaction (product code 07113) in the order of return. The shaded segments are the add-on product segments that can be returned for a WATCH Satisfaction report if add-ons are requested. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
TU4R	Transaction Control
CD01*	Customer Data
PH01	Product Header
SH02	Subject Header
NM01	Name
PI01	Personal Information
AD01	Address
PN01	Phone Number
NM01	Name
NM01	Name (Secondary)
PI01	Personal Information
AD01	Address
PN01	Phone Number
CS01	Consumer Statement
WS01	WATCH Satisfaction
AD01	Address
WS01	WATCH Satisfaction
TR02	WATCH Trade
SA01	Subscriber Address
PN01	Phone Number
WS01	WATCH Satisfaction
PR01	Public Record
WS01	WATCH Satisfaction
IN01**	Inquiry
SA01	Subscriber Address
PN01	Phone Number
NM01	Name
AD01	Address
PN01	Phone Number
EM01	Employment
AD01	Address
WS01	WATCH Satisfaction
EM01	Employment
AD01	Address
WS01	WATCH Satisfaction
CS01	Consumer Statement
AO01	Add-on Status (Phone Append)
PN01	Phone Number
ENDS	End

* This segment is returned only if the CD01 segment is sent in the FFI.

** For WATCH Satisfaction, the IN11 segment does not return the inquiry type, loan type, or inquiry date.

Chapter 6. Add-on Product Descriptions

Add-on products are products that are returned only in conjunction with standalone products. That is, a subscriber can request an add-on product only as part of a request for a standalone product.

Most add-on product requests can be part of the FFI or can be set up as default options for a customer in the subscriber validation file (Geo Code is by default option only). These defaults specify whether the customer wants the add-on product (HAWK, for example) returned for every transaction or wants the product returned only when requested in the transaction.

Each add-on product returned in the FFR is preceded by an Add-on Status (AO01) segment that contains the product status and, if applicable, the search status. These status values describe whether the product is delivered as requested and if it was not, they describe the problem. See Chapter 3, “TU40 FFR Segments,” for a detailed description of the AO01 segment.

TU40 returns the add-on products in this order:

- Phone Append
- Inquiry Analysis
- LOOK
- HAWK
- Score Models
- Geo Code
- OFAC Advisor

Trans Alert is returned in the TA01 segment, which is positioned right after the PI01 segment.

This chapter contains descriptions of the above products. Each product description follows this structure:

- Describes briefly the FFI segments necessary to request the add-on
- Explains the processing rules that affect this add-on product’s FFI settings
- Lists the segments that an FFR that returns this add-on product can include

In addition, the HAWK and Score Models sections in this chapter list the messages and message codes returned for those add-ons.

The HAWK messages are listed in this order:

- Address messages
- Social security number messages
- Telephone number messages
- System messages

The Score Model section lists the messages and message codes for each of the score models in this order:

- New DELPHI
- ASSIST
- FACETS
- Spectrum
- DELPHI
- TransRisk Auto
- TransRisk-AM
- TransRisk Bankruptcy
- TransRisk New Account
- EDGE
- GEM
- PRECISION
- Telescope
- EMPIRICA
- RPM (Revenue Projection Model)
- HORIZON

Geo Code Product Description—Product Code 07011

Geo Code is an add-on product that is delivered with the Credit Report. It matches the input nine-digit ZIP Code to the Geo Code database and returns geographical coding information: latitude, longitude, census tract/block numbers, Metropolitan Statistical Area (MSA), and state and county codes. If the input ZIP Code has less than nine digits, Geo Code uses the input address information to locate the full nine-digit ZIP Code.

The Geo Code data is returned only with the consumer's highest scoring Credit Report file. If two files score equally and both have the same File Opened date, the Geo Code data is returned with the first Credit Report found. Geo Code information is returned only for current or future addresses, not previous addresses. Geo Code **can** return information for a no-hit. Be sure your code can handle the possibility of an AO01 segment returned with a no-hit.

The default is the setting in the subscriber validation file. Geo Code cannot be requested at the transaction level.

Fixed Format Inquiry (FFI)

Below is a sample FFI showing the order in which address segments must be sent. The current address is entered in the first AD01 segment, previous address in the second AD01 segment, and future address is entered in the FA01 segment following the AD01 segments.

Segment ID	Segment Name
TU4I	Transaction Control
EU01	End User
SH01	Subject Header
NM01	Name
NM01	Name (Secondary)
NM01	Name (Alias)
PI01	Personal Information
ID01	Identification
AD01	Address (Current)
AD01	Address (Previous)
FA01	Address (Future)
PN01	Phone Number
EM01	Employment
AD01	Employment Address
RP01	Request Product (Credit Report)
OR01	Optional Request
AI01	Additional Information
OD01	Output Delivery
RA01	Request Add-on Product (Hawk)
ENDS	End

Geo Code Processing Rules

This section describes some input processing rules for Geo Code:

- A request for Geo Code does **not** require an RA01 segment because control for this product is only through the subscriber validation file. If an RA01 segment is entered with product code 07011, the segment is ignored.
- Geo-Code requires a nine-digit ZIP Code. Input addresses with only a five-digit ZIP Code or no ZIP Code may still be geo coded if the input includes a valid address, city, and state code. Subscribers, however, should be encouraged to enter a nine-digit ZIP Code in order for Geo Code to return the proper results.
- Rural Route and Post Office Box addresses do **not** provide sufficient address data for obtaining the nine-digit ZIP Code. Rural Route and Post Office Box addresses without a nine-digit ZIP Code will be returned with a message of “Insufficient address.”
- Geo Code information can be returned for a current address, a future address, or a current address **and** a future address.
 - Joint requests may have two input current addresses geo-coded if the input addresses are different. If the current input addresses are the same, only one current address is geo-coded.
 - Only one future address may be geo-coded for an individual or joint inquiry. If more than one future address is received, the second future address segment is ignored.

Fixed Format Response (FFR)

The following list shows the possible segments that may be returned for Geo Code in the order returned.

Segment ID	Segment Name
AO01*	Add-on Status
GC01	Geo Code – Status and data
AD01	Current Address Entered
AO01*	Add-on Status
GC01	Geo Code – Status and data
FA01	Future Address Entered

* The AO01 segment returns one of the following codes in the Search Status field:

G00	Geo Code No Match
G01	Zip Code Invalid
G02	Geo Code Match
G03	Geo Code Search Not Performed When No Subject Found
G04	No Future Address Entered
G05	No Current Address Entered
G06	Insufficient Future Address
G07	Insufficient Current Address
G08	Geo Code Search Error
G09	Geo Code Not Available

HAWK Product Description—Product Code 06500

HAWK is an add-on product that is delivered with other TransUnion standalone products. HAWK was designed to prevent application fraud, defined as providing fraudulent information on an application to obtain credit or a service. The key data elements of HAWK are addresses, social security numbers and telephone numbers. These elements are matched against a national database of fraud data.

Note

HAWK can return information even for a no-hit. Be sure your code can handle the possibility of an AO01 segment returned with a no-hit.

Fixed Format Inquiry (FFI)

Use the RA01 segment to request HAWK in the FFI. Below is more information about the RA01 segment.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
RA01	Request Add-on Product	1 Per Add-on Product	Optional

HAWK Processing Rules

This section describes how to use the RA01 (Request Add-on) segment with HAWK.

RA01 (Request Add-on) Segment

To request HAWK, the product code 06500 must be provided in a Request Add-on Product segment. One of the following processing request options can also be provided:

Y Perform HAWK-Alert Search. This is the default option. Return any of the following segments:

QH01 (Inquiry History)

MC01 (Message Code)—all codes except 5503/5504/6000

DC01 (Deceased Information)—code 6000

YI01 (Year of Issuance)—code 5503 or 5504

M Perform HAWK-Alert Search. Return Message Text (MT01) segment only.

B Perform HAWK-Alert Search. Return any of the following segments:

QH01 (Inquiry History)

MC01 (Message Code)—all codes except 5503/5504/6000

DC01 (Deceased Information)—code 6000

YI01 (Year of Issuance)—code 5503 or 5504

MT01 (Message Text)

If one of these options is not provided, the system defaults to the subscriber validation file setting.

HAWK can currently be requested on the following primary products:

- Credit Report
- TRACE/TRACE**plus** Reports
- ReTRACE Report
- ReTRACE**plus** Report
- PEER Report
- GAD Report
- Score Report
- ScoreSearch Report
- IDSearch Report
- IDSearch**plus** Report
- FACT Report
- Total ID Report

Fixed Format Response (FFR)

The following list shows the possible segments that may be returned for the HAWK product in the order of return:

Segment ID	Segment Name
AO01	Add-on Status (Hawk)*
QH01	Inquiry History
MC01	Message Code
DC01	Deceased Information
YI01	Year Of Issuance
MT01	Message Text

- Included in the Add-on Status Segment may be one of the following HAWK Search Status codes:

- H01** Available and Clear
- H02** Partially Available

HAWK Messages

The HAWK messages and message codes are listed in the following tables. The message tables are in this order:

- Address
- Social security number
- Telephone number
- System messages.

TransUnion anticipates regular additions of new HAWK messages. We therefore strongly recommend establishing default ranges where indicated (on the following message tables) to handle unrecognized new message codes

HAWK Address Messages

Address Message Text	Code
Input/File (Current/Previous) Address Is A Mail Receiving/Forwarding Service	0001
Input/File (Current/Previous) Address Is A Hotel/Motel Or Temporary Residence	0002
Input/File (Current/Previous) Address Is A Credit Correction Service	0003
Input/File (Current/Previous) Address Is A Camp Site	0004
Input/File (Current/Previous) Address Is A Secretarial Service	0005
Input/File (Current/Previous) Address Is A Check Cashing Service	0006
Input/File (Current/Previous) Address Is A Restaurant /Bar/Night Club	0007
Input/File (Current/Previous) Address Is A Storage Facility	0008
Input/File (Current/Previous) Address Is An Airport/Airfield	0009
Input/File (Current/Previous) Address Is A Truck Stop	0010
Input/File (Current/Previous) Address Is Commercial (Default For Codes 001 - 0500)	0500
Input/File (Current/Previous) Address Is A Correctional Institution	0501
Input/File (Current/Previous) Address Is A Hospital Or Clinic	0502
Input/File (Current/Previous) Address Is A Nursing Home	0503
Input/File (Current/Previous) Address is Institutional (Default For Codes 0501 - 1000)	1000
Input/File (Current/Previous) Address Is A U.S. Post Office	1001
Input/File (Current/Previous) Address Is Governmental (Default For Codes 1001 - 1500)	1500
Input/File (Current/Previous) Address Has Been Reported As Suspicious (POB:#)	1501
Input/File (Current/Previous) Address Is A Multi-Unit Building Reported As Suspicious (Unit: #)	1502
Input/File (Current/Previous) Address Has Been Reported Misused And Requires Further Investigation (Unit: #)	1503
Input/File (Current/Previous) Address Is A Multi-Unit Building Reported Misused And Requires Further Investigation (Unit: #)	1504
Input/File (Current/Previous) Address Is Reported Used In True-Name Fraud Or Credit Fraud	2001
Input (Current/Previous) Address Has Been Used (#) Times In The Last (30,60,90) Days On Different Inquiries	2501
Input/File (Current/Previous) Address Has Been Reported More Than Once (Up To 10 POB Or Unit #S)	2502
Input/File (Current/Previous) Address Is A Multi-Unit Building	2999
Input/File (Current/Previous) Address Requires Further Investigation (Default For Codes 1501 - 3000)	3000

Note

A POB or Unit # may follow any of the address messages except for messages 1502 and 1504. These two message may have a Unit #, but never a POB.

All address messages have a maximum of one POB or Unit # returned with the exception of message 2502, which has a maximum of 10. Unit #s and POBs display in the following format: (Unit: #) or (POB: #). An example of message 2502 output is: (UNIT: 1A, 2B, 3C) or (POB: 22A, 34B).

HAWK Social Security Number Messages

Social Security Number Message Text	Code
Input/file SSN reported as suspicious	3001
Input/file SSN reported misused and requires further investigation	3003
Input/file SSN reported used in true-name fraud or credit fraud	3501
Input/file SSN reported deceased	4001
Input/file SSN is not issued by social security administration	4501
Input/file SSN may have been issued in error; further investigation recommended	4502
Input SSN has been used (#) times in the last (30,60,90) days on different inquiries	5501
Input/file SSN associated with additional subject(s) not displayed/returned	5502
Input/file SSN issued within last (2,5,10) years; year issued: xxxx-xxxx; state: xx; (est. Age obtained: xx to xx)	5503
Input/file SSN issued:xxxx-xxxx; state:xx; (est. Age obtained:xx to xx)	5504
Input/file SSN requires further investigation (Default for codes 3001 - 5999)	5999
Input/file SSN used in death benefits claim for John Consumer. DOB:01/01/1950. DOC: 02/02/1990. Zip code where benefits were paid is 60657, most likely Chicago, IL. Zip code last residence is 60657, most likely Chicago, IL.	6000

Note

The 5502 Message will not be returned with the following products: TRACE, TRACEplus, GAD and HAWKeye. The 5503/5504 message will not be returned for PEER.

HAWK Telephone Number Messages

Telephone Number Text	Code
Input/file telephone number is an answering service	6001
Input/file telephone number is a cellular telephone	6002
Input/file telephone number is a public/pay telephone	6003
Input/file telephone number is commercial	6500
Input/file telephone number is institutional	7000
Input/file telephone number is governmental	7500
Input/file telephone number reported as suspicious	7501
Input/file telephone number reported misused and requires further investigation	7503
Input/file telephone number reported used in true-name fraud or credit fraud	8001
Input/file telephone number requires further investigation (Default for codes 6001-9000)	9000

Note

All telephone messages are followed by the telephone number that matched the phone number on the HAWK database. The area code is derived from the ZIP Code in the current address and the telephone prefix. Telephone numbers display in the following format: (TEL: Area Code-Telephone Number). An example is (TEL: 312-466-8761)

No telephone messages are returned with TRACE, IDSearch or GAD products.

System-Generated Messages

Message Text	Code
Input address(es), SSN and/or telephone number reported together in suspected misuse.	9001
Input/file addresses, SSN, or telephone number reported by more than one source	9002
Security Alert or consumer statement on file relates to true name fraud or credit fraud	9003
Clear for all searches performed	9997

Note

9003 Messages will not be returned with these products: GAD, IDSearch, IDSearch**plus**, ReTRACE, ReTRACE**plus**, TRACE, and HAWKeye.

System Availability Messages

Message Text	Code
Hawk system is partially available	9996
Hawk system is temporarily unavailable	9998
Hawk system access not authorized	9999

Inquiry Analysis Product Description—Product Code 07640

Inquiry Analysis enables the customer to view a comprehensive history of inquiries made to a consumer's file within the past 90 days. This add-on product is a collection tool that customers use to receive additional address and phone information to help locate and contact debtors.

Fixed Format Inquiry (FFI)

Use the RA01 segment to request Inquiry Analysis in the FFI. Below is more information about the RA01 segment.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
RA01	Request Add-on Product	1 Per Add-on Product	Optional

Inquiry Analysis Processing Rules

This section describes how to use the RA01 (Request Add-on) segment with Inquiry Analysis.

RA01 (Request Add-on) Segment

To request Inquiry Analysis, the product code 07640 can be provided in the Request Add-on Product segment. If an RA01 Segment is not provided, the system defaults to the setting in the subscriber validation file.

Inquiry Analysis can currently be requested on the following primary products:

- Credit Report
- FACT
- TRACEplus

Fixed Format Response (FFR)

The following list shows the possible segments that may be returned for Inquiry Analysis in the order returned. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
AO01	Add-on Status
IN01	Inquiry
NM01	Name
NM01	Name (maternal)
AD01	Address (current)
AD01	Address (previous)
PN01	Phone Number
EM01	Employment

LOOK Product Description—Product Code 07500

LOOK is an add-on product that is available on reports that display public record, collection, tradeline, and inquiry data from a consumer's credit file. This add-on product provides information needed to contact subscribers if there are questions regarding the information presented in the report.

Fixed Format Inquiry (FFI)

Use the RA01 segment to request LOOK in the FFI. Below is more information about the RA01 segment.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
RA01	Request Add-on Product	1 Per Add-on Product	Optional

LOOK Processing Rules

This section describes how to use the RA01 (Request Add-on) segment with LOOK.

RA01 (Request Add-on) Segment

To request LOOK, the product code 07500 can be provided in the Request Add-on Product segment with one of the following processing request options:

- L** Perform Address and Phone Search
- P** Perform Only Phone Search
- N** Do not perform LOOK

If an RA01 Segment is not provided, the system defaults to the setting in the subscriber validation file.

LOOK can currently be requested on the following primary products:

- Credit Report
- PEER Report

Fixed Format Response (FFR)

The following list shows the possible segments that may be returned for LOOK in the order returned. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
AO01	Add-on Status
LK01	LOOK
SA01	Subscriber Address
PN01	Phone Number

OFAC Advisor Product Description—Product Code 06800

OFAC Advisor is an add-on product that identifies a subject as possibly being involved with individuals and entities that are prohibited by the U.S. Treasury from doing business in or with the United States.

Name elements from the customer's request are matched against Thomson Financial Publishing's FACFile database. Output is delivered in the form of unparsed messages that contain varying information about the matches: source; entity name, title and type; address; embargoed country with which subject is affiliated; industry standard identifiers, if applicable; and SSN, date of birth, and passport number if available.

Note

OFAC Advisor can return information even for a no-hit. Be sure your code can handle the possibility of an AO01 segment returned with a no-hit.

Fixed Format Inquiry (FFI)

OFAC Advisor is available only by default, per the subscriber validation setting.

OFAC Advisor Processing Rules

OFAC Advisor can currently be returned on the following primary products:

- Acquire
- Credit Report
- Total ID

Fixed Format Response (FFR)

The following list shows the possible segments that may be returned for the OFAC Advisor product in the order of return:

Segment ID	Segment Name
AO01	Add-on Status (OFAC Advisor)*
MT01	Message Text

* Included in the Add-on Status Segment may be one of the following OFAC Advisor Search Status codes:

- 001** OFAC Advisor Clear
- 002** OFAC Advisor Hit
- 003** OFAC Advisor Unavailable

Phone Append Product Description—Product Code 07030

Phone Append is an add-on product that searches an additional source, Permlink, for a consumer's current personal phone number and area code. Phone Append is available on many TU products, including the Credit Report. If included in the product request, Phone Append performs the search for all subjects returned for that product.

Note

If the consumer's phone number is not retrieved from Permlink, the phone number that exists on the CRONUS⁴ database is returned.

Fixed Format Inquiry (FFI)

Use the RA01 segment to request Phone Append in the FFI. Below is more information about the RA01 segment.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
RA01	Request Add-on Product	1 Per Add-on Product	Optional

Phone Append Processing Rules

This section describes how to use the RA01 (Request Add-on) segment with Phone Append.

RA01 (Request Add-on) Segment

To request Phone Append, the product code 07030 should be provided in the Request Add-on Product segment. If an RA01 Segment is not provided, the system defaults to the setting in the subscriber validation file.

Phone Append can currently be requested on the following primary products:

- Credit Report
- PEER Report
- TRACEplus
- FACT
- Score Report
- IDSearch
- IDSearchplus
- ReTRACEplus
- ScoreSearch
- WATCH Satisfaction

⁴ CRONUS, the Credit Reporting Online Network Utility System, is the current TransUnion information database.

Fixed Format Response (FFR)

The following list shows the possible segments that may be returned for Phone Append in the order returned. For detailed information regarding each of these segments, see Chapter 3.

Segment ID	Segment Name
AO01*	Add-on Status
PN01	Phone Number

* For a Phone Append search, the AO01 segment returns one of the following codes in the Search Status field:

- P01** Area code and phone number found on new source.
- P02** Area code and phone number found on new source but phone number is unlisted or unpublished.
- P03** Area code and phone number not found on new source. Phone number on CRONUS database is returned.
- P04** Area code and phone number not found on new source or on CRONUS database. No phone number is returned.
- P05** New source not available. Telephone number on CRONUS database is returned.
- P06** New source not available. Telephone number on CRONUS database not found. No telephone number is returned.

Score Model Product Description—Various Product Codes

Score Models are online empirical scoring systems that analyze information about an individual to derive a numeric score that is predictive of certain behavior. A score model is an *add-on to a primary product* such as the Credit Report.

Note

The Score Model product codes that are available for use in TU40 are listed later in this section. Combination numbers cannot be used to request multiple score models.

Fixed Format Inquiry (FFI)

Use the RA01 segment to request a score model in the FFI. Below is more information about the RA01 segment.

Segment ID	Segment Name	Current Maximum Accepted	Required/Optional
RA01	Request Add-on	1 Per Add-on Product	Optional

Score Model Processing Rules

This section describes how to use the RA01 (Request Add-on) segment with a score model.

RA01 (Request Add-on) Segment

The subscriber can use any of the following three methods to trigger a score model request for a standalone product:

- The subscriber can request one or more score models by sending Request Add-on (RA01) segments for each standalone product in the inquiry (FFI). The subscriber sends one RA01 segment for each score model desired.

If an RA01 segment is received and the product code is valid and authorized for the subscriber, then the requested score model is created and delivered and no default is used. The presence of at least one valid and authorized score model request in an RA01 segment overrides the subscriber's default. No more than 16 score models are accepted for a single standalone product.

- The subscriber can have an assigned default algorithm that is returned for each product request. The subscriber does not send a score request in the inquiry.
- If the subscriber has an assigned default algorithm combination and the inquiry contains only invalid or unauthorized score models, the default is delivered. This happens only if **none** of the inquiry's RA01 segments (with a Product Type of A) has a valid or authorized product code.

Overriding the Default Request

If the subscriber has been assigned a default algorithm combination but no score model is desired for the product requested, then one RA01 segment (with a Product Type of A) can be provided with a 00000 product code. This overrides the default and no score model is created or delivered.

Fixed Format Response (FFR)

The following lists show the segments that may be returned for score models in the order of return. The lists vary depending on whether the request is for a score model, model characteristics, both score and characteristics, or TIE. For detailed information regarding each of these segments, see Chapter 3.

The following segments are returned for a score model when only a score is delivered:

Segment ID	Segment Name
AO01	Add-on Status
SC01	Scoring

The following segments are returned for a custom score model when only the model characteristics are delivered:

Segment ID	Segment Name
AO01	Add-on Status
CH01	Characteristic

The following segments are returned for a custom score model when both a score and the model characteristics are delivered:

Segment ID	Segment Name
AO01	Add-on Status
SC01	Scoring
CH01	Characteristic

The following segments are returned for the TIE Model:

Segment ID	Segment Name
AO01	Add-on Status
TC01	TIE Score

Sample FFI / FFR With Score Models Requested and Returned

Following is an example of an inquiry that uses the first described method (sending RA01 segments in the FFI) to request three different score model products. The right side of the table shows how the score models are returned with a Credit Report for one individual.

Segment ID	Segment Name (FFI)	Segment ID	Segment Name (FFR)
TU4I	Transaction Control	TU4R	Transaction Control
SH01	Subject Header	PH01	Product Header
NM01	Name	SH01	Subject Header
NM01	Name (Secondary)	NM01	Name
NM01	Name (Alias)	NM01	Name (Secondary)
PI01	Personal Information	NM01	Name (Alias)
ID01	Identification	PI01	Personal Information
AD01	Address	TA01	Trans Alert
PN01	Phone Number	AD01	Address
EM01	Employment	PN01	Phone Number
AD01	Address	EM01	Employment
PN01	Phone Number	AD01	Address
RP01	Request Product (Credit)	PN01	Phone Number
OR01	Optional Request	SM01	Credit Summary
AI01	Additional Information	SD01	Credit Summary Description
OD01	Output Delivery	PR01	Public Record
RA01	Request Add-on (Empirica)	CL01	Collection
RA01	Request Add-on (Tie)	TR01	Trade
RA01	Request Add-on (Model X)	TM01	Trade MOP Totals
ENDS	End	MI01	Miscellaneous Statement
		CS01	Consumer Statement
		IN01	Inquiry
		TX01	Text Statement
		OB01	Owning Bureau
		AO01	Add-on Status (Empirica)
		SC01	Scoring
		AO01	Add-on Status (TIE)
		TC01	Tie Score
		AO01	Add-on Status (Model X)
		CH01	Characteristic
		CH01	Characteristic
		CH01	Characteristic
		CH01	Characteristic
		CH01	Characteristic
		CH01	Characteristic
		CH01	Characteristic
		CH01	Characteristic
		CH01	Characteristic
		ENDS	End

Using TransUnion Links

TransUnion Links is an online service that initiates one or more scoring models or characteristics based on the output of another scoring model. Customers can choose Generic Links or Custom Links:

Generic Links Allows customers to choose from any combination of online models currently available at TransUnion. Customers can select a currently available generic link product or can identify a new combination of models to link. Generic Links are available for any customer to use but they cannot be customized.

Custom Links Allows customers to choose from any combination of online models and/or characteristics and to incorporate custom thresholds. All Custom Links require programming by TransUnion and are available for use only by that customer.

TransUnion Links always returns three sets of AO01/SC01 FFR segments: one for Links and one for each linked product. The CH01 segment can also be returned for a linked custom model. The following example shows the AO01/SC01 segments that are returned in response to a request for the current Generic Links combination of EMPIRICA and TransRisk New Account:

Segment ID	Segment Name
AO01	Add-on Status (Generic Links)
SC01	Scoring
AO01	Add-on Status (EMPIRICA)
SC01	Scoring
AO01	Add-on Status (TransRisk New Account)
SC01	Scoring

Testing TransUnion Links

Customers can send an inquiry with the product code 00Y02 to test Generic Links. The request pulls a TransRisk New Account score; if the score is 600 or above, a TransRisk Auto score is also pulled.

TransUnion Links is available as an add-on to these products:

- Credit Report
- FACT
- Score Report

Using TransUnion Data Connect

TransUnion Data Connect (TUDC) is a service that allows subscribers to select up to 180 pre-programmed characteristics to be returned with the credit report.

The subscriber selects characteristics with the assistance of a TransUnion sales representative. The sales representative fills out the TUDC Characteristic Request form and submits it to the local bureau. The bureau updates the subscriber's code to reflect the addition of the TUDC characteristic model.

Fixed Format Inquiry (FFI)

Use the RA01 (Request Add-on) segment to request a characteristic model. In the RA01 segment set these field values:

In this RA01 Field	Set this value
Add-on Product Code	00R14
Processing Request	<i>Leave blank</i>
Product Type	A

Note

The subscriber does not need to include the RA01 segment for TUDC if this model is the default in the subscriber settings.

TUDC Processing Rules

Before calling the characteristic model, the mainframe program performs three checks. If any one of these checks is found, an error message is returned:

Check Performed For	Returns This Error Message if Found
Unauthorized Request	***TUDC CHARACTERISTICS: NOT SCORED: UNAUTHORIZED REQUEST***
Invalid Score Request	***MODEL REQUEST 00999: INVALID SCORE REQUEST***
Suppressed File	***TUDC CHARACTERISTICS: NOT SCORED***

If any one of the above conditions is found, TU40 returns the AO01 segment and does **not** return a CH01 (Characteristic) segment. No further processing is performed.

The table that begins on the next page shows the possible characteristics that TUDC can return.

	Characteristic	Group	Description	Length	Decimal	Default
			Group A – Credit Experience			
1.	AT01	A	Number of trades	3	0	Zero
2.	AT07	A	Number of trades opened in past 12 months	3	0	Zero
3.	AT09	A	Number of trades opened in past 24 months	3	0	Zero
4.	AT20	A	Months since oldest account opened	3	0	Blank
5.	AT21	A	Months since most recent account opened	3	0	Blank
6.	AT29	A	Number of trades with current balance > 0	3	0	Zero
7.	BC01	A	Number of bankcard accounts	3	0	Zero
8.	BC02	A	Number of currently active bankcard accounts	3	0	Zero
9.	BC07	A	Number of bankcard accounts opened in past 12 months	3	0	Zero
10.	BC09	A	Number of bankcard accounts opened in past 24 months	3	0	Zero
11.	BC20	A	Months since oldest bankcard account opened	3	0	Blank
12.	BC21	A	Months since most recent bankcard account opened	3	0	Blank
13.	BC29	A	Number of bankcard accounts with current balance > 0	3	0	Zero
14.	BI01	A	Number of bank installment accounts	3	0	Zero
15.	BI07	A	Number of bank installment accounts opened in past 12 months	3	0	Zero
16.	BI09	A	Number of bank installment accounts opened in past 24 months	3	0	Zero
17.	BI20	A	Months since oldest bank installment account opened	3	0	Blank
18.	FI01	A	Number of finance installment trades	3	0	Zero
19.	FI07	A	Number of finance installment trades opened in past 12 months	3	0	Zero
20.	FI09	A	Number of finance installment trades opened in past 24 months	3	0	Zero
21.	G103	A	Months since most recent activity	3	0	Blank
22.	G104	A	Months on file	4	0	Blank
23.	IN01	A	Number of installment accounts	3	0	Zero
24.	IN02	A	Number of currently active installment trades	3	0	Zero
25.	IN07	A	Number of installment accounts opened in past 12 months	3	0	Zero
26.	IN09	A	Number of installment accounts opened in past 24 months	3	0	Zero
27.	IN20	A	Months since oldest installment account opened	3	0	Blank
28.	IN21	A	Months since most recent installment accounts opened	3	0	Blank
29.	IN29	A	Number of installment trades with balance >0	3	0	Zero
30.	MT01	A	Number of mortgage accounts	3	0	Zero

Chapter 6. Add-on Product Descriptions

	Characteristic	Group	Description	Length	Decimal	Default
31.	MT02	A	Number of currently active mortgage accounts	3	0	Zero
32.	MT07	A	Number of mortgage accounts opened in past 12 months	3	0	Zero
33.	MT09	A	Number of mortgage accounts opened in past 24 months	3	0	Zero
34.	MT20	A	Months since oldest mortgage account opened	3	0	Blank
35.	MT21	A	Months since most recent mortgage account opened	3	0	Blank
36.	MT29	A	Number of mortgage accounts with current balance greater than 0	3	0	Zero
37.	PF01	A	Number of personal finance accounts	3	0	Zero
38.	PF02	A	Number of currently active personal finance accounts	3	0	Zero
39.	PF07	A	Number of personal finance accounts opened in past 12 months	3	0	Zero
40.	PF09	A	Number of personal finance accounts opened in past 24 months	3	0	Zero
41.	PF20	A	Months since oldest personal finance account opened	3	0	Blank
42.	PF21	A	Months since most recent personal finance account opened	3	0	Blank
43.	PF29	A	Number of personal finance trades with balance >0	3	0	Zero
44.	RE01	A	Number of revolving accounts	3	0	Zero
45.	RE02	A	Number of currently active revolving trades	3	0	Zero
46.	RE07	A	Number of revolving trades opened in past 12 months	3	0	Zero
47.	RE09	A	Number of revolving trades opened in past 24 months	3	0	Zero
48.	RE20	A	Months since oldest revolving account opened	3	0	Blank
49.	RE21	A	Months since most recent revolving account opened	3	0	Blank
50.	RE29	A	Number of revolving trades with balance>0	3	0	Zero
51.	RT01	A	Number of retail trades	3	0	Zero
52.	RT02	A	Number of currently active retail trades	3	0	Zero
53.	RT07	A	Number of retail trades opened in past 12 months	3	0	Zero
54.	RT09	A	Number of retail trades opened in past 24 months	3	0	Zero
55.	RT20	A	Months since oldest retail account opened	3	0	Blank
56.	RT21	A	Months since most recent retail account opened	3	0	Blank
57.	RT29	A	Number of retail trades with current balance > 0	3	0	Zero
58.	S011	A	Number of open trades	3	0	Zero
59.	S012	A	Number of open revolving trades	3	0	Zero

	Characteristic	Group	Description	Length	Decimal	Default
			Group B – # of Accts. Since Delinquency			
60.	CT11	B	Number of accounts opened since the last maximum delinquency of 60 day past due	3	0	Zero
61.	CT13	B	Number of accounts opened since the last charge off	3	0	Zero
62.	CT17	B	Number of accounts with a maximum delinquency of 60 days past due since opening a new account (within the last 12 months)	3	0	Zero
63.	CT18	B	Number of accounts with a maximum delinquency of 90 days plus past due since opening a new account (within the last 12 months)	3	0	Zero
64.	CT19	B	Number of accounts Charged Off since opening a new account (within the last 12 months)	3	0	Zero
			Group C - Delinquency			
65.	AT03	C	Number of satisfactory trades	3	0	Zero
66.	AT36	C	Months since most recent delinquency	3	0	Blank
67.	BC03	C	Number of satisfactory bankcard accounts	3	0	Zero
68.	BC36	C	Months since most recent bankcard delinquency	3	0	Blank
69.	BI03	C	Number of satisfactory bank installment accounts	3	0	Zero
70.	CH0F	C	Number of charge-offs within 12 months (CHGOFF12)	2	0	Zero
71.	COAM	C	Highest collection amount owed in 12 months (COLAMT12)	7	0	Zero
72.	COIQ	C	Number of collection inquiries (COLINQ)	2	0	Zero
73.	COLL	C	Number of collections in 12 months (COLLEC12)	2	0	Zero
74.	CXMD	C	Number of collections in 12 months excluding medical collections (COLXMD12)	2	0	Zero
75.	FI03	C	Number of satisfactory finance installment trades	3	0	Zero
76.	G001	C	Number of 30 day ratings	3	0	Zero
77.	G002	C	Number of 60 day ratings	3	0	Zero
78.	G003	C	Number of 90 day ratings	3	0	Zero
79.	G004	C	Number of 120 day ratings	3	0	Zero
80.	G006	C	Number of 30 and 60 day ratings	3	0	Zero
81.	G007	C	Number of 30 day or worse ratings	3	0	Zero
82.	G008	C	Number of 60 day or worse ratings	3	0	Zero
83.	G009	C	Number of 90 day or worse ratings	3	0	Zero
84.	G016	C	Number of trades with maximum delinquency 02 in last 3 months	3	0	Zero
85.	G017	C	Number of trades with maximum delinquency 02 in last 6 months	3	0	Zero
86.	G018	C	Number of trades with maximum delinquency 02 in last 12 months	3	0	Zero

	Characteristic	Group	Description	Length	Decimal	Default
87.	G020	C	Number of trades with maximum delinquency 02 in last 24 months	3	0	Zero
88.	G021	C	Number of trades with maximum delinquency 03 in last 3 months	3	0	Zero
89.	G022	C	Number of trades with maximum delinquency 03 in last 6 months	3	0	Zero
90.	G023	C	Number of trades with maximum delinquency 03 in last 12 months	3	0	Zero
91.	G025	C	Number of trades with maximum delinquency 03 in last 24 months	3	0	Zero
92.	G026	C	Number of trades with maximum delinquency 04 in last 3 months	3	0	Zero
93.	G027	C	Number of trades with maximum delinquency 04 in last 6 months	3	0	Zero
94.	G028	C	Number of trades with maximum delinquency 04 in last 12 months	3	0	Zero
95.	G030	C	Number of trades with maximum delinquency 04 in last 24 months	3	0	Zero
96.	G041	C	Number of trades ever 30 or more days past due	3	0	Zero
97.	G042	C	Number of trades ever 60 or more days past due	3	0	Zero
98.	G043	C	Number of trades ever 90 or more days past due	3	0	Zero
99.	G044	C	Number of trades ever 120 or more days past due	3	0	Zero
100.	G051	C	Percent of trades delinquent	3	0	Zero
101.	G057	C	Number of trades 30 or more days past due in last 3 months	3	0	Zero
102.	G058	C	Number of trades 30 or more days past due in last 6 months	3	0	Zero
103.	G059	C	Number of trades 30 or more days past due in last 12 months	3	0	Zero
104.	G061	C	Number of trades 30 or more days past due in last 24 months	3	0	Zero
105.	G062	C	Number of trades 60 or more days past due in last 3 months	3	0	Zero
106.	G063	C	Number of trades 60 or more days past due in last 6 months	3	0	Zero
107.	G064	C	Number of trades 60 or more days past due in last 12 months	3	0	Zero
108.	G066	C	Number of trades 60 or more days past due in last 24 months	3	0	Zero
109.	G067	C	Number of trades 90 or more days past due in last 3 months	3	0	Zero
110.	G068	C	Number of trades 90 or more days past due in last 6 months	3	0	Zero
111.	G069	C	Number of trades 90 or more days past due in last 12 months	3	0	Zero
112.	G071	C	Number of trades 90 or more days past due in last 24 months	3	0	Zero
113.	G082	C	Number of trades currently past due (updated in past 2 months)	3	0	Zero
114.	G083	C	Number of trades currently 30 days past due (updated in past 2 months)	3	0	Zero

	Characteristic	Group	Description	Length	Decimal	Default
115.	G084	C	Number of trades currently 60 days past due (updated in past 2 months)	3	0	Zero
116.	G085	C	Number of trades currently 90 days past due (updated in past 2 months)	3	0	Zero
117.	G086	C	Number of trades currently 120 days past due (updated in past 2 months)	3	0	Zero
118.	G091	C	Total amount now past due	7	0	Zero
119.	G093	C	Number of derogatory public records	3	0	Zero
120.	G094	C	Number of public record bankruptcies	3	0	Zero
121.	G095	C	Months since most recent derogatory public record	3	0	Blank
122.	MT03	C	Number of satisfactory mortgage accounts	3	0	Zero
123.	MT36	C	Months since most recent mortgage account delinquency	3	0	Blank
124.	PF03	C	Number of satisfactory personal finance accounts	3	0	Zero
125.	PF36	C	Months since most recent personal finance delinquency	3	0	Blank
126.	RE03	C	Number of satisfactory revolving accounts	3	0	Zero
127.	RE36	C	Months since most recent revolving delinquency	3	0	Blank
128.	RT03	C	Number of satisfactory retail trades	3	0	Zero
129.	RT36	C	Months since most recent retail delinquency	3	0	Blank
130.	S059	C	Number of public record and account line derogatory items greater than \$100	3	0	Zero
131.	S061	C	Months since most recent 60-day or worse rating	3	0	Blank
132.	S062	C	Months since most recent 90-day or worse rating	3	0	Blank
133.	S063	C	Total public record amounts	7	0	Zero
134.	S064	C	Total collection amounts ever owed	7	0	Zero
135.	S065	C	Number of tax liens	3	0	Zero
			Group D – High Credit/ Credit Limit			
136.	AT28	D	Total high credit/credit limit	7	0	Blank
137.	BC28	D	Total bankcard high credit/credit limit	7	0	Zero
138.	IN28	D	Total installment high credit/credit limit	7	0	Zero
139.	MT28	D	Total mortgage high credit/credit limit	7	0	Zero
140.	PF28	D	Total personal finance high credit/credit limit	7	0	Zero
141.	RE28	D	Total revolving high credit/credit limit	7	0	Zero
142.	RT28	D	Total retail high credit/credit limit	7	0	Zero
143.	S040	D	Highest retail high credit/credit limit	7	0	Zero

	Characteristic	Group	Description	Length	Decimal	Default
			Group E – Balance of Accounts			
144.	AT33	E	Total current balance of all trades	7	0	Zero
145.	AT35	E	Average current balance of all trades	7	0	Blank
146.	AT99	E	Total current balance of all trades, excluding mortgage	7	0	Blank
147.	BC32	E	Maximum balance owed on all bankcard accounts	7	0	Zero
148.	BC33	E	Total balance of all bankcard accounts	7	0	Zero
149.	BC35	E	Average current balance of all bankcard accounts	7	0	Blank
150.	FI32	E	Maximum balance owed on all finance installment trades	7	0	Zero
151.	IN33	E	Total current balance of all installment accounts	7	0	Zero
152.	IN35	E	Average balance of all installment trades	7	0	Blank
153.	MT32	E	Maximum current balance owed on all mortgage accounts	7	0	Zero
154.	MT33	E	Total current balance of all mortgage accounts	7	0	Zero
155.	MT35	E	Average current balance of mortgage accounts	7	0	Blank
156.	PF32	E	Maximum balance owed on all personal finance trades	7	0	Zero
157.	PF33	E	Total current balance of all personal finance accounts	7	0	Zero
158.	PF35	E	Average balance of all personal finance trades	7	0	Blank
159.	RE32	E	Maximum current balance owed on all revolving accounts	7	0	Zero
160.	RE33	E	Total current balance of all revolving accounts	7	0	Zero
161.	RE35	E	Average current balance of all revolving accounts	7	0	Blank
162.	RT32	E	Maximum balance owed on all retail trades	7	0	Zero
163.	RT33	E	Total current balance of all retail trades	7	0	Zero
164.	RT35	E	Average current balance of all retail trades	7	0	Blank
165.	S043	E	Number of non installment trades > 50% of limit	3	0	Zero
166.	S046	E	Percent of active trades with current balance > 0	5	1	Blank
			Group F – Utilization of Accounts			
167.	AT34	F	Ratio of total current balance to high credit/credit limit for all trades	5	1	Blank
168.	BC30	F	Percentage of all bankcard accounts > 50% of limit	5	1	Blank
169.	BC31	F	Percentage of all bankcard accounts > 75% of limit	5	1	Blank

	Characteristic	Group	Description	Length	Decimal	Default
170.	BC34	F	Ratio of total current balance to high credit/credit limit for all bankcard accounts	5	1	Blank
171.	BC98	F	Total open to buy on revolving bankcards	7	0	Blank
172.	BR34	F	Ratio of total balance to high credit/credit limit for all bank revolving accounts	5	1	Blank
173.	IN34	F	Ratio of total current balance to high credit/credit limit for all installment accounts	5	1	Blank
174.	MT34	F	Ratio of current balance to high credit/credit limit on mortgage accounts	5	1	Blank
175.	PF34	F	Ratio of total current balance to high credit/credit limit for all personal finance accounts	5	1	Blank
176.	RE34	F	Ratio of total current balance to high credit/credit limit for all revolving accounts	5	1	Blank
177.	RT34	F	Ratio of total current balance to high credit/credit limit for all retail trades	5	1	Blank
			Group G - Inquiry			
178.	G096	G	Number of inquiries	3	0	Zero
179.	G098	G	Number or inquiries in last 6 months	3	0	Zero
180.	G102	G	Months since most recent inquiry	3	0	Blank

Score Model Product Codes

Below are the Score Model product codes.

Model Number	Model Name
00002	EMPIRICA 95
00004	EMPIRICA PF 95
00008	EMPIRICA AU 95
00016	EMPIRICA IL 95
00032	New DELPHI
00064	TIE
00133	RPM (Revenue Projection Model)
00138	FACETS
00219	TransRisk New Account 1.0
00227	PRECISION
00241	GEM
00256	EMPIRICA BC 95
00300	REWARD
00315	Spectrum
00336	Telescope
00356	Fraud Model II
00401	Fraud Model
00501	DELPHI (redeveloped -1997)
00601	HORIZON
00701	TransRisk Auto
00730	TransRisk-AM (Account Manager)
00820	Non Standard Auto ASSIST
00842	Old Standard Auto ASSIST
00864	Old Standard Minimal Auto ASSIST
00875	Home Owners 1 ASSIST (2.0)
00876	Home Owners 2 ASSIST (2.0)
00877	Home Owners 3 ASSIST (2.0)
00878	Home Owners 4 ASSIST (2.0)
00879	Home Owners 6 ASSIST (2.0)
00882	Old Preferred Auto ASSIST
00889	Dwelling Fire ASSIST (2.0)
00896	TransRisk Bankruptcy
00900	Old Preferred Minimal Auto ASSIST
00906	Home Owners 1 ASSIST (1.0)
00913	Home Owners 2 ASSIST (1.0)
00919	Home Owners 3 ASSIST (1.0)
00924	Home Owners 4 ASSIST (1.0)
00930	Home Owners 6 ASSIST (1.0)
00935	Dwelling Fire ASSIST (1.0)
00950	EMPIRICA
00977	Standard Minimal Auto ASSIST
00978	Standard Auto ASSIST
00979	Preferred Minimal Auto ASSIST
00980	Preferred Auto ASSIST
00990	EMPIRICA AU
00991	EMPIRICA IL
00992	EMPIRICA PF
00993	EMPIRICA BC
00C01	TransUnion Links (EMPIRICA/TRNA)
00R07	TransRecovery
00R13	Spectrum 2002
00R14	TransUnion Data Connect
00R59	TransRisk New Account 2.0
00X01	EDGE 1
00X02	EDGE 2

The remainder of this chapter lists message and score factor codes in this order:

- New DELPHI
- ASSIST
- FACETS
- Spectrum 2002
- Spectrum
- DELPHI
- TransRisk Auto
- TransRisk-AM (Account Management)
- TransRisk Bankruptcy
- TransRisk New Account, versions 1.0 and 2.0
- EDGE
- GEM
- PRECISION
- Telescope
- EMPIRICA / RPM (Revenue Projection Model) / HORIZON

New DELPHI Score Factor Codes

New DELPHI is the enhanced version of TransUnion’s first bankruptcy model.

Code	New DELPHI Score Factor Description
000	No adverse factor.
001	Insufficient number of satisfactory accounts
002	Delinquency
003	Serious delinquency, derogatory public record, or collection
004	Delinquency date too recent
005	Past due balances
006	Near total credit limits, or lacks credit accounts or lacks recent credit activity
007	Insufficient time since most recent account established
008	Insufficient length of credit history
009	Too many new accounts
010	Too many recent active accounts
011	Too many active accounts
012	Insufficient satisfactory history on revolving accounts
013	Too many recent revolving accounts or lacks revolving accounts
014	Bankcard -- near credit limits or lacks credit accounts or lacks recent credit activity
015	Insufficient length of installment accounts, or lacks installment accounts
016	Too many accounts
017	Near check credit limits
018	Insufficient satisfactory history for mortgage accounts or lacks mortgage accounts
019	Delinquency on mortgage accounts or lacks mortgage accounts
020	Insufficient satisfactory history on retail revolving accounts
021	Near retail credit limit or lacks retail credit accounts or lacks recent retail credit activity
022	Travel and entertainment – near revolving credit limit or lacks revolving accounts
023	Too many consumer finance accounts
024	Too many recent consumer finance accounts
025	Serious delinquency, derogatory public record or collection with a balance
026	Bankruptcy
027	Too many recent bank or travel and entertainment credit checks
028	Too many recent consumer finance credit checks
029	Too many recent credit checks

ASSIST Message Codes

ASSIST score models were developed to determine insurance risk based on credit history.

Code	ASSIST Score Factor Description
001	Favorable amount owed on accounts (+)
002	No recent delinquency (+)
003	Presence of revolving credit accounts (+)
004	Favorable number of accounts with outstanding balances (+)
005	Favorable number of finance accounts (+)
006	Favorable number of recent credit checks (+)
007	Favorable number of new accounts (+)
008	Proportion of revolving balances to revolving credit limits is favorable (+)
009	Favorable amount owed on revolving accounts (+)
010	Favorable length of revolving credit history (+)
011	No past delinquency or favorable length of time since last delinquency (+)
012	Favorable length of credit history (+)
013	No current or past delinquencies (+)
014	Favorable time since last derogatory public record or collection (+)
015	Minimal or no past due balances (+)
016	Favorable payment history (+)
017	Absence of collection accounts (+)
018	Favorable number of revolving accounts with balances (+)
019	Favorable time since last credit check (+)
020	Favorable time since most recent account established (+)
021	Favorable number of installment loan accounts (+)
022	Favorable number of installment loan accounts with outstanding balances (+)
023	Favorable time since most recent installment loan established (+)
024	Favorable number of accounts with large high credit amounts (+)
025	Proportion of loan balances to installment loan amounts is favorable (+)
026	Favorable number of real estate accounts (+)
027	Favorable number of new or existing finance company accounts (+)
028	No delinquency ever on installment loans (+)
029	Favorable percentage of open revolving accounts to all other accounts (+)
030	Favorable number of accounts (+)
031	No delinquency on open revolving accounts (+)
032	Favorable length of time since most recent finance company account opened (+)
033	Favorable number of accounts (+)
034	Favorable time since most recent retail account opened or none present (+)
035	No finance company accounts or no recently active finance company accounts (+)
036	Favorable number of recently active accounts (+)
037	Favorable number of revolving or open accounts (+)
038	Favorable number of adverse public records (+)
040	Favorable time since last collection (+)
041	Favorable time since last adverse public record (+)
051	Excessive or unknown amount owed on accounts (-)
052	Recent delinquency (-)

Code	ASSIST Score Factor Description
053	Absence of revolving credit accounts (-)
054	Too many accounts with balances (-)
055	Too many finance company accounts (-)
056	Too many recent credit checks (-)
057	Too many new accounts (-)
058	Proportion of revolving balances to revolving credit limits is too high or there are no revolving credit accounts (-)
059	Excessive amount owed on revolving accounts (-)
060	Insufficient length of revolving credit history (-)
061	Delinquency date too recent (or date unknown) (-)
062	Insufficient length of credit history (-)
063	Delinquency (-)
064	Recent derogatory public record or collection (-)
065	Past due balances (-)
066	Delinquency, derogatory public record or collection (-)
067	Presence of collection accounts (-)
068	Too many revolving accounts with balances (-)
069	Date of last credit check too recent or unknown (-)
070	Insufficient time since most recent account established (-)
071	Unfavorable number of installment loan accounts (-)
072	Too many installment loan accounts with outstanding balances (-)
073	Insufficient time since most recent installment loan established (-)
074	Too many accounts with high credit amounts (-)
075	Proportion of loan balances to installment loan amounts is too high (-)
076	Unfavorable number of real estate accounts(-)
077	Too many new or existing finance company accounts (-)
078	Prior installment loan delinquency or no installment loans present (-)
079	Unfavorable percentage of open revolving accounts to all other accounts (-)
080	Presence of delinquency, public record or collection (-)
081	Delinquency on open revolving accounts (-)
082	Finance company account opened recently (-)
083	Unfavorable number of accounts (-)
084	Unfavorable length of time since most recent retail account opened (-)
085	Too many recent active finance company accounts (-)
086	Unfavorable number of recently active accounts (-)
087	Unfavorable number of revolving or open accounts (-)
088	Unfavorable number of adverse public records (-)
090	Recent collection (-)
091	Recent adverse public record (-)

FACETS Score Factor Codes

FACETS returns up to 4 of 13 possible adverse action codes and their associated descriptions on credit reports and batch output. FACETS segment 12 is the only segment that does not require adverse actions. FACETS returns up to four adverse action factors in the order of severity. The table below shows the FACETS adverse action codes and their associated descriptions.

Code	FACETS Score Factor Description
001	Recent delinquency
002	High credit utilization on bankcard accounts
003	Low bank revolving credit limit
004	Too many recent credit checks
005	Insufficient credit history
006	Too many recently opened personal finance accounts
007	Too many recently opened bankcard accounts
008	Too many active bankcard accounts
009	Too many recently opened retail accounts
010	High balance on installment accounts
011	Too many oil and national accounts
012	Too few active bankcard accounts
013	High credit utilization on retail accounts

Spectrum 2002 Score Factor Codes

Spectrum 2002 is an updated version of the Spectrum score model. It is a more effective tool for wireless companies to use in predicting the likelihood that a cellular account will become 60 days or more past due within six months.

Code	Description
00	No adverse factors
01	Insufficient length of credit history
03	Recent delinquency
04	Too many new accounts
07	Too many recent credit checks
08	Serious delinquency, derogatory public record, or collection
09	Delinquency
10	Insufficient accounts or lack of recent activity for bank revolving accounts
12	Past due balances
13	Insufficient number of accounts
14	Insufficient bank revolving history or lack of bank revolving accounts
18	Bank revolving utilization ratio is too high
19	Retail revolving utilization ratio is too high
20	Recent serious delinquency, derogatory public record, or collection
21	Too many new accounts with a balance
22	Insufficient number of bank revolving accounts with large credit limit
23	Too many personal finance installment accounts
24	Insufficient number of satisfactory mortgage accounts
25	Too many bank revolving accounts where utilization is too high
26	Lack of retail revolving accounts or lack of recent retail revolving activity
27	Too many retail trades
28	Insufficient retail revolving history or lack of retail revolving accounts
29	Insufficient number of active accounts
30	Insufficient number of large installment accounts
31	Lack of personal finance revolving trades
32	Lack of or insufficient number of \$0 balance personal finance revolving trades
33	Proportion of satisfactory accounts to total accounts is too low
34	Limited credit available
35	Too many active accounts

Spectrum Score Factor Codes

Spectrum is a score model developed to predict the likelihood that a cellular account will become 60 days or more past due within six months.

Code	Spectrum Score Factor Descriptions
000	No adverse factor
001	Insufficient length of credit history
002	Insufficient number of satisfactory accounts
003	Recent delinquency
004	Too many new accounts
005	Limited revolving credit available
006	Proportion of revolving balances to revolving high credit limits is too high
007	Too many recent credit checks
008	Serious delinquency, derogatory public record, or collection
009	Delinquency
010	Insufficient number of bankcard accounts or lack of recent bankcard credit activity
011	Too many active personal finance accounts
012	Past due balances
013	Insufficient number of accounts
014	Insufficient length of bank revolving history or lack of bank revolving accounts
015	Too many oil or national accounts
016	Limited bank revolving credit available
017	Lack of revolving accounts or lack of recent revolving credit activity
018	Proportion of bankcard balances to bankcard high credit limits is too high
019	Proportion of retail revolving balances to retail revolving high credit limits is too high

Spectrum Alert—This flag occurs when a credit file contains one or more of the following: previous bankruptcy, derogatory public records, collection activity, or a MOP of 7 or higher

Spectrum not scored: deceased—This indicator occurs when the subject's social security number matches the Social Security Administration's deceased social security number file.

Spectrum not scored: insufficient credit—This indicator occurs when a credit file does not contain a tradeline updated within the last 12 months.

DELPHI (1997 Redevelopment) Message Codes

DELPHI is the third generation of this bankruptcy model.

Code	Description
000	No adverse factor
001	Too few accounts paid as agreed
002	Too many delinquent accounts
003	Too many derogatory accounts
004	Delinquency date too recent
005	Past due balances
006	Revolving credit utilization too high
007	Insufficient credit history
008	Insufficient length of credit history
009	Too many new accounts
010	Too many active revolving accounts
011	Insufficient recent revolving credit history
012	Too many bank revolving accounts
013	Too many recently active bank revolving accounts
014	Bank revolving credit utilization too high
015	Insufficient credit history on bank revolving accounts
016	Too many accounts
017	Excessive amount on derogatory public record items
018	Insufficient satisfactory history on mortgage loans
019	Too many delinquent mortgage loans
020	Insufficient satisfactory history on retail accounts
021	Retail revolving credit utilization too high
022	Too many credit checks and active accounts and credit utilization too high
023	Too many finance accounts
024	Too many new finance accounts
025	Too many collections or derogatory public record items
026	Bankruptcy
027	Too many new bank revolving accounts
028	Too many recent finance credit checks
029	Too many recent credit checks
030	Too recent collection or derogatory public record item
031	Too many accounts with recent balances
032	Excessive amount owed
033	Too many recent auto credit checks
034	Too many recent retail credit checks
035	Too many retail accounts
036	Too many active retail accounts
037	Too many delinquent installment loans
038	Too many new installment loans
039	Insufficient credit history on mortgage loans
040	Too many mortgage loans
041	No recent non-mortgage balances
042	No recent bank revolving accounts
043	No recent retail accounts

TransRisk Auto Adverse Action Codes

TransRisk Auto is a risk model that was developed to predict risk on prime and non-prime, including sub-prime, auto loans.

Code	Description
00	No Adverse Factor
01	Months since most recent bank installment delinquency
02	Months since most recent mortgage delinquency
03	Months since most recent repossession
04	Months since most recent serious personal finance delinquency
05	Number of recent derogatory public record items with a balance
06	Past due amounts on auto accounts
07	Personal finance revolving account balances too high in proportion to credit limits
08	Too few open national accounts
09	Too many current delinquencies
10	Too many delinquencies
11	Too many new accounts with balances
12	Too many personal finance installment account delinquencies
13	Too many recent auto account delinquencies
14	Too many recent inquiries
15	Too many unsatisfactory accounts in proportion to all accounts
16	Too few satisfactory accounts
17	Length of time bank revolving accounts have been established is too short
19	Too many derogatory public record items
20	Retail or sales finance revolving account balances too high in proportion to credit limits
21	Too many auto account delinquencies
22	Too many inquiries
23	Too many personal finance installment account serious delinquencies
24	Too many serious delinquencies
25	Account balances too high in proportion to credit limits
26	Length of time national accounts have been established is too short
27	Too many recent delinquencies
28	Too many personal finance account delinquencies
29	Too many current serious delinquencies
30	Too few open accounts
31	Months since most recent charge-off
32	Outstanding balance(s) on recent public record items
33	Bank revolving account balances too high in proportion to credit limits
34	Length of time personal finance installment accounts have been established is too short
35	Length of time accounts have been established is too short
36	Length of time most recent account has been established is too short
37	Mortgage credit limits are too low
38	Length of time auto accounts have been established is too short

TransRisk-AM Factor Codes

TransRisk-AM (Account Management) is a risk model that was developed to predict the likelihood of an existing account becoming delinquent at a 90-day or worse level within a 24-month period of time.

Factor Code	English Description
0	No Adverse Factor
1	Available credit on bankcard accounts is too low
2	Average balance of retail accounts is too high
3	Average balance of specialty retail accounts is too high
4	Number of refinanced or transferred accounts is too high
5	Not enough bank installment debt experience
6	Bankcard account balances are too high in proportion to credit limits
7	Collection amounts ever owed are too high
8	Collection, public record, or delinquency amounts or amounts past due are too high
10	Too many delinquencies
11	Installment account balances too high in proportion to credit limits
13	Length of time finance accounts have been established is too short
14	Length of time most recent specialty retail account has been established is too short
15	Number of satisfactory accounts is too low in proportion to total number of accounts
16	Too few satisfactory accounts
17	Length of time oldest bank revolving account has been established is too short
20	Length of time revolving accounts have been established is too short
22	Too many inquiries
23	Months since most recent delinquency is too short
24	Too many serious delinquencies
26	Number of delinquent accounts is too high in proportion to total number of accounts
28	Personal finance account balances are too high in proportion to credit limits
29	Retail account balances are too high in proportion to credit limits
30	Not enough retail debt experience
31	Revolving account balances are too high in proportion to credit limits
32	Not enough revolving debt experience
33	Revolving department store and clothing account balances are too high in proportion to credit limits
34	Too few accounts opened since last serious delinquency
35	Length of time accounts have been established is too short
37	Too few bankcard accounts
38	Too few mortgage accounts
40	Too few premium bankcard accounts
42	Too few retail accounts
43	Too few open revolving accounts
46	Too few satisfactory mortgage accounts
47	Too few specialty retail accounts
49	Too many accounts
50	Too many accounts with a balance

Factor Code	English Description
52	Too many bankcard accounts
53	Too many derogatory accounts or public records
54	Too many finance installment accounts
55	Too many installment accounts
56	Too many accounts close to limit
58	Too many personal finance accounts
59	Too many recent inquiries
60	Too many recent mortgage delinquencies
61	Too many recently opened accounts
63	Too many recently opened personal finance accounts
64	Too many recently opened retail accounts
66	Too many serious derogatory items
68	Total account balances excluding mortgages is too high
69	Not enough debt experience

TransRisk Bankruptcy

TransRisk Bankruptcy is a risk model that was developed to predict the likelihood of a consumer filing bankruptcy in the next 12 months.

Factor Code	English Description
00	No Adverse Factor
01	Available credit on bankcard accounts is too low
02	Average balance of retail accounts is too high
06	Bankcard account balances are too high in proportion to credit limits
07	Collection amounts ever owed are too high
10	Too many delinquencies
15	Number of satisfactory accounts is too low in proportion to total number of accounts
16	Too few satisfactory accounts
17	Length of time oldest bank revolving account has been established is too short
21	Months since most recent delinquency is too short
22	Too many inquiries
24	Too many serious delinquencies
25	Months since most recent serious delinquency is too short
29	Retail account balances are too high in proportion to credit limits
31	Revolving account balances are too high in proportion to credit limits
34	Too few accounts opened since last serious delinquency
35	Length of time accounts have been established is too short
37	Too few bankcard accounts
38	Too few mortgage accounts
40	Too few premium bankcard accounts
42	Too few retail accounts
44	Too few satisfactory department store accounts
46	Too few satisfactory mortgage accounts
49	Too many accounts
50	Too many accounts with a balance
53	Too many derogatory accounts or public records
58	Too many personal finance accounts
59	Too many recent inquiries
61	Too many recently opened accounts
66	Too many serious derogatory items
68	Total account balances excluding mortgages is too high
69	Not enough debt experience
71	Too many bankcard accounts with balances
72	Average balance of bankcard accounts is too high
73	Not enough mortgage debt experience
75	Too many recently opened installment accounts
76	Total amount past due is too high
79	Too few bank revolving accounts
80	Too many accounts with a balance currently past due
82	Total balance of retail accounts is too high
86	Too many mortgage delinquencies
88	Length of time since most recent mortgage account delinquency is too short
97	Bank revolving account balances are too high in proportion to credit limits
98	Finance revolving account balances are too high in proportion to credit limits
99	Too many revolving accounts with balances too high in proportion to credit limits

Factor Code	English Description
100	Too many inquiries in proportion to total number of accounts
101	Total balance of finance installment accounts is too high
102	Length of time since most recent inquiry is too short
103	Not enough available credit
104	Too many finance revolving accounts
105	Too few revolving accounts
106	Too many bank revolving accounts with balances too high in proportion to credit limits
107	Too many personal finance accounts with balances too high in proportion to credit limits
108	Length of time since most recent installment delinquency is too short
109	Too many finance installment accounts with balances too high in proportion to credit limits
110	Delinquency status of mortgage accounts is too high
111	Not enough bankcard debt experience
112	Total account balances excluding mortgages are too high in proportion to credit limits
113	Too many personal finance inquiries
114	Total amount past due on revolving accounts is too high
115	Too many secured accounts with balances too high in proportion to credit limits
116	Maximum balance of serious delinquencies is too high
117	Length of time since most seriously delinquent account has been established is too short
118	Finance account balances are too high in proportion to credit limits
119	Total balance of bankcard accounts is too high
120	Total balance of delinquencies is too high
121	Too few finance accounts
122	Too few satisfactory bankcard accounts in proportion to total number of bankcard accounts
123	Too few satisfactory retail accounts in proportion to total number of retail accounts
124	Too few installment accounts
125	Length of time since installment accounts have been established is too short
126	Length of time since most recent finance delinquency is too short
127	Length of time since most recent finance installment account has been established is too short
128	Too many auto accounts
129	Not enough auto debt experience
130	Maximum amount on auto accounts is too low
131	Length of time since most recent auto delinquency is too short
132	Too few open accounts
133	Maximum balance of department store accounts is too high
134	Too many retail accounts
135	Too many finance or installment accounts
136	Too many revolving accounts

TransRisk New Account Score Factor Codes

The TransRisk New Account model predicts the likelihood of a new account becoming delinquent in 90 plus days or more, within 24 months, based on the applicant's aggregated credit report at the time of the application.

Factor Code		English Description
Version 1.0	Version 2.0	
00	00	No factor
01	01	Available credit on bankcard accounts is too low
02	02	Average balance of retail accounts is too high
03		Average balance of specialty retail accounts is too high
05		Not enough bank installment debt experience
06	06	Bankcard account balances are too high in proportion to credit limits
07	07	Collection amounts ever owed are too high
	08	Collection, public record, or delinquency amounts or amount past due is too high
	09	Too many months since recent activity
10	10	Too many delinquencies
11	11	Installment account balances too high in proportion to credit limits
	12	Average age of bank revolving trades is too short
13	13	Length of time finance accounts have been established is too short
14		Length of time most recent specialty retail account has been established is too short
	15	Number of satisfactory accounts is too low in proportion to total number of accounts
16	16	Too few satisfactory accounts
17	17	Length of time oldest bank revolving account has been established is too short
	18	Too many collection accounts
	19	Length of time most recent collection has been established is too short
20		Length of time revolving accounts have been established is too short
	21	Total account balances are too high in proportion to credit limits
22	22	Too many inquiries
23	23	Number of months since most recent delinquency
24	24	Too many serious delinquencies
	25	Length of time since oldest bankcard has been established is too short
26	26	Number of delinquent accounts is too high in proportion to total number of accounts
	27	Mortgage account balances are too high in proportion to credit limits
28	28	Personal finance account balances are too high in proportion to credit limits
29	29	Retail account balances are too high in proportion to credit limits
30		Not enough retail debt experience
31	31	Revolving account balances are too high in proportion to credit limits
	32	Not enough revolving debt experience
33		Revolving department store and clothing account balances are too high in proportion to credit limits
35	35	Length of time accounts have been established is too short
	36	Not enough Finance debt experience
37	37	Too few bankcard accounts
38	38	Too few mortgage accounts
	39	Too few active accounts
	40	Too few premium bankcard accounts

Factor Code		English Description
Version 1.0	Version 2.0	
	41	Length of time most recent revolving account has been established is too short
42		Too few retail accounts
43	43	Too few open revolving accounts
47		Too few specialty retail accounts
	50	Too many accounts with a balance
	52	Too many bankcard accounts
53	53	Too many derogatory accounts or public records
54		Too many finance installment accounts
	56	Too many accounts close to limit
	58	Too many personal finance accounts
59	59	Too many recent inquiries
60		Too many recent mortgage delinquencies
61	61	Too many recently opened accounts
64		Too many recently opened retail accounts
68		Total account balances excluding mortgages is too high
	69	Not enough debt experience
70	70	Length of time since most recent bankcard account has been established is too short
71		Too many bankcard accounts with balances
72		Average balance of bankcard accounts is too high
73	73	Not enough mortgage debt experience
74	74	Too few satisfactory revolving accounts
75		Too many recently opened installment accounts
76	76	Total amount past due is too high
77		Too many active bankcard accounts
78	78	Too many recent collection inquiries
79	79	Too few bank revolving accounts
80	80	Too many accounts with a balance currently past due
81	81	Length of time since most recent derogatory public record is too short
82	82	Total balance of retail accounts is too high
83	83	Total balance of revolving accounts is too high
84	84	Not enough installment debt experience
85	85	Total balance of personal finance accounts is too high
86	86	Too many mortgage delinquencies
87		Too many active accounts with a balance
88		Length of time since most recent mortgage account delinquency is too short
89		Length of time retail accounts have been established is too short
90	90	Length of time since most recent bank inquiry is too short
91		Too few satisfactory specialty retail accounts
92		Length of time since most recent retail account delinquency is too short
93		Length of time since oldest mortgage account has been established is too short
94	94	Too few bank installment accounts
95		Total amount past due or collection amount is too high
96		Average balance of revolving accounts is too high
	97	Bank revolving account balances are too high in proportion to credit limits
	98	Finance revolving account balances are too high in proportion to credit limits
	99	Too many revolving accounts with balances too high in proportion to credit limits

EDGE Score Factor Codes

EDGE is a TransUnion generic model developed to predict the probability of a bank card account becoming 90 or more days past due in a 24-month period. Primary use of this model is for new account and prescreening application processing. A higher score indicates a better credit risk.

The EDGE model is always preceded by either the EMPIRICA BC model or the EMPIRICA BC 95 model. Execution of the EDGE risk model depends upon the processing results of the EMPIRICA BC risk model. The EDGE model only processes accounts that have the following:

- An EMPIRICA BC or EMPIRICA BC 95 score between 550 and 670
- At least four revolving accounts
- At least one bankcard trade

Code	Description
01	Length of time open for revolving trades too low
02	Length of time open for delinquent trades too low
03	Time weighted balance on revolving trades too high
04	Time weighted credit usage on open, revolving trades too high
05	Time weighted credit usage on open trades too high
06	Time weighted available credit on revolving trades too high
07	Average length of time since opened for bankcard trades too low
08	Average length of time since opened for revolving trades too low
09	Too many revolving trades with delinquency over the past 6 months
10	Outstanding balance on bankcards too high
11	Balance weighted length of time open for trades too recent
12	Balance weighted credit usage on open revolving trades too high
13	Balance weighted Balance-to-limit ratio too high
14	Balance weighted balance-to-limit ratio on revolving trades too high
16	Outstanding balance on open revolving trades too high
17	Outstanding balance on revolving trades too high
18	Past bankruptcy
19	Balance-to-limit ratio on open revolving trades too high
20	Balance on recent delinquent bankcard trades too high
21	Balance on recent delinquent real estate trades too high
22	Balance on currently delinquent open trades too high
24	Too few open trades
25	Revolving trades with recent delinquency too high
26	Revolving trades with delinquency too high
27	Delinquent trades too recent
28	Delinquent revolving trades too recent
30	Time in months since most recent high delinquency too short
31	Too many inquiries
33	Percent of revolving trades presently delinquent too high
34	Percent of bankcard trades presently delinquent too high
37	Too many closed revolving trades
38	Too many trades presently delinquent
39	Too many open revolving trades
40	Too few paid trades
41	Too many secured credit trades

Code	Description
42	Worst status on a trade too recent
43	Worst status on a revolving trade too recent
44	Too many bankcard trades
45	Too many open revolving trades with high balance-to-limit ratio
46	Too many open bank card trades with high balance-to-limit ratio
49	Too few trades presently current
50	Too many trades delinquent or derogatory
51	Too many delinquent retail trades
53	Too many bankcard trades delinquent or derogatory
56	Too many derogatory trades
58	Too many recent inquiries
60	Too many loan finance trades
61	Too many real estate trades delinquent or derogatory
65	Too many accounts opened in the past 24 months
67	Too many bankcards opened recently
68	Too many bankcards opened within the past 24 months
69	Too many installment loans opened within the past 24 months
70	Too many bankcards opened within the past 36 months
74	Too many retail trades
75	Too many revolving trades
78	Too many trades
79	Worst status on recently opened trades too high
80	Worst status on revolving trades open within the past 24 months too high
81	Present delinquency status on open trade
82	Present delinquency on a T & E card
83	Present delinquency on open bankcard trade
84	Present delinquency on revolving trade
85	Worst delinquency on a bankcard too high
86	Too many trades with delinquent or derogatory status
87	Worst status on a trade too high
89	Too many revolving trades with high outstanding balance
90	Delinquency status on real estate trades
91	Too few revolving trades
92	Too few bankcard trades
94	Too many revolving trades with delinquency over the past 24 months
95	High delinquency or derogatory on previous bankcard
97	Recent delinquency on a revolving trade
98	Delinquency on a revolving trade within the past six months
99	Number of delinquent accounts too high

GEM Score Factor Codes

The Gas & Electric (GEM) model predicts the likelihood that an energy account will become 60 or more days delinquent over the next 12 months. A high score indicates low risk, a low score indicates high risk.

Factor	Description
00	No adverse factors
01	Proportion of satisfactory accounts to total accounts is too low
02	Delinquency
03	Serious delinquency, derogatory public record, or collection
04	Recent delinquency
05	Recent serious delinquency, derogatory public record, or collection
06	Too many new accounts with a balance
07	Too many new accounts
08	Insufficient length of credit history
09	Too many active accounts
10	Limited credit available
11	Insufficient number of satisfactory revolving accounts
12	Insufficient length of revolving credit history
13	Lack of revolving accounts or lack of recent revolving credit history
14	Proportion of revolving balances to revolving high credit limits is too high
15	Lack of bank revolving accounts or lack of recent bank revolving credit history
16	Bank revolving utilization ratio is too high
17	Insufficient number of satisfactory bank revolving accounts
18	Insufficient number of bank revolving accounts with high credit limits
19	Excessive amount owed on bank revolving accounts
20	Limited bank revolving credit available
21	Insufficient number of satisfactory retail revolving accounts
22	Lack of retail revolving accounts
23	Too many personal finance installment accounts
24	Insufficient number of satisfactory mortgage accounts
25	Lack of accounts
26	Too many accounts where revolving utilization is too high

PRECISION Score Factor Codes

The PRECISION model predicts the likelihood of a customer, applicant or prospect becoming delinquent (90+) within 24 months. A high score indicates low risk, a low score indicates high risk.

Code	Description
A0	Account payment history is too new to rate
A1	Accounts last reported in delinquent status
A2	Amount of credit available on revolving accounts
A3	Amount owed on accounts is too high
A4	Amount owed on bank/national revolving accounts
A5	Amount owed on collections filed
A6	Amount owed on delinquent accounts
A7	Amount owed on recently opened accounts is too high
A8	Amount owed on recently opened bank/national revolving accounts is too high
A9	Amount owed on recently opened consumer finance company accounts is too high
B0	Amount owed on recently opened retail accounts is too high
B1	Amount owed on recently opened revolving accounts is too high
B3	Amount owed on retail accounts
B4	Amount owed on revolving accounts
B5	Amount owed on revolving accounts is too high
B6	Amount past due on accounts
D0	Bankruptcy filing reported
D1	Date of last inquiry too recent
D2	Delinquency on accounts
D3	Delinquency on recently opened accounts
D4	Derogatory public record or collection filed
D5	Frequency of delinquency
D6	Level of delinquency on accounts
D7	Serious delinquency
D8	Serious delinquency, and public record or collection filed
F0	Insufficient installment payment history
F1	Lack of recently established credit accounts
F2	Lack of recently established revolving accounts
F3	Lack of recent auto finance loan information
F4	Lack of recent auto loan information
F5	Lack of recent bank/national revolving information
F6	Lack of recent consumer finance company account information
F7	Lack of recent installment loan information
F8	Lack of recent reported mortgage loan information
F9	Lack of recent non-mortgage installment loan info
G0	Lack of recent retail account information
G1	Lack of recent revolving account information
G2	No mortgage loans reported
G3	No recent bank/national revolving balances
G4	No recent non-mortgage balance information
G5	No recent retail balances
G6	No recent revolving balances
J0	Length of time accounts have been established
J1	Length of time auto accounts have been established

Code	Description
J2	Length of time bank/national revolving accounts have been established
J3	Length of time consumer finance company loans have been established
J4	Length of time installment loans have been established
J5	Length of time reported mortgage accounts have been established
J6	Length of time open installment loans have been established
J7	Length of time retail accounts have been established
J8	Length of time revolving accounts have been established
J9	Length of time since account activity is too long
K0	Time since delinquency is too recent or unknown
K1	Time since derogatory public record or collection is too short
K2	Time since most recent account opening is too short
K3	Time since most recent auto account opening is too short
K4	Time since most recent bank/national revolving account opening is too short
K5	Time since most recent consumer finance company account opening is too short
K6	Time since most recent installment loan account opening is too short
K7	Time since most recent retail account established
K8	Time since most recent revolving account established
M0	Number of accounts currently in delinquent status
M1	Number of accounts with delinquency
M2	Number of accounts with recent delinquency
M3	Number of active bank/national revolving accounts
M4	Number of active retail accounts
M5	Number of adverse/derog public records
M6	Number of bank/national revolving accounts with balances
M7	Number of bank/national revolving accounts
M8	Number of bank/national revolving or other revolving accounts
M9	Number of collections filed
N0	Number of finance company accounts relative to length of finance history
N1	Number of consumer finance company inquiries
N2	Number of established accounts
N3	Number of open installment loans
N4	Number of recently opened consumer finance company accounts
N5	Number of retail accounts
N6	Number of retail accounts with balances
N7	Number of revolving accounts
N8	Number of revolving accounts with balances higher than limits
P0	Proportion of balance to limit on auto accounts is too high
P1	Proportion of balance to limit on delinquent accounts is too high
P2	Proportion of balance to limit on consumer finance company accounts is too high
P3	Proportion of balance to limit on retail accounts is too high
P5	Ratio of balances to limits on bank/nat'l rev or other rev accounts too high
P6	Proportion of balances to credit limits on revolving accounts is too high
P8	Proportion of balances to loan amounts on mortgage loans is too high
P9	Proportion of loan balances to loan amounts is too high

Chapter 6. Add-on Product Descriptions

Code	Description
Q0	Proportion of revolving balances to total balances is too high
Q1	Proportion of balances to limits on bank/nat'l revolving accounts too high
R0	Too few accounts currently paid as agreed
R1	Too few accounts with balances
R2	Too few accounts with recent payment information
R3	Too few active accounts
R4	Too few bank/national revolving accounts
R5	Too few bank/national revolving accounts with recent payment information
R6	Too few consumer finance company accounts with recent payment information
R7	Too few installment accounts
R8	Too few retail accounts
R9	Too few retail accounts with recent payment information
S0	Too few revolving accounts
S1	Too few revolving accounts with recent payment information
T0	Too many accounts recently opened
T1	Too many accounts with balances
T2	Too many bank/national revolving accounts
T3	Too many consumer finance company accounts
T4	Too many installment accounts
T5	Too many inquiries last 12 months
T6	Too many recently active accounts
T7	Too many recently active auto accounts
T8	Too many recently active bank/national revolving accounts
T9	Too many recently active consumer finance company accounts
U0	Too many recently active installment loan accounts
U1	Too many recently active retail accounts
U4	Too many recently opened accounts with balances
U5	Too many recently opened bank/national revolving accounts
U6	Too many recently opened consumer finance company accounts
U7	Too many recently opened installment accounts
U8	Too many recently opened retail accounts with balances
U9	Too many recently opened revolving accounts
V0	Too many recently opened revolving accounts with balances
V2	Too many retail accounts
V3	Too many revolving accounts
V4	Too many recently opened bank/national revolving accounts with balances
X0	Payments due on accounts

Telescope Score Factor Codes

The Telescope model predicts the likelihood that a telecommunication account will become 120+ days delinquent within 12 months. A high score indicates low risk; a low score indicates high risk.

Code	Description
00	No adverse factors
01	Insufficient number of accounts
02	Delinquency
03	Serious delinquency, derogatory, public record, or collection
04	Recent delinquency
05	Recent serious delinquency, derogatory, public record, or collection
06	Too many high dollar charge-offs
07	Too many new accounts
08	Too many new accounts with a balance
09	Too many currently past due accounts
10	Insufficient number of satisfactory accounts
11	Insufficient number of accounts with high credit limit/high credits
12	Limited credit available
13	Lack of trades with a zero balance
14	Insufficient length of credit history
15	Insufficient number of bank revolving accounts
16	Too many active bank revolving accounts
17	Insufficient length of bank revolving credit history
18	Too many bank revolving accounts with low credit limits
19	Insufficient bank revolving accounts with high credit limits
20	Lack of accounts or recent credit history for bank revolving accounts
21	Bank revolving utilization ratio is too high
22	Insufficient number of travel & entertainment trades
23	Insufficient number of installment trades with high loan amounts
24	Too many new retail revolving accounts with a balance
25	Too many new personal finance non-installment accounts with a balance
26	Too many personal finance installment accounts
27	Too many new personal finance installment accounts
28	Insufficient number of satisfactory mortgage accounts
29	Insufficient number of revolving accounts
30	Too many new revolving accounts with a balance
31	Insufficient number of active revolving trades
32	Too many currently past due revolving accounts
33	Lack of revolving accounts or lack of recent revolving credit history
34	Revolving utilization ratio is too high
35	Limited revolving credit available
36	Too many revolving accounts with high utilization
37	Lack of revolving trades with a zero balance
38	Insufficient length of revolving credit history
39	Too many inquiries in the past year
40	Proportion of satisfactory accounts to total accounts is too low

Message Codes for EMPIRICA, RPM, and HORIZON

Description	EMPIRICA AU	EMPIRICA BC	EMPIRICA IL	EMPIRICA PF	RPM	HORIZON
No adverse factor	000	000	000	000		
Amount owed on accounts too high	001	001	001	001		
Level of delinquency on accounts	002	002	002	002		002
Proportion of loan balances to loan amounts is too high	003	003	003	003		003
Lack of recent installment loan information	004	004	004	004		004
Too many accounts with balances	005	005	005	005		
Too many consumer finance company accounts	006	006	006	006		006
Account payment history is too new to rate	007	007	007	007		007
Too many inquiries last 12 months	008	008	008	008		008
Too many accounts recently opened	009	009	009	009		009
Proportion of balances to credit limits is too high on bank revolving or other revolving accounts	010	010	010	010		010
Amount owed on revolving accounts is too high	011	011	011	011		011
Length of time revolving accounts have been established	012	012	012	012		012
Time since delinquency is too recent or unknown	013	013	013	013		013
Length of time accounts have been established	014	014	014	014		014
Lack of recent bank revolving information	015	015	015	015		015
Lack of recent revolving account information	016	016	016	016		016
No recent non-mortgage balance information	017	017	017	017		017
Number of accounts with delinquency	018	018	018	018		018

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Description	EMPIRICA AU	EMPIRICA BC	EMPIRICA IL	EMPIRICA PF	RPM	HORIZON
Date of last inquiry too recent	019	019	019	019		
Length of time since derogatory public record or collection is too short	020	020	020	020		020
Amount past due on accounts	021	021	021	021		021
Serious delinquency (<i>doesn't apply to redeveloped (1998) version of EMPIRICA</i>)	022	022	022	022		
Number of bank or national revolving accounts with balances						023
No recent revolving balances	024	024	024	024		024
Number of bank revolving or other revolving accounts (<i>for future use</i>)	026	026	026	026		026
Too few accounts currently paid as agreed	027	027	027	027		027
Number of established accounts	028	028	028	028		028
No recent bankcard balances	029	029	029	029		029
Time since most recent account opening is too short	030	030	030	030		
Amount owed on delinquent accounts (<i>for future use</i>)	031	031	031	031		031
Payments due on accounts	036	036	036	036		036
Serious delinquency, and public record or collection filed	038	038	038	038		038
Serious delinquency	039	039	039	039		039
Derogatory public record or collection filed	040	040	040	040		040
No recent retail balances (<i>for future use</i>)	041	041	041	041		
Length of time since most recent consumer finance co. account established (<i>for future use</i>)	042	042	042	042		
Lack of recent mortgage loan information						
Proportion of balances to loan amounts on existing mortgage loans is too high						
Too few accounts with balances						

Description	EMPIRICA AU	EMPIRICA BC	EMPIRICA IL	EMPIRICA PF	RPM	HORIZON
Lack of recent retail account information <i>(for future use)</i>	050	050	050	050	050	050
Number of active retail accounts					051	051
Number of active bank revolving or national revolving accounts					052	052
Lack of recent consumer finance account information					053	
Number of recently opened consumer finance company accounts					054	054
Number of accounts with delinquency					055	
Amount owed on retail accounts <i>(for future use)</i>	056	056	056	056		
Time since most recent retail account established					057	057
Length of time accounts have been established					058	
Lack of recent bank revolving account information					059	
No recent bank revolving or national revolving balances					060	
Proportion of balances to credit limits on bank revolving or other revolving accounts					061	
Lack of recent installment loan information					062	
Proportion of loan balances to loan amounts					063	
Lack of recent revolving account information					064	
No recent revolving balances					065	
Amount owed on bank revolving or national revolving accounts					066	066
Amount of bankcard credit extended					067	
Monthly payment due on accounts					068	
Amount owed on revolving accounts					069	069

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Description	EMPIRICA AU	EMPIRICA BC	EMPIRICA IL	EMPIRICA PF	RPM	HORIZON
Level of delinquency on accounts					070	
Payment pattern history					071	
Number of open installment loans						074
Too many recently opened bank revolving or national revolving accounts						080
Frequency of delinquency						081
No mortgage loans reported						082
Proportion of revolving balances to total balances too high						083
Amount owed on derogatory public record items						
Too few active accounts						085
Time since most recent revolving account established						086
Amount of credit available on revolving accounts						087
Number of revolving accounts with balances higher than limits						088
Lack of recent auto loan information	097					
Length of time consumer finance company loans have been established				098		
Lack of recent consumer finance company account information				099		099

Alert—This flag occurs when a credit file contains one or more of the following: previous bankruptcy, derogatory public records, collection activity, or a MOP of 7 or higher

Not scored: deceased—This indicator occurs when the subject's social security number matches a number in the Social Security Administration's deceased social security number file.

Not scored: insufficient credit—This indicator occurs when a credit file does not contain a tradeline opened for at least six months or a tradeline updated within the last 6 months.

Trans Alert Product Description—Product Code 06400

Trans Alert is an add-on product that is available with many TU products. Trans Alert highlights mismatched addresses (comparing the input current address to the file address), invalid ZIP codes, SSN mismatch conditions, and inquiry activity. Trans Alert information is not requested in the FFI but, for subscribers with the appropriate subscriber validation setting, is automatically returned for each subject requested.

Fixed Format Response (FFR)

The following list shows where the Trans Alert segment is returned for a subject in the FFR:

Segment ID	Segment Name
PH01	Product Header
SH01	Subject Header
NM01	Name
PI01	Personal Information
TA01	Trans Alert
ETC.	

Note

One TA01 segment is returned for each Trans Alert message issued. If there are no mismatches between input and file data and no inquiry activity to report, no Trans Alert messages are issued.

Appendix A. Name, Address, and Phone Codes

This appendix shows examples of how several different types of addresses are coded in TU40 and contains the following lists of codes that are valid in TU40:

- Street type codes
- State codes
- Prefix codes
- Suffix codes
- Phone codes

Sample Addresses

The following table contains sample addresses and shows how these addresses are coded in the TU40 format.

Full Input Address						
Segment Type	House Number	Pre-Direct.	Street Name	Post Direct.	Street Type	Apt/ Unit
123456 NW Massachusetts Avenue Apartment 2B						
AD01	123456	NW	MASSACHUSETTS		AV	2B
6 N 144 Higgins						
AD01	6	N	HIGGINS			144
19 W412 Briar Place						
AD01	19		W412 BRIAR		PL	
1349 1/2 Broadway						
AD01	1349		BROADWAY			
1105 W North Shore						
AD01	1105	W	NORTH SHORE			
893 Portage Road West						
AD01	893		PORTAGE	W	RD	
893 Portage South Road West						
AD01	893		PORTAGE SOUTH	W	RD	
893 Portage West						
AD01	893		PORTAGE WEST			
7326 Avenue G						
AD01	7326		AVENUE G			
14 West Avenue of the Americas						
AD01	14	W	AVENUE OF THE AMERICAS			
100 School St Apt 2-B						
AD01	100		SCHOOL		ST	2B
257 17 th EE Ave						
AD01	257		17TH EE		AV	
150 Grove Av 2ND Floor						
AD01	150		GROVE		AV	2
6134 N 3 Road						
AD01	6134	N	3RD		RD	
72 11 St						
AD01	72		11TH		ST	

Full Input Address						
Segment Type	House Number	Pre-Direct.	Street Name	Post Direct.	Street Type	Apt/ Unit
Lot 185 671 W Airwood						
AD01	185	W	AIRWOOD			
Grand Square Building						
AD01	1		GRAND		SQ	
West Wind Trailer Park						
AD01	1	W	WIND TRAILER		PK	
1425 US Hwy 19 S 404						
AD01	1425	S	US HY 19404			
1130 ST Andrew						
AD01	1130		ST ANDREW			
Box 853 Route 2						
AD01	2		RR 2 POB 853			
Box 123 Star Route 4						
AD01	4		STAR 4 POB 123			
Post Office Box 345						
AD01	345		POB 345			
Rural Route Box 345						
AD01	1		RR POB 345			
Star Route Box 678						
AD01	1		STAR POB 678			
Rural Route B Box 678						
AD01	1		RR B POB 678			
Star Route A Box 123						
AD01	1		STAR A POB 123			
Rural Route 5 Box 99-A						
AD01	5		RR 5 POB 99A			
Star Route 3 Box G-78						
AD01	3		STAR 3 POB G78			
Route 48 Kitty Corners						
AD01	48		RR 48			
64TH ORD CO						
AD01	64		ORD CO			
7TH ARMY TRNG CMD						
AD01	7		ARMY TRNG CMD			

Example of House Number Editing

These house numbers are acceptable and will invoke no edits or errors:

1	1N2	0N23	1SW2
12	12N3	0N234	12SW3
123	123N4	1N2345	123SW4
12345	123N45		1SW23
123456			0SW234

Appendix A. Name, Address, and Phone Codes

These house numbers will invoke critical errors:

N	1N	1234SW	ST34
N1	12N	SW	123NX
N12	123N	SW1	123NXT
N123	1234N	SW12	TXN123
N1234	1SW	SW123	TN123
N12345	12SW	SW1234	

The following house numbers will be edited by TU40. Blanks, nondirectional alpha characters, and special characters are edited out.

T1	1T2	ABCDE1
T12	12T	A1
T123	123T	1A
T12345	12345T	1ABCDE

Street Type Codes

Below are listed the TU40 street type codes.

Code	Street Type	Code	Street Type
AL	Alley	PA	Path
AV	Avenue	PI	Pike
BV	Boulevard	PK	Park
CI	Circle	PL	Place
CN	Center	PT	Point
CR	Crescent	PY	Parkway
CT	Court	PZ	Plaza
DA	Dale	RD	Road
DR	Drive	RN	Run
EX	Expressway	RO	Row
FY	Freeway	RT	Route
GA	Garden	SQ	Square
GR	Grove	ST	Street
HL	Hill	TE	Terrace
HT	Heights	TP	Turnpike
HY	Highway	TR	Trail
KN	Knoll	VI	Viaduct
LN	Lane	WK	Walk
LP	Loop	WY	Way
MA	Mall		

State Codes

Below are listed the TU40 state codes, which include:

- U.S. states
- Canadian provinces
- Other geographic areas

The U.S. state codes are:

Code	State	Code	State
AL	Alabama	NV	Nevada
AZ	Arizona	NH	New Hampshire
AR	Arkansas	NJ	New Jersey
CA	California	NM	New Mexico
CO	Colorado	NY	New York
CT	Connecticut	NC	North Carolina
DE	Delaware	ND	North Dakota
DC	Washington D.C.	OH	Ohio
FL	Florida	OK	Oklahoma
GA	Georgia	OR	Oregon
ID	Idaho	PA	Pennsylvania
IL	Illinois	RI	Rhode Island
IN	Indiana	SC	South Carolina
IA	Iowa	SD	South Dakota
KS	Kansas	TN	Tennessee
KY	Kentucky	TX	Texas
LA	Louisiana	UT	Utah
ME	Maine	VT	Vermont
MD	Maryland	VA	Virginia
MA	Massachusetts	WA	Washington
MI	Michigan	WV	West Virginia
MN	Minnesota	WI	Wisconsin
MS	Mississippi	WY	Wyoming
MO	Missouri	AK	Alaska
MT	Montana	HI	Hawaii
NE	Nebraska		

Appendix A. Name, Address, and Phone Codes

The codes for Canadian provinces and territories are:

Code	Canadian Province or Territory
AB	Alberta
BC	British Columbia
LB	Labrador
MB	Manitoba
NB, NK	New Brunswick
NF	Newfoundland
NT, NW	Northwest Territories
NS	Nova Scotia
ON	Ontario
PE	Prince Edward Island
QU, PQ	Quebec
SK	Saskatchewan
YU, YT	Yukon

Other valid geographic codes are:

Code	Location
AA	America other than Canada
AE	Europe, Middle East, Canada
AP	Pacific
AS	American Samoa
CA	Canada
CZ	Canal Zone
FM	Federated States
GU	Guam
MH	Marshall Islands
MP	N. Mariana Isles
MX	Mexico
PW	Palau
PR	Puerto Rico
VI	Virgin Islands

Prefix/Suffix Codes

The TU40 FFI accepts both 2-character and 3-character prefix and suffix codes. A 2-character code in the FFI must be left-justified. Whatever the length of the input code, however, the FFR displays *only* the 2-character codes.

Below is a list of valid TU40 prefix codes:

Prefix Codes		
2-Character Code	3-Character Code	Description
DD DR MD OD	DDS DVM DMD DRA MD OD	Doctor
ML		Military
RN	R N	Registered Nurse
FR, RV	REV	Reverend
SS		Sister

Below is a list of valid TU40 suffix codes. Note that a few of the suffix codes are 1-character.

Suffix Codes		
1- and 2-Character Codes	3-Character Code	Description
JR		Junior
SR		Senior
II ND 11 2 02	2ND	Second
3 03 RD	III 111 3RD	Third
IV TH 4 04	4TH	Fourth
5 05 V	5TH	Fifth
VI 6 06	6TH	Sixth

RPA Phone Type Codes

Reverse Phone Append (RPA) and TOTAL ID use phone type codes returned from the RPA database. The table below shows these codes:

Code	Description
00	Standard service
01	Mobile
02	Pager
03	Packet Switching
04	Cellular
05	Plant test
06	Maritime
07	Air to ground
08	800 service
09	900 service
10	Called party pays
11	Information provider service
12	500 service
13	Directory assistance
14	Special calling cards
15	Official exchange carrier service
16	Originating only
17	Billing only
18	800 database
30	Broad band
50	Shared among 3 or more services
51	Shared between standard and mobile
52	Shared between standard and paging
53	Reserved for future use
54	Shared between POTS and cellular
55	Special billing option – cellular
56	Special billing option – paging
57	Special billing option – mobile
58	Special billing option shared among two or more (cellular, page, mobile)
60	Service provider requests – cellular, page, mobile or shared
61	Service provider requests – cellular, page, mobile or shared
62	Service provider requests - cellular, page, mobile or shared
63	Service provider requests - cellular, page, mobile or shared
64	Personal communication services (NPA 500)
65	Miscellaneous service (non-500 PCS, etc.)
66	Shared between standard and miscellaneous service
88	Toll station – Ring down
99	No information available

Appendix B. Industry and Permissible Purpose Codes

This appendix shows the valid industry codes and permissible purpose codes for this version of TU40.

Industry Codes

Note

Industry codes are assigned by TransUnion. Use the industry code assigned with your subscriber code rather than picking one.

Below is a list of subscriber industry codes for TU40:

Code	Industry
A	Automotive <ul style="list-style-type: none">• Truck dealers• Automotive dealers• Automotive repair• Tire dealers
B	Banks and S&Ls <ul style="list-style-type: none">• Auto loans• Credit cards issued by banks and S&Ls• Home equity loans• Student loans• Mortgage loans• Line of credit
C	Clothing
D	Department, variety, local, regional, and national chains <ul style="list-style-type: none">• Mail order
E	Employment
F	Finance, personal <ul style="list-style-type: none">• Personal loan companies and credit cards/lines of credit issued by them
G	Groceries
H	Home furnishing
I	Insurance
J	Jewelry, cameras, and computers
K	Contractors <ul style="list-style-type: none">• General contractors• Home improvement contractors
L	Lumber, building material, hardware
M	Medical and related health
N	Credit card and travel/entertainment companies <ul style="list-style-type: none">• Travel and entertainment cards• Car rental companies• Airline cards
O	Oil companies
P	Personal services other than medical

Code	Industry
Q	Finance other than personal <ul style="list-style-type: none"> • Sales finance companies • Automobile finance • Mortgage companies • Credit unions and credit cards issued by them
R	Real estate and public accommodations
S	Sporting goods
T	Farm and garden supplies
U	Utilities and fuel
V	Government
W	Wholesale
X	Advertising
Y	Collection services
Z	Miscellaneous and public record

Permissible Purpose Codes

Below are the valid codes that indicate the purpose for obtaining the requested report. Refer to the description of the EU01 segment in Chapter 2, “TU40 FFI Segments,” for more details about when a subscriber must provide one of these codes. If necessary, the subscriber sends the code in the EU01 segment.

Code	Permissible Purpose Description
AR	Intends to use the information as a potential investor, servicer, or current insurer in connection with a valuation of, or assessment of, the credit or prepayment risks
BI	Beneficial Interest of the Consumer as allowed under GLB
BN	A legitimate business need in connection with a business transaction that is initiated by the consumer
CI	In accordance with written instructions of the consumer to whom it relates
CL	In connection with a collection transaction involving the consumer for the collection of an account of the consumer
CP	In response to an agency administering a state plan under Section 454 of the Social Security Act (42 U.S.C. 654) for use to set an initial or modified child support award
CR	In accordance with written instructions of the consumer through a reseller
CS	In response to a request by the head of a state or local child support enforcement agency (or a state or local government official authorized by the head of such an agency) that has met all requirements of Section 604(a)(4)(A,B,C,D)
CT	In connection with a credit transaction involving the consumer and for the extension of credit or review or collection of an account of the consumer

Appendix B. Industry and Permissible Purpose Codes

Code	Permissible Purpose Description
EP	For employment purposes (Use only with the PEER product)
FB	Use falling under FCRA Section 625—disclosures to FBI for counterintelligence purposes
FN	Financial Services transaction as allowed under GLB
FP	Fraud Prevention as allowed under GLB
GF	In connection with a determination of eligibility for a license or other benefit granted by a governmental instrument required by law to consider financial responsibility or status
GR	Use falling under FCRA Section 608—disclosures to governmental agencies
GT	Government Use as allowed under GLB or under California SB 168
HS	If the end user of the consumer report product is the California State Department of Health Services or its agents or assigns acting to investigate Medi-Cal fraud
IN	In connection with the underwriting of insurance
IS	In connection with an insurance claim where written permission of the consumer has been obtained
MS	Any person or entity administering a credit file monitoring subscription service to which the consumer has subscribed.
PC	In connection with pre-screen back end verification that determines if the consumer who accepts prescreen firm offer still meet the specific criteria.
PR	In connection with the review of existing policy holders for insurance underwriting purposes
RA	A legitimate business need to review an account to determine whether the consumer continues to meet the terms of the account
RP	Any person or entity for the purpose of providing a consumer with a copy of his or her credit report upon the consumer's request
SF	Comply with State or Federal Law as allowed under GLB
SI	In response to the order of a court having jurisdiction or a subpoena issued by a federal grand jury (1)
SP	If the end user is any state or local agency, law enforcement, trial court, or private collection agency acting on a court order, warrant, or subpoena
TB	If the end user is California Franchise Tax Board investigating or collecting delinquent taxes or unpaid court orders or to fulfill any of its statutory responsibilities
TS	In connection with a tenant screen application involving the consumer

Appendix C. Trade and Loan Type Codes

This appendix contains the TU40 codes for fields that apply to trade and loan information. These fields are located in the trade (TR01) and collection (CL01) segments, but some also appear in other TU40 segments. These are the field codes listed in this appendix:

- Loan type codes
- Manner of Payment (MOP) codes
- Remarks codes

The final section of this appendix describes the payment pattern logic reflected in the TU40 FFR trade data.

Loan Type Codes

Listed below are the loan type codes used in TU40.

Code	Type of Loan
AC	Open Account
AF	Appliance/Furniture
AG	Collection Agency/Attorney
AL	Auto Lease
AP	Airplane
AR	Auto Loan—Refinanced
AT	Auto Loan—Equity Transfer
AU	Automobile
AX	Agricultural Loan
BC	Business Credit Card
BL	Revolving Business Lines
BT	Boat
BU	Business
CA	Camper
CB	Combined Credit Plan
CC	Credit Card
CE	Commercial Line of Credit
CG	Commercial Credit Obligation
CH	Charge Account
CI	Commercial Installment Loan
CK	Checking Account Type of Loan
CL	Credit Line
CM	Co-maker
CN	Credit Clinic
CO	Consolidation
CP	Child Support
CR	Cond. Sales Contract; Refinance
CS	Conditional Sales Contract
CU	Telecommunications/Cellular

Code	Type of Loan
CV	Conventional Real Estate Mortgage
CW	Credit Watch
CX	Charged Off Checking Account
CY	Commercial Mortgage
DB	Dun and Bradstreet
DC	Debit Card
DR	Deposit Related
DS	Debt Counseling Service
EM	Employment
EQ	Equipment
FA	Farm Equipment
FC	Factoring Company Account
FD	Fraud Identity Check
FE	Attorney Fees
FH	FHA Loan
FI	FHA Home Improvement
FL	FMHA Real Estate Mortgage
FM	Family Support
FR	FHA Real Estate Mortgage
FS	Finance Statement
FT	FACT Inquiry
GA	Government Employee Advance
GE	Government Fee for Services
GF	Government Fines
GG	Government Grant
GH	Fraud Check Req. & GAD Rpt
GO	Government Overpayment
GS	Government Secured
GU	Govt. Unsecured Guar/Dir Ln
GV	Government
HE	Home Equity Loan
HG	Household Goods
HI	Home Improvement
HK	HAWK Match Received
HW	Building Material/Hardware
IN	Insurance
IS	Installment Sales Contract
LC	Line of Credit
LE	Lease
LI	Lender-placed Insurance
LN	Construction Loan
LS	Credit Line Secured
MB	Manufactured Housing
MC	Miscellaneous
MD	Medical Debt
MH	Medical/Health Care
MT	Motor Home
NT	Note Loan
PI	Property Improvement Plan
PL	Personal Loan
PO	Paid Out
PR	Personal Loan—Refinanced
PS	Partly Secured

Appendix C. Trade and Loan Type Codes

Code	Type of Loan
RA	Rental Agreement
RC	Returned Check
RD	Recreational Merchandise
RE	Real Estate
RF	Refund Anticipation Loan
RL	Real Estate—Junior Liens
RM	Real Estate Mortgage
RT	Real Estate Loan—Equity Transfer
RV	Recreational Vehicle
SA	Summary of Accounts—Same Status
SC	Secured Credit Card
SE	Secured
SH	Secured by Household Goods
SI	Secured Home Improvement
SK	Skip
SM	Second Mortgage
SO	Secured by Household Goods & Collateral
SS	ScoreSearch Inquiry
ST	Student Loan
SU	Spouse Support
SV	Savings Book, Stock, etc.
TR	TRACE Inquiry
TS	Time Shared Loan
UC	Utility Company
UK	Unknown
US	Unsecured
VA	V.A. Loan
VM	V.A. Real Estate Mortgage
WT	WATCH Inquiry
YY	Collection

Account Designator Codes

Below are listed the account designator codes returned in a TU40 FFR.

Code	Account Designator Description
U	Undesignated account: account that has not yet been designated
I	Individual account: account that has been restricted to subject's use only.
C	Contractually liable: account for which both spouses are contractually liable.
A	Authorized spouse user: joint account in which either spouse is an authorized user, but has no joint contractual liability .
P	Participating account: joint account for which contractual liability cannot be determined.
S	Co-maker: account in which the subject is a cosigner (no spousal relationship), who becomes liable if the maker defaults.
M	Maker: account in which the subject is the primary maker and for which a cosigner with no spousal relationship assumes liability if the subject defaults.
T	No longer associated: a previously active, joint-type account with which a separated or divorced spouse is no longer associated and desires to make known the situation. Termination code 't' may also be used for the termination of a co-maker account.
X	Deceased.

Manner of Payment (MOP) Codes

Below are listed the MOP codes returned in a TU40 FFR.

Code	MOP Description
00	No rating
01	Paid or paying as agreed
02	30 days past due
03	60 days past due
04	90 days past due
05	120 days past due
07	Wage earner or similar plan
08	Repossession
8A	Voluntary surrender
8D	Legal repossession
8P	Payment after repossession
8R	Repossession redeemed
09	Charged off as bad debt
9B	Collection account
9P	Payment after charge off/collection
SL	Slow pay
UC	Unclassified
UR	Unrated or bankruptcy (remarks code will show whether the account is a bankruptcy and, if so, what type of bankruptcy)

Remarks Codes

Below are listed the remarks codes returned in a TU40 FFR.

Code	Remarks Description
AAP	Loan assumed by another party
ACR	Account closed due to refinance
ACQ	Acquired from another lender
ACT	Account closed due to transfer
AFR	Account acquired by RTC/FDIC/NCUA
AID	Account information disputed by consumer
AJP	Adjustment pending
AMD	Active military duty
AND	Affected by natural/declared disaster
BAL	Balloon payment
BCD	Bankruptcy/dispute of account information/account closed by consumer
BKC	Bankruptcy/account closed by consumer
BKD	Bankruptcy/dispute of account information
BKL	Included in bankruptcy
BKW	Bankruptcy withdrawn
BRC	Bankruptcy/dispute resolved/consumer disagrees/account closed by consumer
BRR	Bankruptcy/dispute resolved/consumer disagrees
CAD	Dispute of account information/closed by consumer
CBC	Account closed by consumer
CBD	Dispute resolved; consumer disagrees/account closed by consumer
CBG	Account closed by credit grantor
CBL	Chapter 7 bankruptcy
CBR	Chapter 11 bankruptcy
CBT	Chapter 12 bankruptcy
CCD	Account closed by consumer/Chapter 7
CDC	Chap. 7/dispute of account information/account closed by consumer
CDD	Account closed by consumer/Chapter 11
CDL	Chap. 7/dispute of account information
CDR	Chap. 11/dispute of account information
CDT	Chap. 12/dispute of account information
CED	Account closed by consumer/Chapter 12
CFD	Account in dispute/closed by consumer
CLA	Placed for collection
CLB	Contingent liability—corporate defaults
CLO	Closed
CLS	Credit line suspended
CPB	Customer pays balance in full each month
CRC	Chap. 11/dispute of account information/account closed by consumer
CRD	Chap. 7/dispute resolved/consumer disagrees/account closed by consumer
CRL	Chap. 7/dispute resolved/consumer disagrees

Appendix C. Trade and Loan Type Codes

Code	Remarks Description
CRR	Chap. 11/dispute resolved/consumer disagrees/account closed by consumer
CRT	Chap. 12/dispute resolved/consumer disagrees/account closed by consumer
CRV	Chap. 11/dispute resolved/consumer disagrees
CTR	Account closed—transfer or refinance
CTS	Contact subscriber
CTC	Chap. 12/dispute of account information/account closed by consumer
CTV	Chap. 12/dispute resolved/consumer disagrees
DEC	Deceased
DLU	Deed in lieu
DM	Bankruptcy dismissed
DRC	Dispute resolved—customer disagrees
DRG	Dispute resolved reported by grantor
ER	Election of remedy
ETB	Early termination/balance owing
ETD	Early termination by default
ETI	Early termination/insurance loss
ETO	Early termination/obligation satisfied
ETS	Early termination/status pending
FCL	Foreclosure
FPD	Account paid, foreclosure started
FPI	Foreclosure initiated
FRD	Foreclosure, collateral sold
FTB	Full termination/balance owing
FTO	Full termination/obligation satisfied
FTS	Full termination/status pending
INA	Inactive account
INP	Debt being paid through insurance
INS	Paid by insurance
IRB	Involuntary repossession/balance owing
IRE	Involuntary repossession
IRO	Involuntary repossession/obligation satisfied
JUG	Judgement granted
MCC	Managed by debt counseling service
MOV	No forwarding address
ND	No dispute
NIR	Student loan not in repayment
NPA	Now paying
PAL	Purchased by another lender
PCL	Paid collection
PDD	Paid by dealer
PDE	Payment deferred
PDI	Principal deferred/interest payment only
PFC	Account paid from collateral
PLL	Prepaid lease
PLP	Profit and loss now paying
PNR	First payment never received
PPA	Paying partial payment agreement
PPD	Paid by comaker
PPL	Paid profit and loss
PRD	Payroll deduction
PRL	Profit and loss writeoff

Code	Remarks Description
PWG	Account payment, wage garnish
REA	Reaffirmation of debt
REP	Substitute/Replacement account
RFN	Refinanced
RPD	Paid repossession
RPO	Repossession
RRE	Repossession; redeemed
RVN	Voluntary surrender
RVR	Voluntary surrender redeemed
SET	Settled—less than full balance
SGL	Claim filed with government
SIL	Simple interest loan
SLP	Student loan perm assign government
SPL	Single payment loan
STL	Credit card lost or stolen
TRF	Transfer
TRL	Transferred to another lender
TTR	Transferred to recovery
WCD	Chap. 13/dispute of account information/account closed by consumer
WEP	Chap. 13 bankruptcy
WPC	Chap. 13/account closed by consumer
WPD	Chap. 13/dispute of account information
WRC	Chap. 13/dispute resolved/consumer disagrees/account closed by consumer
WRR	Chap. 13/dispute resolved/consumer disagrees

Payment Pattern Logic

The payment pattern, returned in the TR01 segment, shows up to a 48-month history of the Manner of Payment (MOP) ratings on the tradeline. The pattern is usually built by TransUnion and is incremented each month during its processing of automated tradelines. Alternatively, credit grantors may provide their own complete payment patterns.

The pattern has six possible values—1, 2, 3, 4, 5, and X—that correspond to the following MOP values:

This MOP Received	00	01	02	03	04	05	UC	UR	07, 08s, 09s
Becomes This Payment Pattern Entry	X	1	2	3	4	5	X	X	MOP values of 07, 08x, or 09x cause the payment pattern to be deleted.

Reading the Payment Pattern

The payment pattern is read from left to right, the leftmost value being the most recent. The Payment Pattern Start Date, which begins in column 232 of the TR01 segment, specifies the year and month this first value applies to. The Payment Pattern Start Date is derived from one of the following dates on the trade:

1. Date Closed
2. Date Paid Out (if Date Closed is not present)
3. Date Verified (if neither of the above dates is present)

The remaining entries indicate monthly intervals (from most recent to oldest) from that start date and specify the MOP value in effect for each month.

In the example below, the start date is April 2001 (200104) and the remaining entries list the MOP values for March, February, and January in that order.

Payment Pattern Entry	3	2	1	1
Date Effective	200104 <i>(start date)</i>	200103	200102	200101

When no data is received from a subscriber for the month or when an account is in dispute, the MOP value is X. To continue the above example, if no MOP was received in May and a MOP value of 2 was received in June, this would be the payment pattern:

Payment Pattern Entry	2	X	3	2	1	1
Date Effective	200106 <i>(start date)</i>	200105	200104	200103	200102	200101

Appendix D. Public Record Codes

This appendix contains the TU40 codes for court types and for public record types.

Court Type Codes

Below is a list of the codes returned in TU40 to identify court types in public records.

Code	Court Type	Code	Court Type
AS	Associate Court	FE	Federal District
BK	U.S. Bankruptcy Court	GS	General Sessions
CA	County Auditor	IC	Inferior Court
CC	County Clerk	JU	Justice of the Peace
CH	Chancery Court	MA	Magistrate Court
CI	Circuit Court	MU	Municipal Court
CL	County Court at Law	M1	Magisterial Court, Type 1
CN	Conciliation Court	M2	Magisterial Court, Type 2
CO	Common Claims	M3	Magisterial Court, Type 3
CP	Common Pleas	M4	Magisterial Court, Type 4
CR	County Recorder	PC	Parish Court
CT	County Court	PR	Probate Court
CY	City Court	RD	Recorder of Deeds
DC	District Court	SC	Small Claims
DO	Domestic Court	ST	State Court
DS	District Judge System	SU	Superior Court

Public Record Types

Below is a list of the codes returned in TU40 to identify types of public records.

Code	Public Record Type	Code	Public Record Type
AM	Attachment	RM	Release of mechanic's lien
CB	Civil judgement in bankruptcy	RS	Real estate attachment satisfied
CJ	Civil judgement	SF	Satisfied foreclosure
CP	Child support	SL	State tax lien
CS	Civil suit filed	TB	Tax lien included in bankruptcy
DF	Dismissed foreclosure	TC	Trusteeship canceled
DS	Dismissal of court suit	TL	Tax lien
FC	Foreclosure	TP	Trusteeship paid/state amortization satisfied
FD	Forcible detainer	TR	Trusteeship paid/state amortization
FF	Forcible detainer dismissed	TX	Tax lien revived
FT	Federal tax lien	WS	Water and sewer lien
GN	Garnishment	1D	Chapter 11 bankruptcy dismissed
HA	Homeowner's association assessment lien	1F	Chapter 11 bankruptcy filing
HF	Hospital lien satisfied	1V	Chapter 11 bankruptcy voluntary dismissal
HL	Hospital lien	1X	Chapter 11 bankruptcy discharged
JL	Judicial lien	2D	Chapter 12 bankruptcy dismissed
JM	Judgement dismissed	2F	Chapter 12 bankruptcy filing
LR	A lien attached to real property	2V	Chapter 12 bankruptcy voluntary dismissal
ML	Mechanics lien	2X	Chapter 12 bankruptcy discharged
PC	Paid civil judgement	3D	Chapter 13 bankruptcy dismissed
PF	Paid federal tax lien	3F	Chapter 13 bankruptcy filing
PG	Paving assessment lien	3V	Chapter 13 bankruptcy voluntary dismissal
PL	Paid tax lien	3X	Chapter 13 bankruptcy discharged
PQ	Paving assessment lien satisfied	7D	Chapter 7 bankruptcy dismissed
PT	Puerto Rico tax lien	7F	Chapter 7 bankruptcy filing
PV	Judgement paid, vacated	7V	Chapter 7 bankruptcy voluntary dismissal
RL	Release of tax lien	7X	Chapter 7 bankruptcy discharged

Appendix E. Puerto Rico Name and Address Logic

Special logic exists for storing and retrieving Hispanic paternal and maternal surnames. Special logic also exists for formatting the addresses using Hispanic conventions. The name and address logic applies to subject files in Puerto Rico and the Virgin Islands. The following sections describe the special steps that users should follow to maximize effectiveness of the file retrieval logic.

Special Logic for Hispanic Surnames

TransUnion searches under both paternal and maternal surnames if they are input. If eligible, files are combined before they are returned. In all cases, the output records display both surnames if present in the database. Because many surnames are common, an FFI that contains both paternal and maternal surnames is likelier to return the correct record.

Other ways to help ensure the return of correct records is to use as much information as possible as input:

Social Security Number

Residents of Puerto Rico and the Virgin Islands receive social security numbers. Use the social security number as part of the input whenever possible because of the presence of many common surnames.

Other Input Data

Use other available data, such as date of birth, as input to better narrow the range of the record search. The TransUnion file selection algorithm makes use of all input data.

Note

Add these fields if they are known. Transmitting fabricated information can cause improper file selection.

Input of Surnames

Place the first surname (generally the paternal name) in the Last Name field of the first NM01 segment. Place the first name, middle name, prefix, and suffix in the appropriate fields of the first NM01 segment.

Place the second surname (generally the maternal name) in the Last Name field of the **second** NM01 segment and set the Name Type field to a value of 2, which indicates a secondary name. Only the maternal surname should be placed in the Last Name field of the second NM01 segment. It is not necessary to populate the first, middle, prefix, and suffix fields.

Sample of Surname Input

Below is an example of how to correctly input a Hispanic surname.

Source Applicant Information: **Barbara F Ecchevarria De Colon**

First FFI NM01 Segment Input:

Field Name	Displacement	Input
Name Type	5	1 (<i>primary name</i>)
Last Name	6	Ecchevarria (<i>paternal name</i>)
First Name	31	Barbara
Middle Name	46	F

Second FFI NM01 Segment Input:

Field Name	Displacement	Input
Name Type	5	2 (<i>secondary name</i>)
Last Name	6	Colon (<i>maternal name</i>)
		Note: The preposition of “De” is dropped

Output Of Multiple Surnames

When credit information is located under one surname, only that file is returned. When credit information is located under each surname separately, the data is returned in separate files.

Special Logic for Hispanic Addresses

This section describes how to input Hispanic addresses, what to expect in the output, and examples of both.

Address Input

Whenever possible, follow the normal TransUnion address input conventions. When uncertain of the proper entry format, place a zero (0) in the House Number field (displacement 6 of the AD01 segment). Then enter the entire first line of the address (or as much as will fit, blanks included) in Street Name field (displacement 18 in the AD01 segment).

Address Output

Regardless of the input, TransUnion reformats the output Puerto Rican addresses to standardize them for both file retrieval and mail delivery. The House Number field is zero-filled, and the Street Name field contains the complete first line of the address.

Samples of Address Input and Output

Below are samples of how to send Hispanic addresses in the FFI and how the addresses are returned.

CASE 1

Source Applicant Information: **804 Ponce De Leon Avenue
San Juan, PR 00907**

FFI AD01 Segment Input:

Field Name	Displacement	Input
House Number	6	804
Street Name	18	Ponce de Leon
Street Type	47	AV
City	54	San Juan
State	81	PR
Zip Code	83	00907

FFR AD01 Segment Output:

Field Name	Displacement	Input
House Number	10	0000000000
Street Name	22	Ponce de Leon
Street Type	51	AV
City	58	San Juan
State	85	PR
Zip Code	87	00907

CASE 2

Source Applicant Information: **Munoz Rivera Apt. 6A Guaynabo, PR 00657**

FFI AD01 Segment Input:

Field Name	Displacement	Input
House Number	6	0
Street Name	18	Munoz Rivera
Apartment/Unit	49	6A
City	54	Guaynabo
State	81	PR
Zip Code	83	00657

FFR AD01 Segment Output:

Field Name	Displacement	Input
House Number	10	0000000000
Street Name	22	Urb Munoz Rivera
Apartment/Unit	53	6A
City	58	Guaynabo
State	85	PR
Zip Code	87	00657

CASE 3

Source Applicant Information: **Calle San Justo 23 Carolina, PR 00630**

FFI AD01 Segment Input:

Field Name	Displacement	Input
House Number	6	0
Street Name	18	Calle San Justo 23
City	54	Carolina
State	81	PR
Zip Code	83	00630

FFR AD01 Segment Output:

Field Name	Displacement	Input
House Number	10	0000000000
Street Name	22	Calle San Justo 23
City	58	Carolina
State	85	PR
Zip Code	87	00630

Appendix F. Edit and Error Codes

This appendix describes how edit records and error records are created and lists the edit codes and error codes that can be generated during transactions.

Edit Response Records

To avoid rejection of an inquiry, the system tries to edit improperly formatted fields in the fixed format inquiry record (FFI). If an inquiry is rejected, the output is an error response record instead of a fixed format response.

Generating an Edit Response Record

During processing, certain fields in the FFI are edited for invalid characters. The system removes any invalid data that it finds and creates an optional edit response record (ED01). You receive this record if you request the edit response on the OR01 segment in the FFI.

The system returns the edit segment if you requested one in the OR01 segment and if no error response (TU4E) record was created. The edit record is returned after the subject header for the first file returned for the first subject as shown below. Multiple edit segments may be returned for a subject, one segment for each field edited.

Segment ID	Segment Name	Current Maximum Returned
TU4R	Transaction Control	1 Per Transaction
PH01	Product Header (Credit Report)	1 Per Product
SH01	Subject Header (Subject 1, File 1)	12 Per Subject
ED01	Edit Segment	39 Per Subject
CI01	Consumer Identifier	1 Per Subject
NM01	Name	1 Per Type Per Subject
PI01	Personal Information	1 Per Subject
TA01	Trans-Alert	6 Per Subject
AD01	Address	1 Per Address Type Per Subject
PN01	Phone	9 Per Subject
PR01	Public Record	126 Per Subject
TR01	Trade Segment	126 Per Subject
MI01	Miscellaneous	126 Per Subject
CS01	Consumer	20 Per Subject
IN01	Inquiry	126 Per Subject
OB01	Owning Bureau	1 Per Subject
AO01	Add-on Status (Hawk)	1 Per Subject
MC01	Message Code	999
SH01	Subject Header (Subject 2)	12 Per Subject
ED01	Edit Segment	39 Per Subject
ENDS	End Segment	1 Per Transaction

The edit record is not shown on printed output.

EDIT Segment Layout

The ED01 segment identifies the field that was edited.

Edit (ED01) Segment				Total length: 61 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ED01 .
Segment Length	5	3	N	Value is 61 .
Subject Identifier	8	1	N	Indicates the subject for which the edit applies. Possible values are: 1 First subject 2 Second subject
Original Value	9	50	A/N	Contains the original value in the fixed format inquiry field for subject input data before it was edited
Edit Code Number	59	3	A/N	Displays the edit code.

Edit Codes

Code	Segment ID	Field Name	Edit Action
001	OR01	Owning Bureau Identification of Credit File Request	Defaulted to 'N' option – do not return .
002	OR01	Error Text Segment Request	Defaulted to 'N' – return only the error code.
003	OR01	Trade MOP Totals Request	Defaulted to 'N' option – do not return.
004	OR01	Summary Segment Request	Defaulted to subscriber option.
005	SH01	Subject Input Data	Invalid subject input data – subject ignored.
006	NM01	Last Name	Embedded blanks, special characters or numerics were edited out.
007	NM01	First Name	Embedded blanks, special characters or numerics were edited out.
008	NM01	Middle Name	Embedded blanks, special characters or numerics were edited out.
009	NM01	Prefix	Invalid code is ignored.
010	NM01	Suffix	Invalid code is ignored.
012	PI01	Social Security Number	Invalid format is ignored.
013	PI01	Date of Birth	Invalid format is ignored.
014	PI01	Age	Invalid format is ignored.
015	AD01	House Number	Invalid alphabetic, special characters, embedded blanks or fractions were edited out.
017	AD01	Street Name	Special characters or fractions were edited out.
018	AD01	Street Type	Invalid Type is ignored.
019	AD01	Apartment or Unit Number	Special characters or fractions were edited out.
020	AD01	City Name	Embedded special characters or numerics were edited out.
021	AD01	Employer House Number	Invalid alphabetic, special characters, embedded blanks or fractions were edited out.
022	AD01	Employer Street Name	Special characters or fractions were edited out.
023	AD01	Employer City Name	Embedded special characters or numerics were edited out.
024	EM01	Occupation	Invalid format – contains characters not A-Z or 0-9 – is ignored.
025	PN01	Phone Type	Invalid type – phone is ignored.
026	PN01	Telephone	Invalid or missing – phone is ignored.
027	EM01	Employer State	Invalid State is ignored.
028	EM01	Date Hired	Invalid Date format is ignored.
029	EM01	Date Separated	Invalid Date format is ignored.
030	EM01	Pay Basis	Invalid code is ignored.
031	EM01	Income	Invalid format is ignored.
032	AI01	Loan Type	Invalid code is ignored.
033	AI01	Loan Amount	Invalid format is ignored.
034	AD01	Predirectional	Invalid street directional is ignored.
035	AD01	Postdirectional	Invalid street directional is ignored.
036	AD01	Street Type	Invalid street type is ignored.
037	AD01	Length of Residence	Invalid format is ignored.
038	AD01	Residential Status	Invalid valid is ignored.
039	OD01	Form Type	Default of 01 or 04 was used.
041	AD01	Street address fields	Street address could not be parsed so cannot be used for matching.

Error Response Records

This section describes the errors and error codes that TU40 generates and specifies how to structure your FFI to avoid causing errors.

Generating an Error Response Record

Each fixed format inquiry record (FFI) is edited when received in CRONUS. An error response record results if:

- In a required field, there is invalid or incorrect data for which CRONUS processing cannot compensate.
- There is a failure of software, hardware, or telecommunication lines.

Five levels of Errors

These are the five levels of errors used to check systematic conditions and the validity of data received:

- Level 0** Failure of software, hardware or telecommunication lines.
- Level 1** Invalid segment identification, version switch, or segment structure errors.
- Level 2** Invalid credit bureau control fields.
- Level 3** Invalid request.
- Level 4** Invalid subject identification data.

Structure Editing Process

To avoid causing errors, the FFI must meet all of the following structure requirements:

- The first segment of the FFI must be the Transaction Control Segment (TU4I).
- All segment types must be valid.
- The total length of the FFI must equal the sum of the lengths of all the segments received.
- The last segment of the FFI must be the ENDS segment.
- The FFI must contain at least one Request Product segment (RP01).
- The End User segment (EU01), if the FFI contains one, must immediately follow the TU4I segment.
- A subject segment—SH01, NM01, PI01, AD01, PN01, ID01, CC01, EM01—must precede a product segment—RP01, OR01, AI01, OD01, RA01.
- The FFI cannot include more than the maximum number of segments specified for a subject or product.
- The subject data segments—NM01, PI01, AD01, PN01, ID01, CC01, EM01—must follow a Subject Header (SH01).
- The request processing segments—OD01, OR01, AI01, RA01—must follow a Request Product segment (RP01).
- There must be at least one subject data segment following a Subject Header (SH01).

Error Segment Layouts

TU40 includes two error segments, ERRC and ERRT, both of which are described below.

Error Code Segment

The ERRC segment displays the code of the error that occurred while this transaction was being processed.

Error Code (ERRC) Segment				Total length: 11 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ERRC .
Segment Length	5	3	N	Value is 011 .
Subject Identifier	8	1	N	Indicates the subject for which the error applies. Possible values are: <ol style="list-style-type: none"> 1 First subject 2 Second subject
Error Code Number	9	3	A/N	Displays the error code.

Error Text Segment

The ERRT segment displays the full message text of an error code that was returned to the customer. Request the error text segment with an OR01 (Optional Request) segment in the FFI. If no error text segment is requested, then an error code segment is returned.

Error Description/Text (ERRT) Segment				Total length: 90 bytes
Field	Displacement	Length	Type	Description
Segment Type	1	4	A/N	Value is ERRT .
Segment Length	5	3	N	Value is 090 .
Subject Identifier	8	1	N	Indicates the subject for which the error applies. Possible values are: <ol style="list-style-type: none"> 1 First subject 2 Second subject
Error Code Number	9	3	A/N	Specifies the error code for the error that was found. The next section lists possible error codes.
Error Description	12	79	A/N	Contains the text corresponding to the error code that was returned.

Sample Error Response

The following example shows how an error response is returned when no product is delivered for an inquiry transaction:

Segment ID	Segment Name	Current Maximum Returned
TU4E	Transaction Control	1 Per Transaction
PH01	Product Header (Credit Report)	1 Per Product/Subject
ERRC	Error	1 Per Product/Subject except for Level Four errors. The FFR can return up to 5 Level Four errors per product/subject.
ENDS	End	1 Per Transaction

Note It is possible for a low-level error to occur for which TU40 cannot read enough of the FFI to send a TU4E segment. If this occurs, we return a CORR segment **without** a TU4E. The CORR segment returns the same TU40 error codes as the TU4E segment.

Error Codes—Level Zero

Level zero errors denote a failure of software, hardware, or telecommunication lines.

Code	Description	Recovery
001	The transaction was abnormally terminated due to a system error.	Retry transaction and if the situation persists, notify network help desk.
015	The CRONUS system is not available at this time.	Retry transaction and if the situation persists, notify network help desk.
021	The market area being accessed is out of service.	Retry transaction and if the situation persists, notify network help desk.
027	The subject record being accessed is too long.	Notify network help desk.
029	Hardware failure exists on new subject file disk drive.	Notify network help desk.
031	The subject record being accessed is misformatted.	Notify network help desk.
033	Too many total or duplicate inquiries exist on file. This commonly occurs on test records and may also occur when the same subject file is requested repeatedly by the same subscriber.	Notify network help desk.
035	The transaction was abnormally terminated due to a WATCH system error.	Retry transaction and if the situation persists, notify network help desk.
041	The transaction was abnormally terminated due to an internal DecisionPoint error.	Notify network help desk.
042	DecisionPoint model error.	Notify network help desk.
043	Invalid response from product server.	Retry transaction and if situation persists, notify network help desk.
090	The product requested is not available at this time.	Retry transaction and if situation persists, notify network help desk.
091	Internal system error	Notify network help desk.
098	Fraud Detect connection failed.	Notify network help desk.
099	Undefined system error.	Notify network help desk.

Error Codes—Level One

Level one errors denote invalid segment identification, a version switch, or a segment structure error.

Code	Description	Recovery
101	FFI segment contains an invalid segment ID.	Fixed format inquiry record contains an invalid segment ID, invalid country code, or the sum of the individual segment lengths is invalid.
102	Invalid input FFI message type	Occurs when first segment is not TU4I. Check input to ensure properly formatted segments and resend transaction.
105	Invalid version switch.	TU4I segment contains an invalid version switch.
117	The length of the FFI is invalid	Occurs when an incomplete FFI is received or if ENDS segment is not the last segment in the FFI. Check input to ensure proper format and sequence of segments and resend transaction.
132	Number of subject AD01 segments greater than maximum allowed.	Only 2 AD01 segments per subject. Check input, delete extra segments and resend transaction.
133	Number of employment AD01 segments greater than maximum allowed.	Only 1 AD01 per employer. Check input, delete extra segments and resend transaction.
134	Number of AI01 segments greater than maximum allowed.	Only 1 AI01 segment allowed per product. Check input, delete extra segments and resend transaction.
135	Number of CC01 segments greater than maximum allowed.	Only 1 CC01 per subject. Check input, delete extra segments and resend transaction.
136	Number of EM01 segments greater than maximum allowed.	Only 1 EM01 segment per subject. Check input, delete extra segments and resend transaction.
137	Number of EU01 segments greater than maximum allowed.	Only 1 EU01 segment per FFI. Check input, delete extra segments and resend transaction.
138	Number of FA01 segments greater than maximum allowed.	Only 1 FA01 segment per subject. Check input, delete extra segments and resend transaction.
139	Number of ID01 segments greater than maximum allowed.	Only 1 ID01 segment per subject. Check input, delete extra segments and resend transaction.
140	Number of primary NM01 segments greater than maximum allowed.	Only 1 primary NM01 segment per subject. Check input, delete extra segments and resend transaction.
141	Number of NM01 segments (secondary name) greater than maximum allowed.	Only 1 secondary NM01 segment per subject. Check input, delete extra segments and resend transaction.
142	Number of NM01 segments (alias) greater than maximum allowed.	Only 3 alias NM01 segments per subject. Check input, delete extra segments and resend transaction.
143	Number of OD01 segments greater than maximum allowed.	Only 2 OD01 segments allowed (1 per output type). Check input, delete extra segments and resend transaction.
144	Number of OR01 segments greater than maximum allowed.	Only 1 OR01 segment per product. Check input, delete extra segments and resend transaction.
145	Number of PI01 segments greater than maximum allowed.	Only 1 PI01 segment per subject. Check input, delete extra segments and resend transaction.
146	Number of subject PN01 segments greater than maximum allowed.	Only 1 PN01 segment per subject. Check input, delete extra segments and resend transaction.
147	Number of employment PN01 segments greater than maximum allowed.	Only 1 PN01 segment per employer. Check input, delete extra segments and resend transaction.
148	Number of RA01 segments greater than maximum allowed.	Only 20 RA01 segments per product. Check input, delete extra segments and resend transaction.
149	Number of RP01 segments greater than maximum allowed.	Only 2 RP01 segments per FFI. Check input, delete extra segments and resend transaction.

Appendix F. Edit and Error Codes

Code	Description	Recovery
151	Number of SH01 segments greater than maximum allowed.	Only 2 SH01 segments per FFI. Check input, delete extra segments and resend transaction.
152	Number of TU4I segments greater than maximum allowed.	Only 1 TU4I segment per FFI. Check input, delete extra segments and resend transaction.
154	Subject information found after product information.	Fixed format inquiry record contains subject segments out of proper sequence. Check input to ensure properly formatted segments and resend transaction.
155	No subject data found for subject header.	Fixed format inquiry must contain at least one of these segments: NM01, PI01, or AD01. This error is returned only if <i>none</i> of these segments is present. Check input to ensure properly formatted segments and resend transaction.
157	Subject data found without subject header.	Fixed format inquiry record does not contain an SH01 segment for subject data. Check input to ensure properly formatted segments and resend transaction.
158	Request product header not present in FFI.	Fixed format inquiry record does not contain an RP01 segment. Check input to ensure properly formatted segments and resend transaction.
159	Product data found without product header.	Fixed format inquiry record does not contain an RP01 segment for product data. Check input to ensure properly formatted segments and resend transaction.
160	End user segment not in proper order	EU01 segment does not immediately follow the TU4I segment. Check input to ensure proper format and sequence of segments and resend transaction.
162	Name type field invalid on name (NM01) segment.	See NM01 segment description.
169	Number of NC01 segments greater than maximum allowed.	Only 1 NC01 segment per FFI. Check input, delete extra segments, and resend transaction.
170	Invalid segment count.	Only 1 CD01 segment per product. Check input, delete extra segments, and resend transaction.
171	Segment out of order.	CD01 segment does not immediately precede the SH01 segment. Check input to ensure proper format and sequence of segments and resend transaction.
172	Required segment missing or invalid.	Fixed format inquiry does not include a CD01 segment. Check input for proper format and resend transaction.

Error Codes—Level Two

Level two errors denote invalid credit bureau control fields.

Code	Description	Recovery
201	Bureau market missing or invalid	Contact your local bureau if assistance is needed.
203	Bureau submarket missing or invalid	Contact your local bureau if assistance is needed.
205	Member code missing or invalid	Contact your local bureau if assistance is needed.
209	Password missing/invalid	Contact your local bureau if assistance is needed.
211	EP code is valid only for PEER	Recheck the settings in the FFI. This error is returned if the inquiry requests PEER without including the EP permissible purpose code (in the EU01 segment) or includes the EP code while requesting a different product.
212	Missing or invalid Permissible Purpose or End User field(s)	Recheck the settings in the FFI. This error is returned when information in the End Usage (EU01) segment is missing or invalid.
213	Not a valid permissible purpose code for product/model requested.	Recheck the settings in the FFI. This error is returned when information in the End Usage (EU01) segment is missing or invalid.
215	Invalid access code.	Recheck the settings in the FFI. This error is returned if a security freeze exists on a consumer file and the input access code does not match the file access code.
216	Input use type code does not match use type code established for this subscriber code.	Recheck the settings in the FFI. This error is returned if the use type code in the EU01 segment is different than expected per the subscriber's settings.
241	DecisionPoint customer ID, customer password, agent ID, and/or agent password missing or invalid.	Contact your account manager if assistance is needed.
299	Undefined error in a credit bureau control field or internal error.	Contact network help desk if assistance is needed.

Error Codes—Level Three

Level three errors denote invalid delivery or processing instructions.

Code	Description	Recovery
301	Inquiry type missing or invalid.	RP01 Inquiry Type must be I, C, A, or P.
303	Product requested invalid or missing.	Check product code specified in RP01 segment.
307	Member code is valid only for government agency disclosure (GAD) product.	Contact local credit bureau.
309	Member code is valid only for HAWKeye search.	Contact local credit bureau.
311	SDB invalid.	Contact local credit bureau.
313	Output blocksize requested is missing or invalid.	See output blocksize requested description in OD01 segment.
323	Subscriber not authorized for product requested.	Contact local credit bureau.
324	Subscriber not authorized for loan type requested.	Contact local credit bureau.
399	Undefined error in a processing option field.	Recheck the settings in the FFI.

Error Codes—Level Four

Level four errors denote invalid subject identification data.

Code	Description	Recovery
401	Surname missing or invalid *	See NM01 segment description.
403	First name missing or invalid	See NM01 segment description.
407	UNISSN was invoked, but the SSN is missing or invalid or a pocketbook SSN was entered.	See PI01 segment description.
410	More data is needed, check input for house number or street type.	See AD01 segment description.
411	Current address house number is missing or invalid.	See AD01 segment description.
413	Current address Street name is missing or invalid.	See AD01 segment description.
415	Current address city name missing or invalid.	See AD01 segment description.
417	Current address state code missing or invalid.	See AD01 segment description.
419	Current address zip code missing or invalid.	See AD01 segment description.
421	Previous address house number missing or invalid.	See AD01 segment description.
423	Previous address street name missing or invalid.	See AD01 segment description.
425	Previous address city name missing or invalid.	See AD01 segment description.
427	Previous address state code missing or invalid.	See AD01 segment description.
431	Employer name missing/invalid	See EM01 segment description.
435	Current address apartment number invalid.	See AD01 segment description.
447	Telephone number invalid.	See PN01 segment description.
449	Middle name invalid.	See NM01 segment description.
451	Current address street direction invalid.	See AD01 segment description.
453	Current address street type invalid.	See AD01 segment description.
455	Subject cross market invalid	
457	Invalid format to be decoded for LOOKUP.	See LK01 segment description.
459	California AB-156—at least three pieces of identifying information must be present in input.	Review NM01, AD01, and PI01 segments.
461	GLANCE: subscriber code/inquiry code match not established.	See RS01 segment description.
466	GLANCE: subscriber code/inquiry code match not active.	See RS01 segment description.
472	Customer identifier missing or invalid.	See CD01 segment description.
473	Customer identifier qualifier missing or invalid.	See CD01 segment description.
474	Application missing or invalid.	Review your TransUnion Net Access settings.
475	Digital Certificate missing or invalid	Review your TransUnion Net Access settings.
476	Net ID missing or invalid.	Review your TransUnion Net Access settings.
477	Fraud Detect: insufficient input to call fraud detect.	Review Fraud Detect product description.
478	Insufficient input.	Recheck input data to insure that required input fields were entered and segments are properly formatted.
499	Undefined error in subject identification field or internal error.	

* Surname and other indicative information must be in all capital letters.

Appendix G. The TU40 Format in the U.S. and Canada

The table below lists the segment fields in the TU40 FFI and FFR that are handled differently in the United States and Canada and describes the differences.

Segment Type	Segment ID	Field or Segment Name	U.S. Rule	Canadian Rule
FFI	OD01	Output Delivery Segment	Optional segment. Required only if requestor wants a delivery method other than FFR and standard (electronic) response.	Required segment.
FFI	RP01	ECOA Inquiry Type	Optional field. Type A used for authorized or spouse user.	Required field. Type J used for authorized or spouse user, but this is not usually used in Canada.
FFI	TU4I	Bureau Market/ Submarket	Needed because Member Numbers are not unique outside a bureau.	Not used.
FFI	TU4I	Contractual Indicator	Determines whether the transaction includes two subjects that have a contractual relationship. Replaces ECOA Inquiry Type.	Not used.
FFI	VN01	Vendor Information Segment	Supplies the name and product description of the vendor.	Not used.
FFI	EU01	End Usage Segment	Provides end user name and permissible purpose code for compliance purposes.	Not used.
Note: Multiple subject processing is different in the U.S. than it is in Canada. While the U.S. requires that only one subject be valid to process the transaction, Canada requires that both subjects are valid.				
FFR	SE02	Spouse's Employment	Not used. This information is returned in an EM01 segment.	Returned for Joint Credit Report.
FFR	SN02	Spouse's Name	Not used. This information is returned in an NM01 segment.	Returned for Joint Credit Report.
FFR	TU4R	Transaction Time	Returns Central Standard Time.	Returns Eastern Standard Time.
FFR	Various	Date Fields	If day does not exist on database, returns 01 in day field.	If day does not exist on database, returns 00 in day field. Also, when no date is present, the date field returned is zero-filled although it is an A/N field.
FFR	TA01	Trans Alert Segment	Returned for each Trans Alert message generated. There are no message codes defined for Trans Alert messages, only indicators.	Not used.
Note: Trans Alert processing is different in the U.S. than it is in Canada.				
FFR	TA02	Trans Alert Segment	Not used. The exact number of inquiries is returned in the <i>More Than 4 Inquiries in the Last 60 Days</i> message.	Returns message code and text for each Trans Alert message generated. Message codes range from 000001-000503. The exact number of inquiries is not returned in the <i>More Than 4 Inquiries in the Last 60 Days</i> message.
Note: HAWK message processing is different in the U.S. than it is in Canada.				

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Segment Type	Segment ID	Field or Segment Name	U.S. Rule	Canadian Rule
FFR	MT01	Message Code	HAWK message codes range from 000000 through 009999. Possible HAWK message segments include: <ul style="list-style-type: none"> • MT01 (message text) • MC01 (message code) • QH01 (Inquiry History) • DC01 (Deceased SSN) • YI01 (Year of Issuance) 	HAWK message codes range from 000040 through 000130. HAWK messages are always returned in an MT01 segment. MC01, QH01, DC01, and YI01 never returned. No Inquiry History or SSN Year of Issuance messages.
FFR	MT01	Message Code	The MT01 message segment is not returned for HAWK when the result is HAWK Clear. This status is communicated in the AO01 segment. Actual HAWK code has been defined as 9997.	The MT01 segment is returned for a HAWK Clear message with a code of '000000'. This was a customer requirement.
FFR	LE02	Legal Items segment	Not used.	Returned for Credit Report.
FFR	RC02	Registered Item/Chattel segment	Not used.	Returned for Credit Report.
FFR	BK02	Banking Information	Not used.	Returned for Credit Report.
Note: IDSearch product processing is different in the U.S. than it is in Canada.				
FFR	SH04	Subject Header	Returns the best match indicator for ScoreSearch and IDSearch products.	Not used. Canada returns SH01 segment for IDSearch. Canadian product performs matches on additional information such as Date of Birth, Employment, and Phone Number, and returns only the Best Match file.

Appendix H. Test Files

Test cases have been developed to accommodate the testing requirements of TransUnion's customers. Use any of the fifteen files listed below to test your system setup. For joint file testing, use either the first two files or the last two files in the listing.

You must request a subscriber code and password from your local TransUnion Account Representative to access the files in the test region. If you are using a production subscriber code, you can access the test region by setting the Special Routing Indicator in the TU4I segment to **1**.

Name	Social Security Number	Street Address	City	State	ZIP Code
Amacommon, Louis D.	248-48-0031	11 99 th St.	Fantasy Island	IL	60750
Amacommon, Eve A.	135-86-9076	11 99 th St.	Fantasy Island	IL	60750
Bbacommon, Gloria F.	052-46-2197	24 Greene St.	Fantasy Island	IL	60750
Bhacommon, Michael C.	393-72-0458	27 W. Dixon St Apt 5C	Fantasy Island	IL	60750
Bgacommon, Luigi	567-84-5985	27 Hillcrest	Fantasy Island	IL	60750
Bsacommon, Diane S.	098-50-0964	46 Bank	Fantasy Island	IL	60750
Byacommon, David A.	117-74-5035	58 E. Maplewood St.	Fantasy Island	IL	60750
Ddacommon, Charles V.	393-54-2482	354 W. Walter St. Apt 2C	Fantasy Island	IL	60750
Dracommon, Joseph P.	088-54-3643	920 Bull St.	Fantasy Island	IL	60750
Gjacommon, Michael G.	474-72-5302	791 Young Circle	Fantasy Island	IL	60750
Hbacommon, Elizabeth	326-70-5552	1355 E. Lee St.	Fantasy Island	IL	60750
Hvacommon, Maria A.	061-74-8583	590 Pine St., Apt #31	Fantasy Island	IL	60750
Kfacommon, Mark F.	112-60-3103	10006 Anchor Ave.	Fantasy Island	IL	60750
Kyacommon, Lee	524-84-5562	15658 Noel Rd.	Fantasy Island	IL	60750
Kyacommon, Helen E.	240-04-8233	15658 Noel Rd.	Fantasy Island	IL	60750

Glossary

Account designator

Code that describes the contractual ownership of a line of credit.

AKA, Alias

Also known as. Another name used by the subject, such as a maiden name.

Algorithm

A computational procedure that is used to score (evaluate) a credit report; a term used to identify models such as New DELPHI and EMPIRICA.

Alphabetic (or alpha) character

A letter of the alphabet.

Alphanumeric character

A letter of the alphabet, a number, or a symbol.

Automated reports

Tape-to-tape and CPU-to-CPU reports.

Broker

A TransUnion customer who buys TransUnion products and resells them to end users.

Byte

A measurable portion of eight consecutive binary digits (bits) that is equivalent to one character.

Character

The unit of storage of information by the computer. A character may be alphabetic, numeric, or alphanumeric.

Consumer Relations

The TransUnion customer service department that handles consumer inquiries and disputes.

Consumer statement

A subject's statement on facts or conditions entered into the subject's credit file.

Credit file

A file containing a subject's identifying information and credit history.

CRONUS

TransUnion's Credit Reporting Online Network Utility System.

Database

The collection of consumer credit information.

Date reported

The date an item of data is entered into the database.

Decode

The process of using a subscriber code to return information about the subscriber.

Displacement

The position within a segment at which a field starts.

Editing the inquiry

The process of validating inquiry data to ensure the correct format and syntax.

Edit segment

The edit segment provides the user with an audit trail of all noncritical erroneous fields in the inquiry that CRONUS either corrected or ignored. Refer to Appendix F for a more detailed description of the edit segment.

End user

A customer who buys TransUnion products through a broker.

Error segment

The error segment provides codes and/or text that describe why the CPU inquiry record could not be processed. Refer to Appendix F for a more detailed description of the error segment.

FCRA

Fair Credit Reporting Act. A 1971 law that defines certain standards that the credit industry must adhere to and procedures it must follow.

Field

A set of one or more characters that define a specific item in a TU40 segment. The information provided in the field helps to define the subject or request.

Field length

The maximum number of characters allowed in a field.

Fixed-format inquiry record (FFI)

The formatted inquiry composed of segments that identify the subject for whom data is requested and the product to use to find and return the data.

Fixed-format response record (FFR)

The formatted response composed of segments that contain data about the requested subject.

Format

The arrangement of data in a file, record, or field.

Format error

An error in the arrangement or content of a field.

HAWK system

Automated screening of data for information that may be fraudulent.

Indicative information

Information that identifies a subject, such as name, address, and social security number.

Industry codes

A series of TransUnion codes used to classify the types of subscribers. This term is sometimes used to refer to a KOB.

Input

Information that a user (such as an operator or a customer) enters into a data processing system or a computer.

Inquiry

A query into a subject's history for credit, employment, or collection purposes.

Joint inquiry

An inquiry that performs a double search using input subject and spouse names and social security numbers.

Justify

To adjust the position of characters to either the left or right margins of a field. Generally, an alphabetic or alphanumeric field is left-justified and a numeric field is right-justified.

KOB

A one- or two-character code used to identify the nature of the subscriber's industry. See also *Industry code*.

Left-justified

Data adjusted to the leftmost position of a field, followed by spaces.

Market Area

Designated service area within the TransUnion network.

Maximum delinquency

The most serious delinquency within the history of an account as monitored by the system.

Miscellaneous set

The data set containing any miscellaneous information that applies to a subject's credit history.

Model

See *Score model*.

Multiple applicant processing

Sending an inquiry for two subjects with different names and addresses in one transaction.

Multiple product processing

Sending a request for two products, such as Credit Report and Fraud Detect, in one transaction.

Numeric character

A number. A numeric value consists of numbers only—no alphabetic characters or symbols.

Output

The information produced by a computer process.

Pay basis

The frequency with which a subject is paid by an employer.

Permissible purpose

A legal permissible purpose that certain types of customers must have to obtain a credit report.

Prefix

A title, such as Reverend or Doctor, that precedes a subject's name.

Public record

The record of a legal action that involves the subject.

Remarks codes

A series of three-position codes that further describe an account in a subject file.

Required field

A field that must be present to access a subject's file.

Reseller

See Broker.

Right-justified

Data adjusted to the rightmost position of a field, preceded by either zeros or spaces.

SSN

Social security number.

Score

See Score model.

Score model

A mathematical system used to predict credit behavior. The output from a score model is a number (score) representing the likelihood of a particular behavior, such as delinquency. Some examples of scoring models are EMPIRICA and New DELPHI.

Segment

An element in a TU40 FFI or FFR. Each segment has its own segment ID and contains a unique set of data. Every FFI or FFR begins with a TU4I or TU4R segment and ends with an ENDS segment.

Subject

A person about whom information is being requested.

Submarket

A designated service area within a market area.

Subscriber code

A unique number assigned to each member of a credit bureau.

Suffix

A title, such as junior or III, that follows a subject's name.

Verification date

The date the subscriber last verified the status of an entry in the database.

Verification indicator

Code used to identify the manner in which a database entry (employment, trade, and so on) was verified by the source.