

Technical requirements, data formats and interface specifications

Annex 2.3 to Joint Venture Agreement Toll Service Provider Agreement

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Document Revision History

Version	Date	Author	Main changes
8.0	06.07.2016	SR	Approved by ESC
9.0	2017.03.30	SR	Approved by ESC
10.0	2019.03.25	FHL/WG2	Consequences after update of document 201 Inclusion of ADU files Modification of HGC, NAC, TIF and TIC New fields to be used by AutoPASS is included and made general where applicable Adding EFC Attribute "VehicleMaxLadenWeight" in HGV and TIF Change of name of position 296-297 in the HGV-file Clarification of definition of position 97-100 in the TIF-file Written approval by steering committee
11.0	2020.04.24	FHL/WG2	Update HGV-file in order to follow new requirements for a tariff-relevant differentiation of vehicle attributes Update of TIF-file -according to new Norwegian requirements, - include tariff relevant attributes (similar as HGV) and - Toll Chargers may use different number of decimal digits in monetary fields Approved by ESC
12.0	2020.06.04	ASK	Revision with clarifications related to AIT, HGV and TIF to avoid misinterpretation. Distributed without need for approval by EasyGo steering committee.
13.0	2022.02.23	SR	Update based on WG2 meeting January 26 th 2022 including reference to AutoPASS HGV version 220001.
14	2023.02.13	FHL/SR (and WG2)	Adaptations of Eurovignette Directive 1999/62/EC updated by Directive (EU) 2022/362: New fields added in HGV and TIF Adaptations in TIF, concerning 6 digits amounts Approved by ESC

Changes in the document made after **version 13.0** are marked according to the table below:

Editorial change or additional explanations
Validation rules change/clarify
New fields/changed position

1 General Description

1.1 Objectives of this Document

This document provides a specification of the data exchange architecture upon which the EasyGo toll collection service is managed. Both data exchange procedures and the formats of the data elements are included. Procedures and schedule for data exchange are described in Annex 2.1 "Requirements for Central Systems and the EasyGo HUB".

The following interface files are described and physically implemented:

- Actor Table File
- Toll Station Table File
- Accepted Issuer Table File
- HGV / Whitelist File
- HGC confirmation File
- NAT / Black- / Exception List File
- NAC / Black- / Exception List Confirmation File
- Transits Information File
- Transits Information Confirmation File
- Financial Information File (optional)
- Financial Information Confirmation File (optional)
- Application Data Unit File (ADU; optional)

1.2 Introduction

The data formats described in this document apply for data exchange through the EasyGo HUB (EGH). Some of the data formats described here are also referred to in other interfaces, such as the interface between Road side equipment (RSE) and central system (CS), and between CS and EGH. These interfaces are described in separate documents.

There are three basic types of data transfers in the interfaces. These are:

- Parameter list (actor table file, toll stations table file, issuer table file and list of security keys)
- Validity lists (black lists/exception lists, White lists /HGV lists and security keys)
- Transferring and validating transactions (transit detail files)

1.3 General rules

The following general rules for data definition apply:

Character encoding format in all files is ISO 8859-1.

The format of each record is described below.

At the end of each line a LF is used. (Based on ANSI (Windows-1252))

The data formats are either numerical (Numeric) or alpha-numerical (AlphaN):

- AlphaN (aligns left with blanks at right) must be filled with blanks if no value. (For some fields it is required to fill with zeros according to spec, even when AlphaN - see the column Value if Nothing)
- Numerical (align right with zeros at left) are filled with zeros if no value
- Fields marked as filler reserved for future use can be filled with zeros as specified regardless of field type
- If the field is a date field it shall be filled with a date according to specification, or filled with zeros

All major data is exchanged through files containing lists of data.

Each file contains:

- One header record with information regarding receiver, sender, list name and number of records in the body
- A limited number of body records (see Annex 201) with detailed record information
- One footer record ends the list and with information of sum of records in body when relevant

The file name is a combination of the list name or part of it. The Actor ID of the receiver is included when necessary to ensure the unique identity or to ease the communication between Toll Charger (TC) and Toll Service Provider (TSP).

Note that the EasyGo HUB internally uses XML so a number of validations of text files are also performed in order to avoid stop in data exchange. According to the XML standard "W3C Recommendation 26 November 2008" (see: <http://www.w3.org/TR/xml/#charsets>) the following Control characters must not be included in an XML file:

NUL, SOH, STX, ETX, EOT, ENQ, ACK, BEL, BS, VT, FF, S0, S1, DLE, DC2, DC3, DC4, NAK, SYN, ETB, CAN, EM, SUB, ESC, FS, GS, RS, US

Decimal no.: 0,1,2,3,4,5,6,7,8,11,12,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,60 (for details see table below)

The files and lists according to this document have a version stated independently for each type of file or list.

Table of ASCII Characters (7-bit)

Name	Decimal Value	Hex Value	Escape Seq.	Description
NUL	0	0	\0	Null character
SOH	1	1		Start of heading
STX	2	2		Start of text
ETX	3	3		End of text
EOT	4	4		End of transmission
ENQ	5	5		Enquiry
ACK	6	6		Acknowledge
BEL	7	7	\a	Bell; makes a beep
BS	8	8	\b	Backspace
HT	9	9	\t	Horizontal tab
LF	10	a	\n	Line Feed
VT	11	b	\v	Vertical tab
FF	12	c	\f	Form Feed, clear page
CR	13	d	\r	Carriage Return
SO	14	e		Shift Out
SI	15	f		Shift In
DLE	16	10		Data Link Escape
DC1	17	11		Device Control 1
DC2	18	12		Device Control 2
DC3	19	13		Device Control 3
DC4	20	14		Device Control 4
NAK	21	15		Negative acknowledge
SYN	22	16		Synchronous idle
ETB	23	17		End Transmission Block
CAN	24	17		Cancel line
EM	25	19		End of Medium
SUB	26	1a		Substitution
ESC	27	1b		Escape
FS	28	1c		File Separator
GS	29	1d		Group Separator
RS	30	1e		Record Separator
US	31	1f		Unit Separator
<	60	3c		Less than sign

2 Tables and lists

2.1 ACT (Actor table)/file

2.1.1 Description

This table is produced by the EasyGo management which maintains it according to the general rules for all Toll Service Providers (TSP), Toll Chargers (TC), EGH and others which have a defined role in EasyGo. This table is created and maintained by the EasyGo management and compiled at the (EGH) and distributed in a file to all actors. **The information from the actors must the first time be sent according to annex 2.8.** After having established the actor, information can be sent either by mail to the EasyGo management or as an ACT file only containing data from the sender. All changes shall result in a transfer of an updated Actor Table file to all actors. The data in the Actor Table is used to verify that all partners are authorized. If the same toll company acts as both a TC and TSP it will be represented in both roles, with separate ID's for each role. This table is a part of the data set "EFC context data" referred to in the business process "Originate and distribute EFC context data" sent to EGH (Receiver 200000).

The Actor ID is used as identifier either as sender or receiver in all data exchange. The Actor ID used shall preferably be according to ISO 14816 /ISO 14906. A TSP is usually registered with an ID according to ISO 14816. An agreed coding within each country, where the first 1 or 2 characters are unique for the country, will be used in EasyGo. A TC is usually not registered with an ID according to ISO 14816. The EasyGo management shall ensure a unique Actor ID for TCs and CFCs in EasyGo until international standards are established for TCs and CFCs.

The EGH also have dedicated Actor IDs. In addition, one special "Actor ID" (999999) is reserved for a broadcast from the EGH to all actors. When a complete ACT file is sent to all actors at once the ID of the recipient is 999999. If a limited/filtered ACT file is sent to a specific TC or TSP, the Actor ID of the recipient of the filtered file is used in the header and the filename.

The data in the table is divided in two categories:

- Data which shall not be changed (marked as "No change")
- Data which can be updated upon request

Format of filename ACTxxxxxxYYYYMMDDSS_zzzzzz_vvvvvv (33 characters)

Format of list name: ACTxxxxxxYYYYMMDDSS (19 characters)

Where is

- xxxxxx = Identifier of the sender of the Actor Table (6 characters). An Actor Table is sent from the EGH where the Actor ID of the EGH is used as sender.
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SS = Sequence within the day (sequential number of 2 characters increased for each file of this type sent per day beginning with 01)
- zzzzzz = Receiver - Files to the EGH the receiver must be 200000. Files from the EGH will be actor ID of the recipient or 999999 (see above)
- vvvvvv = Version name

2.1.2 Format Actor Table file (Version 130001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing	Update req. test. Yes
Header									
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory		
Sender Identifier	6	AlphaN	2	7	Actor ID 6 digits identifier of the Company having created this file and sending the file.		Mandatory		
Receiver Identifier	6	AlphaN	8	13	Actor ID 6 digits identifier of the Company receiving this file		Mandatory		
List Sequence	19	AlphaN	14	32	ACTxxxxxYYYYMMDDSS		Mandatory		
Previous List Sequence	19	AlphaN	33	51	ACTxxxxxYYYYMMDDSS (ACT0000000000000000 if first list)		Mandatory		
Moment of activation	14	Numeric	52	65	EGH generated files always filled with "0" for immediate activation.		Mandatory		
Number of records	15	Numeric	66	80	Number of records (lines) in Body		Mandatory		
Moment of creation	14	Numeric	81	94	Timestamp (UTC) when the original file has been created (YYYYMMDDhhmmss)		Mandatory		
List format version	6	AlphaN	95	100	The value to be filled in is defined above. This will allow for individual time schedules for updating of actors systems.		Mandatory		
Filler	27	AlphaN	101	127	Reserved for future use, filled with Zeros		Mandatory	0	
End of header	1	AlphaN	128	128	End of line		Mandatory		
Body									
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory		
ActorID	6	AlphaN	2	7	Unique ID identifier in the EasyGo system for the actor responsible for the following data. Shall not be changed.		Mandatory		No change
Actor ID Connected	6	AlphaN	8	13	If the Actor X has appointed another Actor Y to acts on its behalf. The Actor ID of Y shall be stated. Several Actors may appoint the same Actor Y. If no actor is appointed to act on behalf of the Actor the value of the actor or 000000 must be stated.		Mandatory		
Actor ID Connected CFC	6	AlphaN	14	19	EasyGo HUB is 200000		Mandatory		
Actor Type	2	AlphaN	20	21	Code for identification of actor type: 10 – EasyGo HUB 11 – ACFC (only for administrative purpose) 30 – Toll Service Provider (TSP) 31 – Toll Charger (TC)		Mandatory		No change
Actor name	30	AlphaN	22	51	Full name of actor.		Mandatory		
Address	50	AlphaN	52	101	Full (except postal code/city) address of actor, preferably postal address.		Mandatory		
Postal code	6	AlphaN	102	107	Postal code of address (no country prefix), (NL: Length is 7 characters (digits and letters) including a space in position 5. The space is removed to comply with the length of 6 characters).		Mandatory		
Country code	3	AlphaN	108	110	Code according ISO 3166-1-Alpha-2 code elements E.g.: DK = Denmark		Mandatory		

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing	Update req. test. Yes
					NO = Norway AT = Austria SE = Sweden SI = Slovenia				
Telephone working time	15	AlphaN	111	125	(1)		Mandatory		
Telephone outside working time	15	AlphaN	126	140	(1)		Optional		
Telefax	15	AlphaN	141	155	(1)		Optional		
Mobile phone	15	AlphaN	156	170	(1)		Optional		
Internet – web site	100	AlphaN	171	270			Mandatory		
E-mail address	100	AlphaN	271	370	(3)		Mandatory		
Customer related contact	30	AlphaN	371	400	General contact to the department handling direct customer related contact. (Name of the Group. Avoid single persons)		Mandatory		
Contact– Direct telephone	15	AlphaN	401	415	(1)		Mandatory		
Contact – Direct mobile	15	AlphaN	416	430	(1)		Optional		
Contact – Direct e-mail	100	AlphaN	431	530	Should be a group mail (3)		Mandatory		
IT support contact	30	AlphaN	531	560	IT support contact for actor		Mandatory		
IT support contact– Direct telephone	15	AlphaN	561	575	(1)		Mandatory		
IT support contact– Direct mobile	15	AlphaN	576	590	(1)		Optional		
IT support contact– Direct e-mail	50	AlphaN	591	640	Should be a group mail or service desk mail address (3)		Mandatory		
Mails from EasyGo HUB	50	AlphaN	641	690	All mails from the EasyGo to an actor will be sent to this mail.		Mandatory		
Administrative contact Financial and data exchange	30	AlphaN	691	720	Administrative contact department for actor. Handling matters between TC and TSP, primarily data content in files and payment of transaction and TSP fee.		Mandatory		
Administrative contact– Direct telephone	15	AlphaN	721	735	(1)		Optional		
Administrative contact– Direct mobile	15	AlphaN	736	750	(1)		Optional		
Administrative contact– Direct e-mail	100	AlphaN	751	850	Should be group mail (3)		Mandatory		
Bank account number	20	AlphaN	851	870	Bank account number for actor (for local use between national actors). (1)		Optional		
Description	50	AlphaN	871	920	Description of actor.		Mandatory		
Date established	8	AlphaN	921	928	Format: DDMMYYYY. Date for establishment of actor		Mandatory		
TypeofContract AutoPass	16	AlphaN	929	944	Only if Norwegian TSP A code for the type of contract TSP has as a part of AIP. Blank if TC. Only used in AutoPASS		Optional		
VAT-number 1 for Currency 1 (Organization number)	20	AlphaN	945	964	The actors VAT number starting with a two letter national code within the EU (e.g. AT, DK and SE) and Norway (NO).		Mandatory		
IBAN number	28	AlphaN	965	992	The actors IBAN-number for international payments in Currency 1. May be used for all currencies if no other bank accounts are stated.		Mandatory		
BIC code	11	AlphaN	993	1003	The actors BIC code for international payments.		Mandatory		

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing	Update req. test. Yes
Postal address (place/city name) (Address of the TC)	30	AlphaN	1004	1033	Postal place/city name. Mandatory city name for TC. Additional information when Post Box is used in order to specify the geographical location.		Mandatory		
Currency 1 (2)	3	AlphaN	1034	1036	The currency of the actor's VAT number 1.		Mandatory		
VAT-number 2 for Currency 2	20	AlphaN	1037	1056	The actor's VAT-number 2 if a second currency is used. Mandatory if Currency 2 is stated.		Mandatory/Optional		
Currency 2 (2)	3	AlphaN	1057	1059	The currency of the actor's VAT number 2 (if a second currency is used).		Optional		
IBAN number currency 2	28	AlphaN	1060	1087	The actor's IBAN-number 2 for international payments in Currency 2		Optional		
BIC/ code currency 2	11	AlphaN	1088	1098	The actor's BIC code 2 for international payments in Currency 2		Optional		
TC type	1	AlphaN	1099	1099	Value: A = EasyGo HUB B = The TC is a General Party in the JVA. C = The TC is a Limited Party to the JVA D = Service Recipient TC F = The TSP is an EasyGo TSP. G = Service Recipient TSP		Mandatory		
TC operational name	30	AlphaN	1100	1129	Name of operational company acting on behalf of the TC if outsourced.		Optional		
Type of charge	2	Numeric	1130	1131	Fee, duty or tax. 00 - no information 01 - Tax 02 - Duty (Custom) 03 - Fee (Private or public)		Mandatory		
Currency 3 (2)	3	AlphaN	1132	1134	The currency of the actor's VAT-number 3 (if a third currency is used)		Optional		
VAT-number 3 for currency 3	20	AlphaN	1135	1154	The actor's VAT-number 3 if a third currency is used. Mandatory if Currency 3 is stated.		Mandatory/Optional		
IBAN number currency 3	30	AlphaN	1155	1184	The actor's IBAN-number 3 for international payments in Currency 3		Optional		
BIC code currency 3	11	AlphaN	1185	1195	The actor's BIC code 3 for international payments in Currency 3		Optional		
Currency 4 (2)	3	AlphaN	1196	1198	The currency of the actor's VAT-number 4 (if a fourth currency is used)		Optional		
VAT-number 4 for currency 4	20	AlphaN	1199	1218	The actor's VAT-number 4 if a fourth currency is used. Mandatory if Currency 4 is stated.		Mandatory/Optional		
IBAN number currency 4	30	AlphaN	1219	1248	The actor's IBAN-number 4 for international payments in Currency 4		Optional		
BIC code currency 4	11	AlphaN	1249	1259	The actor's BIC code 4 for international payments in Currency 4		Optional		
Company registration number	20	AlphaN	1260	1279	The actor's registration number at the local trade office		Mandatory		
For later use	150	AlphaN	1380	1429	Filled in with '0's		Mandatory	0	
End of record	1	AlphaN	1430	1430	End of line		Mandatory		
Footer									
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory		
Filler	62	AlphaN	2	63	Reserved for future use, filled with Zeros		Mandatory	0	

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing	Update req. test. Yes
End of Footer	1	AlphaN	64	64	End of line		Mandatory		

(1) These numbers are represented with numerals only and without spaces between digits. For telephone numbers also national prefix is included (e.g. 0047....)

(2) Any currency can only be stated once. It is not allowed to attach two bank accounts to the same currency. The same bank account can however be used for several currencies. It is the responsibility of the recipient of a bank transfer to keep track of the received currencies and amounts. If the TSP service is performed from one country allowing for different currencies the VAT number may be the same for several currencies.

(3) Only valid e-mail-addresses in the form name@domain (See also 208)

2.2 TST (Toll Station Table) file

2.2.1 Description

This file is produced by the EasyGo TCs based on information from Toll Stations according to the general rules of coding. The term Toll Station is also used for parking facilities, ferry companies and other installations. This file is a part of the data set “EFC context data” referred to in the business process “Originate and distribute EFC context data” sent to EGH (Receiver 200000).

The Toll Station Table file is compiled in the EGH based on information provided by each TC. When a complete EasyGo Toll Station Table file is sent to all actors at once the ID of the recipient is 999999. If a limited/filtered TST file is sent to a specific TC or TSP, the Actor ID of the recipient of the filtered file is used in the header and the filename.

The TST Is distributed to each individual TSP and TC.

Format of filename TSTxxxxxxYYYYMMDDSS_zzzzzz_vvvvvv (33 characters)

Format of list name: TSTxxxxxxYYYYMMDDSS (19 characters)

Where is

- xxxxxx = Identifier of the sender of the Toll Station Table file, originated by a TC (6 characters).
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SS = Sequence within the day (sequential number of 2 characters increased separately for each file per each sender/receiver combination per day beginning with 01)
- zzzzzz = Receiver – for Files to the EGH the receiver must be 200000. For Files from the EGH will be actor ID of the recipient or 999999 (see above).
- vvvvvv = Version name

2.2.2 Format Toll Station Table file (Version 130001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
Header								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Sender Identifier	6	AlphaN	2	7	6 digits identifier of the Company having created this file. Either TC or EGH		Mandatory	
Receiver Identifier	6	AlphaN	8	13	6 digits identifier of the Company having received this file.		Mandatory	
List Sequence	19	AlphaN	14	32	TSTxxxxxYYYYMMDDSS		Mandatory	
Previous List Sequence	19	AlphaN	33	51	TSTxxxxxYYYYMMDDSS (TST000000000000 in first list)		Mandatory	
Moment of activation	14	Numeric	52	65	EGH generated files always filled with "0" for immediate activation.		Optional	
Number of records	15	Numeric	66	80	Number of records (lines) in Body		Mandatory	
Moment of creation	14	Numeric	81	94	Timestamp (UTC) when the original file has been created (YYYYMMDDhhmmss)		Mandatory	
List format version	6	AlphaN	95	100	The value to be filled in is defined above. This will allow actors for individual time schedules for updating of systems.		Mandatory	
Filler	27	AlphaN	101	127	Reserved for future use, filled with Zeros		Mandatory	0
End of header	1	AlphaN	128	128	End of line		Mandatory	
Body								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Country code	2	AlphaN	2	3	ISO 3166-1-Alpha-2 code elements (DK = Denmark, NO = Norway, AT = Austria, SE = Sweden etc...)		Mandatory	
ActorID (1)	6	AlphaN	4	9	6 digits identifier of the TC. Unique ID identifier in the EasyGo system for the actor responsible for the following data.		Mandatory	
TC Name	25	AlphaN	10	34	Name of the TC		Mandatory	
Network Code	2	Numeric	35	36	2 digits identifier of the Network The network can be used to group stations. It is only for administrative purpose not a part of a unique ID. Only the last digit is referenced in the TIF file		Mandatory	
Network Name	20	AlphaN	37	56	Name of the network (Maybe used to identify a group of TC being part of one Toll domain)		Mandatory	
Road number	4	AlphaN	57	60	Number of the road the station is located on (E6, E20, A23....)		Mandatory	
Station Code (1)	4	Numeric	61	64	4 digits identifier of the Station. This is unique for each ActorID and Lane identification. For aggregated transactions the fictive number 9999 is to be defined in this list and used in the TIF file (e.g. Austria).		Mandatory	
Station Name short (2)	25	AlphaN	65	89	Short name of the Station		Mandatory	
Station direction Code	2	AlphaN	90	91	Direction 31 or 32 (Example from Storebælt)		Optional	
Station direction Description	25	AlphaN	92	116	(Example from Storebælt) Direction: Fyn/Sj. / east bound = 31, Sj/Fyn / west bound = 32.		Optional	
Lane identification (1)	4	AlphaN	117	120	Identification of the lane to be used in the TIF list. I.e. Lane number.		Mandatory	
Type of the Station	2	Numeric	121	122	Code which identifies the type of toll station: "01" Open "02" Closed entry "03" Closed exit		Mandatory	

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
					"04" Checkpoint "05" Open Road Tolling – OBE or Video based fully automatically. I.e. Fjellinjen Oslo or E6 Norway "06" Distance based free flow – DSRC OBE only (i.e. Austria) "07" Distance based free flow – Virtual transaction only (i.e. Austria/Slovenia)			
Station name long (2)	60	AlphaN	123	182	If the Station name is longer than 25 char this field shall be used to include the full description in addition to the short description.		Mandatory	
GNSS coordinate longitude	10	AlphaN	183	192	GNSS coordinate of Toll station longitude. WGS 84 The format is the one used for ASECAP Protected Zone Database. (xx.xxxxxx,yy.yyyyyy) (Storebælt = 11.108748)		Optional	
GNSS coordinate Latitude	10	AlphaN	193	202	GNSS coordinate of Toll station Latitude. WGS84 The format is the one used for ASECAP Protected Zone Database. (xx.xxxxxx,yy.yyyyyy) (Storebælt = 55.349784)		Optional	
Filler	30	AlphaN	203	232	Reserved for future use, filled with Zeros		Mandatory	0
End of Record	1	AlphaN	233	233	End of line		Mandatory	
Footer								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Filler	62	AlphaN	2	63	Reserved for future use, filled with Zeros		Mandatory	0
End of Footer	1	AlphaN	64	64	End of line		Mandatory	

(1) The combination of ActorID, Station code and Lane identification shall be unique

(2) Both fields "Station name short" and "Station name long" shall be filled. The short name shall be useful as description on an invoice if to be stated.

2.3 AIT (Accepted Issuer Table) file

2.3.1 Description

This file is produced by the EasyGo TSPs with the coding of the OBE being part of the common EFC service as received from all TSP. The file is a part of the data set “EFC context data” referred to in the business process “Originate and distribute EFC context data” sent to EGH (Receiver 200000).

The list is a data element generated by combining information from each TSP and delivered to TCs. The list informs the TCs about the identifiers of the issued OBE, which have to be accepted at tolling facilities for the EasyGo service (if the OBE is valid). This enables TSP to activate and/or offer OBE for different specific toll domains stepwise and/or group of toll domains. OBEID can be filtered by the EGH according to the PAN (BIN/BIN Extension) and Type of Contract/Context Version. The assignment of the toll domains must be agreed in advance with the TC(s) and EGH.

The Issuer Table file is compiled in the EGH based on information provided by each TSP. When a complete EasyGo Issuer Table file is sent to all actors at once the ID of the recipient is 999999. If a limited/filtered AIT file is sent to a specific TC or TSP the Actor ID of the recipient of the filtered file is used in the header and the filename.

Format of filename AITxxxxxxYYYYMMDDSS_zzzzzz_vvvvvv (33 Characters)

Format of list name: AITxxxxxxYYYYMMDDSS (19 Characters)

Where is

- xxxxxx = Identifier of the sender of the AIT file. Originated by a TSP (6 characters). The compiled AIT file is sent from the EGH where the Actor ID of the EGH is used as sender
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SS = Sequence within the day (sequential number of 2 characters increased separately for each file per each sender/receiver combination per day beginning with 01)
- zzzzzz = Receiver - Files to the EGH the receiver must be 200000. Files from the EGH will be actor ID of the recipient or 999999 (see above).
- vvvvvv = Version name

2.3.2 Format AIT file (Version 130001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
Header								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Sender Identifier	6	AlphaN	2	7	6 digits identifier of the Company having created this file. Either TSP or EGH		Mandatory	
Receiver Identifier	6	AlphaN	8	13	6 digits identifier of the Company having received this file.		Mandatory	
List Sequence	19	AlphaN	14	32	AITxxxxxxYYYYMMDDSS		Mandatory	
Previous List Sequence	19	AlphaN	33	51	AITxxxxxxYYYYMMDDSS (AIT0000000000000000 in first list)		Mandatory	
Moment of activation	14	Numeric	52	65	EGH generated files always filled with "0" for immediate activation.		Optional	
Number of records	15	Numeric	66	80	Number of records (lines) in Body		Mandatory	
Moment of creation	14	Numeric	81	94	Timestamp (UTC) when the original file has been created (YYYYMMDDhhmmss)		Mandatory	
List format version	6	AlphaN	95	100	The value to be filled in is defined above. This will allow actors for individual time schedules for updating of systems.		Mandatory	
Filler	27	AlphaN	101	127	Reserved for future use, filled with Zeros		Mandatory	0
End of header	1	AlphaN	128	128	End of line		Mandatory	
Body								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
BIN (1) (2)	6	AlphaN	2	7	Number of the BIN (6 first digit of PAN no)		Mandatory	
BIN Extension (1) (2)	8	AlphaN	8	15	BIN extension (7-14 digit of PAN no).		Optional	
Length of BIN ID	2	Numeric	16	17	No. of digits (BIN and in some cases counting digits from BIN extension) necessary to identify the TSP uniquely. I.e. Storebælt PISTA: 92086062 = 8. The total number of digits used in both BIN + BIN extension must be stated.		Mandatory	
Length of PAN no	2	Numeric	18	19	Actual no of characters including check digit, which always is last number, ISO 7812 Standard Modulus control		Mandatory	
Level of security	1	AlphaN	20	20	Character which identifies the level of security. Note that it shall be read in connection with type of EFC application to use in the OBE. PISTA "A" Level 1, "C" Level 2 and "B" Intermediate Level (Off line OBE Authentication) EN15509 Security level 0 or 1. OBE for trucks will be level 1. OBE for passenger car may be 0 or 1.		Mandatory	
Type of contract (Auto PASS)	2	AlphaN	21	22	Identifier of the type of contract – only used by AutoPASS and obligatory for AutoPASS		Optional	0
Actor ID / TSP (Contract provider ISO 14906) (1)	6	AlphaN	23	28	6 digits identifier of the Company Having issued this BIN (Part of context mark ISO 14 906))		Mandatory	
Type of Contract (ISO 14 906) (1) (2)	4	AlphaN	29	32	4 digits identifier part of context mark ISO 14906		Mandatory	
Context version (1) (2)	2	AlphaN	33	34	2 digits identifier part of context mark ISO 14906		Mandatory	
Product code	25	AlphaN	35	59	Description of the product, Pista, BroBizz, AutoPASS or EN 15509		Mandatory	

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
Processor	1	AlphaN	60	60	Issuer Associated Entity (Only for Bank-related Issuers) Not used		Optional	
Key Reference	1	Numeric	61	61	Key Reference for TSP Authenticator (number of key) the number of Atr ID is specified below.		Mandatory for Security level 1	
Valid from	14	Numeric	62	75	YYYYMMDDhhmmss (UTC)		Optional	
Type of EFC application to use in the OBE	1	AlphaN	76	76	EFC application to use for the specific context mark: "A" = AutoPASS "B" = BroBizz "P" = Pista "9" = 15509 "V" = Virtual OBE used for ANPR		Mandatory	
Type of EasyGo OBE	6	Numeric	77	82	If the OBE are: EasyGo Basic with security level 0 or similar the value should be "000001". EasyGo basic 15509 with security level 1 the value should be "000002". EasyGo+ (15509 Security level 1) the value should be "000003". Virtual OBE. If a licence plate is attached without a physical OBE having been issued. For example previous visitor's payment in Norway and e-Booking or ANPR at Storebælt and Øresund. May also be used for congestion tax in Sweden "000009". If no information "000000"		Mandatory	
For future use	6	AlphaN	83	88			Optional	0
Attribute ID of the Key Reference	3	Numeric	89	91	Key Reference for TSP Authenticator Attribute ID		Mandatory for Security level 1	
Filler	14	AlphaN	92	105	Reserved for future use, filled with Zeros		Mandatory	0
End of Record	1	AlphaN	106	106	End of line		Mandatory	
Footer								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Filler	62	AlphaN	2	63	Reserved for future use, filled with Zeros		Mandatory	0
End of Footer	1	AlphaN	64	64	End of line		Mandatory	

- (1) The combination of fields "BIN", "BIN ext.", "Actor ID / TSP", "Type of Contract", and "Context version" shall be unique.
- (2) The combination "BIN"/"BIN Extension" and "Type of Contract"/"Context Version" can be used for filtering of toll domain(s).

2.4 HGV (Heavy Goods Vehicle list or White list) file

2.4.1 Description

The HGV list has the following purposes:

- Classify vehicles with OBEs – in order to allocate a tariff - when:
 - the OBE does not have stored tariff relevant attributes (e.g. the vehicle class (declared class), emission class, engine characteristics,...)
 - the RSE do not have classification equipment
- Identify vehicles based on the license plate number:
 - via the HGV list when the OBE has not been read at the charging point (this will enable the TC to charge the user via his OBE instead of via his license plate number)
- Identify the responsible TSP for a licence plate number to request address data from him for an enforcement process

The “local” HGV file is generated by the TSP and the EGH will process the file and compile a “global” HGV list based on the latest received file at the time of compilation according to chapter 5 in annex 2.1. This “global” HGV list is sent to all TCs where the Actor ID of the EGH is used as sender and receiver 999999 used in order to secure that this broadcast is automatically distributed to all TCs. If a receiver only wants a part of the “global” HGV file limited to a certain range of OBE (e.g. OBE issued for a specific service) this can be agreed upon with the EasyGo management. The EGH will - instead of the “global” file - send a filtered file agreed upon to the TC. If a TC receives a limited HGV file, the ID of the receiver is the ActorID of the recipient of the filtered file.

Format of filename HGVxxxxxxYYYYMMDDSS_zzzzzz_vvvvvv (33 Characters)

Format of list name: HGVxxxxxxYYYYMMDDSS (19 Characters)

Where is

- xxxxxx = Identifier of the sender of the “local” HGV list, originated by a TSP (6 characters). When a “global” HGV list is sent from EGH this is the Actor ID of EGH
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SS = Sequence within the day (sequential number of 2 characters increased separately for each file/list per each sender/receiver combination per day beginning with 01)
- zzzzzz = Receiver - Files to the EGH the receiver must be 200000. Files from the EGH will be actor ID of the recipient or 999999 (see above).
- vvvvvv = Version name

Norway has introduced a HGV list to be used in Norway. The local Norwegians HGV list have the same format as the EasyGo HGV list but is based on incremental process instead of total lists and therefore only containing changed body lines including not valid entries. The version name for this HGV list is: 220001.

Reference is AutoPASS Appendix A04-3 – Whitelist Format version 220001

2.4.2 Format HGV file (Version 120001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
Header								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Sender Identifier	6	AlphaN	2	7	6 digits identifier of the Company having created this file. Either TSP or EasyGo HUB		Mandatory	
Receiver Identifier	6	AlphaN	8	13	6 digits identifier of the Company having received this file. Either TC or EGH		Mandatory	
List Sequence	19	AlphaN	14	32	HGVxxxxxYYYYMMDDSS		Mandatory	
Previous File Sequence	19	AlphaN	33	51	HGVxxxxxYYYYMMDDSS (HGV0000000000000000 if first)		Mandatory	
Moment of activation	14	Numeric	52	65	EGH generated files always filled with "0" for immediate activation.		Optional	
Number of records	15	Numeric	66	80	Number of records (lines) in Body		Mandatory	
Moment of creation	14	Numeric	81	94	Timestamp (UTC) when the original file has been created (YYYYMMDDhhmmss)		Mandatory	
List format version	6	AlphaN	95	100	The value to be filled in is defined above This will allow actors for individual time schedules for updating of systems.		Mandatory	
Filler	27	AlphaN	101	127	Reserved for future use, filled with Zeros		Mandatory	0
End of header	1	AlphaN	128	128	End of line		Mandatory	
Body								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Actor ID – TSP 1)	6	AlphaN	2	7	6 digits identifier of the Company having issued this OBE according to ISO 14816		Mandatory	
Shadow TSP	6	AlphaN	8	13	6 digits Actor ID of the EasyGo TSP which acts as shadow TSP for this OBE if issued by a TSP not part of the EasyGo (Only one shall act as shadow TSP for each OBE)		Optional	
Specific CO2 emissions	6	AlphaN	8	13	Specific CO2 emissions [cgCO2/tkm] of the vehicle Note: In COC-CIF (2.3) and/or Vehicle Registration (V.7): stated in [gCO2/tkm] Example: 11956 = 119,56 gCO2/tkm	COC-CIF (2.3) or Reg Doc (V.7)	Optional	
Personal Account Number	19	AlphaN	14	32	Atr. ID 32 according to PISTA and 15509 no. According to ISO 7812. Shall be unique.		Mandatory	
License Plate number (1)	10	AlphaN	33	42	License Plate number of the vehicle (without spaces or other separators in between regular characters). Mandatory for vehicle class above 3.5 t.		Mandatory	Above 3.5 t.
License Plate nationality (1)	3	AlphaN	43	45	Nationality of Licence Plate number according ISO 3166-1-Alpha-2 code elements (DK = Denmark, NO = Norway, AT = Austria, SE = Sweden etc...) See http://www.iso.org/iso/english_country_names_and_code_elements		Mandatory	if licence plate is filled in
Tariff Classification	2	AlphaN	46	47	Specific vehicle class applied for tariff calculation, containing both EU standard and local Norwegian class: Byte 1: Classification code according to EU standard		Mandatory	

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
					Byte 2: Classification code according to national standard having created this information. This means in EasyGo the local Norwegian class. For valid combinations see Table 1 – HGV/TIF Values for "Tariff Classification".			
VehicleClass	1	Numeric	48	48	As personalized in the OBE – UNECE vehicle classes		Optional	
Number of axels	1	Numeric	49	49	Personalized number of axels of the tractor unit as in the OBE		Optional/ Mandatory for EasyGo+	
Context mark	12	AlphaN	50	61	ContractProvider + TypeOfContract + ContextVersion acc. to ISO 14906 3+2+1 bytes represented as 6+4+2 in Hex. E.g.: ASFINAG: "C04001"+"0004"+"01" = "C04001000401"		Mandatory for EasyGo+	
OBE ID	18	AlphaN	62	79	ContractProvider + ManufacturerId + EquipmentOBEId acc. to ISO 14906 3+2+4 bytes represented as 6+4+8 in Hex. E.g.: ASFINAG: "C04001" + "001D" + "07900108" = "C04001001D07900108" (must be unique) BroBizz: "978003" + "0003" + 120002AD" = "9780030003120002AD". Equipment ID BroBizz value in Atr. ID 24 from the application element.		Mandatory for EasyGo+	
Emission class	6	AlphaN	80	85	Personalized (declared) Emission class. The TSP is obligated to state only verified emission classes for vehicles in the HGV list. See Table 2	Reg Doc (V.9)	Mandatory for EasyGo+	
TSP product code	6 3	AlphaN	86	91 88	TSP code for local use in Norway. Two first characters indicate Fuel Type. See Table 3 - HGV Values for "Fuel Type" (used for "TSP product code") and "Engine Characteristics". Character 3 (Y/N) indicates if the vehicle is a chargeable hybrid, able to drive 40 km or more on battery only or not.		Optional	
Vehicle Subgroup	2	AlphaN	89	90	Vehicle Subgroup according to Regulation (EU) 2019/1242 and to Regulation (EU) 2017/2400 updated by Regulation (EU) 2022/1379	COC-CIF (1.1.15a)	Optional	
Filler	1	AlphaN	91	91	Reserved for future use		Optional	Blank
Engine Characteristics	3	Numeric	92	94	Personalized Engine Characteristics (according to ISO 14906 / ISO 14906:2018/DAmD1:2019 ISO 17573-3 2022). Note that this is not included in the current version of 202. Until this is included the TSP is obligated to state only verified engine types for vehicles in the HGV list. See Table 3 - HGV Values for "Fuel Type" (used for "TSP product code") and "Engine Characteristics"	Reg Doc (P.3)	Mandatory for EasyGo+ OBE	
CO2 (CopValue)	2	Numeric	95	96	Personalized carbon dioxide pollution values (according to ISO 14906:2018/DAmD1:2019). Note that this is not included in the current version of 202. Until this is included the TSP is obligated to state only verified CO2 values in the HGV list		Mandatory for EasyGo+ OBE	
Filler	1	Numeric	95	95	Reserved for future use, filled with Zeros		Mandatory	
CO2 Emission Class	1	Numeric	96	96	CO2 emission class, according to Directive 1999/62/EC updated by Directive (EU) 2022/362 "0" noEntry: no CO2 emission class assigned until "7"	Reg.Doc (V.10)	Mandatory for EasyGo+ OBE	

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
					CO2 emission class of heavy-duty vehicles determined at the moment of first registration, in case of a reclassification, the current valid CO2 emission class, according to Directive 1999/62/EC updated by Directive (EU) 2022/362. Personalized CO2EmissionClass (according to EN ISO 14906:2023) Note: Part of Attribute 22 VehicleSpecificCharacteristics (CO2EmissionClass: VehicleSpecificCharacteristics.futureCharacteristics.co2Class)			
VehicleMaxLadenWeight Technically permissible maximum laden mass	4	Numeric	97	100	Maximum permissible total weight including payload, according to ISO 1176. Technically permissible maximum laden mass, 10 kg units rounded down to the next 10 kg step. For example: 349 = 3491-3500 kg, 350 = 3501 – 3510 kg, 351 = 3511 – 3520 kg etc.	Reg Doc (F.1)	Optional	
Valid to	14	Numeric	101	114	YYYYMMDDhhmmss (UTC) (it works for all OBE at Norwegian Toll Chargers) Note: this is not the ExpiryDate personalized in the OBE		Optional	
LPNseparator	2	Numeric	115	116	If a separator is a part of a license plate number in order to identify it uniquely this field must be filled in as described. The position/s of separator/s to the left of the separator shall be stated. E.g. the value in the field for license plate number AB-C123= 30. Number plate AB-C123-B= 38. The value for licence plate without separator is 00.		Optional	
Filler	11	AlphaN	117	127	Reserved for future use, filled with Zeros	-	Mandatory	0
First Registration	6	AlphaN	117	122	Date of the first registration of the vehicle (YYMMDD)	Reg Doc (B)	Mandatory for EasyGo+ OBE	0
Vehicle Group	4	AlphaN	123	126	Vehicle Group according to Regulation (EU) 2017/2400 updated by Regulation (EU) 2022/1379	COC-CIF (1.1.5)	Mandatory for EasyGo+ OBE	0
Filler	1	AlphaN	127	127	Reserved for future use, filled with Zeros		Mandatory	0
End of Record	1	AlphaN	128	128	End of line		Mandatory	
Footer								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Filler	62	AlphaN	2	63	Reserved for future use, filled with Zeros		Mandatory	0
End of Footer	1	AlphaN	64	64	End of line		Mandatory	

- (1) Each TSP may enter a licence plate number more than once. For the LPN only upper case letters and numbers (without any spaces and hyphens!) according to table 4 must be used. Non Latin-1 characters must be coded as lower case letters applying a translation table acc. to ISO 14906:2018/Am1:2020 EN ISO 14906:2023, Annex D (see table 5). Allowed Characters are specified in Table 4 and Table 5 - Allowed non-Latin1 characters (column 1) and their mapping for "Vehicle License plate Number". The mapped character in column 3 is the value to be included in the OBE and the HGV list..1)

EasyGo Tariff Classification in HGV/TIF		EN15509 European Vehicle Group (Byte 1)		EasyGo Local Class (Byte 2)	
00	No entry	0	No entry	0	No entry
12	Passenger car max. 8 persons below or equal 3.5 T	1	Group 1 - Small passenger vehicles (UNECE class M 1)	2	Light vehicle (≤ 3.5 T)
14	Passenger car electrical / zero emission vehicle any weight			4	Electrical Vehicle zero emission
22	Light Goods Vehicle below or equal 3.5 T	2	Group 2 - Light Goods Vehicles (UNECE class N 1)	2	Light vehicle (≤ 3.5 T)
24	Light Goods Vehicle below or equal 3.5 T Electrical / zero emission vehicle	2		4	Electrical Vehicle zero emission
31	Bus above 3.5 T, seats count excluding driver is greater than 8 (M2+M3)	3	Group 3 - Large passenger vehicles (UNECE class M 2, M 3)	1	Large vehicle (>3.5 T)
32	Bus below or equal 3.5 T, seats count excluding driver is greater than 8 (M2)			2	Light vehicle (≤ 3.5 T)
32	Mobile Home above 3.5 T			4	All Mobile Home
34	Mobile Home and bus Electrical /zero emission				Electrical Vehicle zero emission
41	Truck above 3.5 T and below or equal to 12 T	4	Heavy Goods Vehicles up to 12 T (UNECE class N 2)	1	Large vehicle (>3.5 T)
44	Truck above 3.5 T and below or equal to 12 T – Electrical zero emission			4	Electrical Vehicle zero emission
51	Truck above 12 T	5	Group 5 - Heavy Goods Vehicles over 12 T (UNECE class N 3)	1	Large vehicle (>3.5 T)
54	Truck above 12 T – Electrical zero emission			4	Electrical Vehicle zero emission
63	Motorcycle	6	Group 6 – Motorcycles (UNECE class L)	3	Motorcycle not charged in Norway
71	Other Vehicle	7	Group 7 - Other vehicles including vehicles above 3,5 T not included in previous groups	1	Large vehicle (>3.5 T)

Table 1 – HGV/TIF Values for "Tariff Classification"

- All EasyGo+ OBE must be on the HGV list.
- Norway:
 - All vehicles must be registered in the HGV list including emission class and Values for "Fuel Type" (used for "TSP product code") and "Engine Characteristics" if driving in Norway to be charged the correct price.
 - Trucks over 3.5 T must be registered with an OBE and have mounted the OBE correctly to avoid being fined according to Norwegian requirement of mandatory OBE.
 - Entries on the HGV list allow vehicles to be included in the Norwegian fall-back solution if the OBE is not read.
- Other:
 - Classes for Storebælt and Øresund are primarily determined based on length and height. However, there is a maximum price for vehicles ≤ 3.5 T, and a minimum price for vehicles > 3.5 T. At Øresund the price is also dependent of whether it is a bus or a truck.

- Storebælt has announced that in order to obtain the new green discount for business customers, replacing the volume discount from 1st of October 2020 a bilateral agreement including the necessary parameters must be agreed.)

Euro emission Classes – Entry in HGV	Euro Emission Classes – Code in OBE
0 (Meaning no information / entry)	0
Euro1	1
Euro2	2
Euro3	3
Euro4	4
Euro5	5
EEV	15 (coded as F HEX)
Euro6	6

Table 2 - HGV Values for "Emission class"

- Vehicles without Combustions Engines, e.g. vehicles with type of engine “Batteries” must be personalized as Euro Emission Class “0” (meaning no information / entry)
- Vehicles with Combustions engines older than 01.10.1993, must be personalised as Euro1 in order to allow a temporary assignment for Toll Charger, in case the Engine Characteristics is not implemented at the RSE.

Fuel Type in TSP Product Code Usage for Norway (HGV only)		Engine Characteristics According ISO 14906:2011 and ISO 14906:2018/Amd1:2020 ISO 17573-3 2022 (HGV and OBE)	
Fuel Type	Description	Description	Engine Characteristics
00	No information	No Entry	0
		No Engine	1
01	Gasoline	Petrol Unleaded	2
01	Gasoline	Petrol Leaded	3
02	Diesel	Diesel	4
04	Gas	LPG	5
05	Electric	Battery -- vehicle powered exclusively by battery	6
05	Electric	Solar	7
		Hybrid -- kept for legacy compatibility, more differentiated values are available	8
06	Hydrogen	Hydrogen	9
		multi-fuel -- Multi-fuel engine	10

Fuel Type in TSP Product Code Usage for Norway (HGV only)		Engine Characteristics According ISO 14906:2011 and *ISO 14906:2018/Amd1:2020 ISO 17573-3 2022 (HGV and OBE)	
Fuel Type	Description	Description	Engine Characteristics
01		bivalent-petrol-LPG -- bivalent operating engine with petrol or liquefied petroleum gas	11
01		bivalent-petrol-CNG -- bivalent operating engine with petrol or compressed natural gas	12
01		combined-petrol-electric -- combined operation with petrol and electric engine	13
13		CNG -- compressed natural gas	14
12		LNG -- liquefied natural gas	15
02		combined-diesel-electric -- combined operation of diesel and electric engine	16
05		combined-hydrogen-electric -- combined operation of hydrogen and electric engine	17
01		bivalent-hydrogen-petrol -- bivalent operating engine with hydrogen or petrol	18
01		bivalent-hydrogen-petrol-electric-engine -- bivalent operating engine with hydrogen or petrol combined with electric engine	19
06		fuel-cell-hydrogen -- fuel cell with hydrogen as primary energy source and electric engine	20
01		fuel-cell-petrol -- fuel cell with petrol as primary energy source and electric engine	21
14		fuel-cell-methanol -- fuel cell with methanol as primary energy source and electric engine	22
15		fuel-cell-ethanol -- fuel cell with ethanol as primary energy source and electric engine	23
02		fuel-cell-diesel -- fuel cell with diesel as primary energy source and electric engine	24
02		combined-multi-fuel-electric-engine -- combined operation of multi fuel and electric engine	25
13		combined-CNG-electric-engine -- combined operation with compressed natural gas and electric engine	26
12		combined-LNG-electric-engine -- combined operation with liquefied natural gas and electric engine	27
01		petrol-ethanol -- fuel mix of petrol and mainly ethanol, e.g. E85	28
12		combined-LPG-electric-engine -- combined operation of LPG and electric engine	29
07	Gasoline Hybrid	hybrid-petrol-external-battery -- hybrid drive with petrol and external chargeable battery (plug-in hybrid)	30

Fuel Type in TSP Product Code Usage for Norway (HGV only)		Engine Characteristics According ISO 14906:2011 and *ISO 14906:2018/Amd1:2020 ISO 17573-3 2022 (HGV and OBE)	
Fuel Type	Description	Description	Engine Characteristics
08	Diesel Hybrid	hybrid-diesel-external-battery -- hybrid drive with diesel and external chargeable battery (plug-in hybrid)	31
12		hybrid-LPG-external-battery -- hybrid drive with LPG and external chargeable battery (plug-in hybrid)	32
06		hybrid-hydrogen-external-battery -- hybrid drive with hydrogen and external chargeable battery (plug-in hybrid)	33
02		hybrid-multi-fuel-external-battery -- hybrid drive with multi fuel and external chargeable battery (plug-in hybrid)	34
13		hybrid-CNG-external-battery -- hybrid drive with compressed natural gas and external chargeable battery (plug-in hybrid)	35
12		hybrid-LNG-external-battery -- hybrid drive with liquified natural gas and external chargeable battery (plug-in hybrid)	36
01		hybrid-bivalent-hydrogen-petrol-external-battery -- hybrid drive with bivalent operating hydrogen and petrol engine and external chargeable battery (plug-in hybrid)	37
13		hydrogen-CNG -- fuel mix of hydrogen and compressed natural gas	38
12		hydrogen-LNG -- fuel mix of hydrogen and liquified natural gas	39
13		hybrid-hydrogen-CNG-external-battery -- hybrid drive with hydrogen and compressed natural gas and external chargeable battery (plug-in hybrid)	40
12		hybrid-hydrogen-LNG-external-battery -- hybrid drive with hydrogen and liquified natural gas and external chargeable battery (plug-in hybrid)	41
15		ethanol -- ethanol or fuel mix of ethanol and other fuel (except petrol) or additives, e.g. E95	42
05		hybrid-fuel-cell-hydrogen -- hybrid drive with fuel cell (electric engine) and hydrogen (combustion engine)	43
05		hybrid-fuel-cell-hydrogen-external-battery -- hybrid drive with fuel cell (electric engine) and hydrogen (combustion engine) and external chargeable battery (plug-in hybrid)	44
02		dual-fuel-LNG-diesel -- dual operation with LNG and diesel	4
05		electric-external -- electric engine with external power supply	46
04		biogas -- mixture of different gases produced by the breakdown of organic matter	47
10	Bio Diesel	bioDiesel -- vegetable oil- or animal fat-based diesel fuel	48
11	Bio Gasoline	bioPetrol -- petrol fully or partly based on vegetable sources	49
01		bivalent-petrol-biogas -- bivalent operating engine with petrol or biogas	50

Fuel Type in TSP Product Code Usage for Norway (HGV only)		Engine Characteristics According ISO 14906:2011 and *ISO 14906:2018/Amd1:2020 ISO 17573-3 2022 (HGV and OBE)	
Fuel Type	Description	Description	Engine Characteristics
05		combined-biogas-electric-engine -- combined operation of biogas and electric engine	51
02		dual-fuel-cng-diesel -- dual operation with CNG and diesel	52
09	Other fuel (if fuel type is not known, or not in list, use this as default)	Other	255
03	Paraffin		

Table 3 - HGV Values for "Fuel Type" (used for "TSP product code") and "Engine Characteristics"

ISO/IEC 8859-1																
	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x	Not in use															
1x	Not in use															
2x	SP	!	"	#	\$	%	&	'	()	*	+	,	-	.	/
3x	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4x	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5x	P	Q	R	S	T	U	V	W	X	Y	Z	[\]	^	_
6x	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7x	p	q	r	s	t	u	v	w	x	y	z	{		}	~	
8x	Not in use															
9x	Not in use															
Ax	NBSP	ı	ç	£	¤	¥	¦	§	¨	©	ª	«	¬	SHY	®	¯
Bx	°	±	²	³	´	µ	¶	·	¸	¹	º	»	¼	½	¾	¿
Cx	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	Ì	Í	Î	Ï
Dx	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß
Ex	à	á	â	ã	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï
Fx	ð	ñ	ò	ó	ô	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ÿ

Table 4 - Valid Characters for "License Plate Number" (marked blue)

License Plate Character	Unicode Code Point	Mapped Latin1 Character
A to Z	U+0041 to U+005A	not mapped
0 to 9	U+0030 to U+0039	not mapped
Ä	U+00C4	not mapped
Ö	U+00D6	not mapped
Ü	U+00DC	not mapped
А	U+039B	a
Б	U+042A	b
С	U+010C	c
Д	U+0414	d
Е	U+0401	e
Э	U+042D	f
Г	U+0413	g
Б	U+042C	h
Ч	U+0427	i
Й	U+0419	j
Э	U+0417	k
Л	U+041B	l
Щ	U+0429	m
И	U+0418	n
Ф	U+0424	o
П	U+041F	p
Ы	U+042B	q
Я	U+042F	r
Š	U+0160	s
Ю	U+042E	t
Ц	U+0426	u
В	U+0411	v
Ш	U+0428	w
Ж	U+0416	x
У	U+0423	y
Ž	U+017D	z
Ð	U+00D0	ä
Č	U+0106	ü

Table 5 - Allowed non-Latin1 characters (column 1) and their mapping for "Vehicle License plate Number". The mapped character in column 3 is the value to be included in the OBE and the HGV list.

2.5 HGC (HGV Confirmation) file

2.5.1 Description

Each time the EGH receives a new “local” HGV file from a TSP, the file is checked, to ensure that the general content and numbers of records are according to the specification in Annex 2.1 “Requirements for central systems and collection and forwarding centrals”. If the EGH detects any error and alarm and an e-mail is sent to the TSP and the EasyGo management. A confirmation file (HGC) is produced and sent back to the TSP when the file is accepted or partial accepted. In case of total rejection of a HGV file no HGC file will be produced. The file will be placed in the TSPs rejected catalogue and an alarm will be sent describing the failure¹. The HGC file contains information whether the file was accepted or if and where the failure has occurred.

Format of filename: HGCxxxxxxYYYYMMDDSS_zzzzzz_vvvvvv (33 Characters)

Format of list name: HGCxxxxxxYYYYMMDDSS where is (19 Characters)

Where is

- xxxxxx = Identifier of the sender of the HGC register confirmation (6 characters), that means the id of the EGH
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SS = Sequence within the day (sequential number of 2 characters increased separately for each file per each sender/receiver combination per day beginning with 01)
- zzzzzz = Identifier of the receiver of the Transit Information File (6 characters)
- vvvvvv = Version name

2.5.2 Format HGC file (Version 120001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
Header								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Sender Identifier	6	AlphaN	2	7	6 digits identifier of the Company having created this file. (EasyGo HUB)		Mandatory	
Receiver Identifier	6	AlphaN	8	13	6 digits identifier of the Company having received this file.		Mandatory	
List Received	19	AlphaN	14	32	Name of the HGV file this confirmation file is generated for (HGVxxxxxxYYYYMMDDSS)		Mandatory	
Date of reception	14	Numeric	33	46	Timestamp (UTC) when receiver received the file "List Received" (YYYYMMDDhhmmss)		Mandatory	
Number of records Accepted	15	Numeric	47	61			Mandatory	
Number of records Rejected	15	Numeric	62	76			Mandatory	

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
List format version	6	AlphaN	77	82	The value to be filled in is defined above. This will allow actors for individual time schedules for updating of systems.		Mandatory	
Filler	25	AlphaN	83	107	Reserved for future use, filled with Zeros		Mandatory	0
File acceptance	2	AlphaN	108	109	Code for acceptance or rejection of received HGV list: 00: Full acceptance (all records OK) 01: Partial acceptance (EasyGo HUB only forward correct data) (2)		Mandatory	
End of header	1	AlphaN	110	110	End of line		Mandatory	
Body (1)								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory *	
Copy of HGV body line	126	AlphaN	2	127	In case of rejected body line the line between Register Identifier and End of Record from the HGV list is copied and inserted in this position.		Mandatory *	
Reason of rejection of line	2	Numeric	128	129	Code of rejection: "01" Duplicate entry for EasyGo+ (PAN and OBEID must be unique) (duplicate entries allowed for basic EasyGo) "02" PAN number not valid (Luhn code) Only checked by TSP but not by the EGH "03" Number of digits in PAN not correct "04" PAN number or context mark not within TSPs range "05" OBE is not valid (same entry on the NAT list) "06" Nationality of licence plate missing when licence plate is included "07" Mandatory OBU ID is missing or wrong (EasyGo+) "08" Mandatory context mark missing or wrong (EasyGo+) "09" Mandatory licence plate number / licence plate nationality missing or wrong "10" Mandatory number of axels missing or wrong (EasyGo+) "11" Mandatory emission class missing or wrong (EasyGo+) "12" Miscellaneous		Mandatory *	
End of Record	1	AlphaN	130	130	End of line		Mandatory *	
Footer								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Filler	62	AlphaN	2	63	Reserved for future use, filled with Zeros		Mandatory	0
End of Footer	1	AlphaN	64	64	End of line		Mandatory	

*) Body contains only records in case of rejected HGV list records.

- In case all lines in an otherwise- regarding its syntax - valid HGV list are rejected, "File acceptance" shall be set to "01" (partial acceptance)
- A HGV file may be rejected if e.g. it contains errors like invalid or non-readable file, illegal/unauthorized sender/receiver in header, format error in header/footer, mandatory information is not specified, number of records is not the same as specified in header format error in body
- In case of rejection of a complete file no HGC shall be sent. An alarm with the reason for rejection shall be generated.

2.6 NAT (Not Accepted Table, Black list or Exception list) file

2.6.1 Description

The NAT (or non-accepted table) file contains the list of the contract identifiers of OBEs issued by a specific TSP which are not valid for use. Each contract is identified by a Personal Account Number (PAN) and OBE ID for EasyGo+ OBEs. The PAN is max 19 digits. The format of the OBE ID numbers is 18 characters. The format of the PAN differs depending on the standard used. The relation of a PAN no. to the issuing TSP is defined in the AIT list. Each TSP generates periodically (usually daily but according to the agreed sending schedule) a NAT list, allowing the check of included Personal Account Numbers and or OBE ID in EFC lanes (or in manual lanes if an extended mode procedure is applied).

The “global” NAT file is compiled in the EGH based on information provided by each TSP. The “global” NAT file is distributed to each TC which replaces the existing NAT file in their systems. For each PAN or OBE ID the action to be taken by the TC and the reason of non-acceptance is included. A NAT list is always transferred as a full update. Incremental updates are not used. If a receiver only wants a part of the “global” NAT file limited to a certain range of OBE (e.g. OBE issued for a specific service). The EGH will - instead of the ”global” file - send a filtered file agreed upon to the TC. If a TC receives a limited NAT list file, the ID of the receiver is ActorID of the recipient of the filtered file.

Format of filename NATxxxxxxYYYYMMDDSS_zzzzzz_vvvvvv (33 characters)

Format of list name: NATxxxxxxYYYYMMDDSS where is (19 characters)

Where is

- xxxxxx = Identifier of the sender of the ”local” NAT list, originated by a TSP (6 char.). When a “global” NAT list is sent from the EGH this is the ActorID of EGH
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SS = Sequence within the day (sequential number of 2 characters increased separately for each file per each sender/receiver combination per day beginning with 01)
- zzzzzz = Receiver - Files to the EGH the receiver must be 200000. Files from the EGH will be actor ID of the recipient or 999999 (see above).
- vvvvvv = Version name

2.6.2 Format NAT – file (Version 120001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
Header								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Sender Identifier	6	AlphaN	2	7	6 digits identifier of the Company having created this file. Either TSP or EasyGo HUB		Mandatory	
Receiver Identifier	6	AlphaN	8	13	6 digits identifier of the Company having received this file.		Mandatory	
List Sequence	19	AlphaN	14	32	NATxxxxxxYYYYMMDDSS		Mandatory	
Previous List Sequence	19	AlphaN	33	51	NATxxxxxxYYYYMMDDSS (NAT0000000000000000 if first)		Mandatory	

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Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
Moment of activation	14	Numeric	52	65	EGH generated files always filled with "0" for immediate activation.		Optional	
Number of records	15	Numeric	66	80	Number of records (lines) in Body		Mandatory	
Moment of creation	14	Numeric	81	94	Timestamp (UTC) when the original file has been created (YYYYMMDDhhmmss)		Mandatory	
List format version	6	AlphaN	95	100	The value to be filled in is defined above. This will allow actors for individual time schedules for updating of systems.		Mandatory	
Filler	27	AlphaN	101	127	Reserved for future use, filled with Zeros		Mandatory	0
End of header	1	AlphaN	128	128	End of line		Mandatory	
Body								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Personal Account Number	19	AlphaN	2	20	Atr. ID 32 according to PISTA and 15509 no. According to 7812. Expiry date and usage control is not used and filled in this field.		Mandatory	
Reason of non acceptance of OBE	2	Numeric	21	22	Code of rejection: "80": Customer does not want the EasyGo service "90": OBE not valid, no reason given (Used if no detailed information is available) "91": Customer temporal suspension "92": Contract terminated by the TSP and OBE not recovered "93": Contract terminated by the Customer and OBE not recovered "94": OBE lost "95": OBE stolen "96": Non-existing OBE – not produced "97": OBE on stock – not distributed to customer "98": OBE returned from customer because of contract termination "99": OBE returned from customer because of OBE fault		Mandatory	
Action to take	2	Numeric	23	24	Action to be taken: "01" To reject the OBE "02" To invalidate the OBE (Not used in EasyGo) "03" To accept the OBE (Not used in EasyGo) "04" To remove the OBE from vehicle (Not used in EasyGo)		Mandatory	
Context mark	12	AlphaN	25	36	ContractProvider + TypeOfContract + ContextVersion acc. to ISO 14906 3+2+1 bytes represented as 6+4+2 in Hex. E.g.: "C04001"+"0004"+"01" = "C04001000401"		Mandatory for EasyGo+	
OBE ID	18	AlphaN	37	54	ContractProvider + ManufacturerId + EquipmentOBEId acc. to ISO 14906 3+2+4 bytes represented as 6+4+8 characters in Hex. E.g.: ASFINAG: "C04001"+"001D"+"07900108" = "C04001001D07900108" BroBizz: "978003" + "0003" + 120002AD" = "9780030003120002AD" Equipment ID BroBizz value in Atr. ID 24 from the application element.		Mandatory for EasyGo+	
Filler	9	AlphaN	55	63	Reserved for future use, filled with Zeros		Mandatory	0

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
End of Record	1	AlphaN	64	64	End of line		Mandatory	
Footer								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Filler	62	AlphaN	2	63	Reserved for future use, filled with Zeros		Mandatory	0
End of Footer	1	AlphaN	64	64	End of line		Mandatory	

2.7 NAC (NAT Confirmation) file

2.7.1 Description

Each time EGH receives a new “local” NAT list from a TSP the structure and the content of the file are checked, to ensure that the general content and number of records are according to specification in Annex 2.1. If the EGH detects any error both an alarm and an e-mail is sent to the TSP and the EasyGo management. A confirmation file (NAC) is produced and sent back to the TSP when the file is accepted or partial accepted. In case of total rejection of a NAT file no NAC file will be produced. The file will be placed in the TSPs rejected catalogue and an alarm will be sent describing the failure¹. The NAC file contains information whether the file was accepted or partly accepted if and where the failure has occurred.

If the EGH detects any error both an alarm and an e-mail is sent to the TSP and the EasyGo management.

Format of filename NACxxxxxxYYYYMMDDSS_zzzzzz_vvvvvv (33 characters)

Format of list name: NACxxxxxxYYYYMMDDSS where is (19 characters)

Where is

- xxxxxx = Identifier of the sender of the Black list confirmation (6 characters), that means the ID of the EGH
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SS = Sequence within the day (sequential number of 2 characters increased separately for each file per each sender/receiver combination per day beginning with 01)
- zzzzzz = Identifier of the receiver of the Transit Information File (6 characters)
- vvvvvv = Version name

2.7.2 Format NAC (NAT confirmation) file (Version 120001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
Header								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	
Sender Identifier	6	AlphaN	2	7	6 digits identifier of the Company having created this file. (EasyGo HUB)		Mandatory	
Receiver Identifier	6	AlphaN	8	13	6 digits identifier of the Company having received this file.		Mandatory	
List Received	19	AlphaN	14	32	Name of the NAT file this confirmation file is generated for (NATxxxxxxYYYYMMDDSS)		Mandatory	
Date of reception	14	Numeric	33	46	Timestamp (UTC) when receiver received the file "List Received" (YYYYMMDDhhmmss)		Mandatory	
Number of records Accepted	15	Numeric	47	61			Mandatory	
Number of records Rejected	15	Numeric	62	76			Mandatory	
List format version	6	AlphaN	77	82	The value to be filled in is defined above. This will allow actors for individual time schedules for updating of systems.		Mandatory	
Filler	25	AlphaN	83	107	Reserved for future use, filled with Zeros		Mandatory	0
File acceptance	2	AlphaN	108	109	Code for acceptance or rejection of received black list: 00: Full acceptance (all records OK) 01: Partial acceptance (EGH only forwards correct data),		Mandatory	
End of header	1	AlphaN	110	110	End of line		Mandatory	
Body								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory *	
Copy of NAT body line	62	AlphaN	2	63	In case of rejected body line the line between Register Identifier and End of Record from the NAT list is copied and inserted in this position.		Mandatory *	0
Reason of rejection of line	2	Numeric	64	65	Code of rejection: "01" Duplicate line "02" PAN number not valid (Luhn code) (EGH currently not used due to performance reasons) "03" Number of digits in PAN is not correct "04" PAN number or context mark not within TSPs range "05" Mandatory OBU ID missing. "06" Mandatory context mark missing (EasyGo+) "07" Action to take missing/not correct "08" Reason of not acceptance missing/not correct "09" Miscellaneous		Mandatory *	
End of Record	1	AlphaN	66	66	End of line		Mandatory *	
Footer								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory	

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Mand. / Optional	Value if Nothing
Filler	62	AlphaN	2	63	Reserved for future use, filled with Zeros		Mandatory	0
End of Footer	1	AlphaN	64	6	End of line		Mandatory	

*) Body contains only records in case of rejected NAT list records.

- In case all lines in an otherwise- regarding its syntax - valid NAT list are rejected, "File acceptance" shall be set to "01" (partial acceptance)
- A NAT file may be rejected if e.g. it contains errors like invalid or non-readable file, illegal/unauthorized sender/receiver in header, format error in header/footer, mandatory information is not specified, number of records is not the same as specified in header format error in body
- In case of rejection of a complete file no NAC shall be sent. An alarm with the reason for rejection shall be generated.

2.8 TIF (Transit Information File) file

2.8.1 Description

The Transit Information File contains the information concerning the transactions performed by the Service Users (SU) on the toll facilities managed by a specific TC. The name of the file and list follows the same principle. The name of the receiver is included in the filename to ensure the unique identity of the file.

Format of filename TIFxxxxxxYYYYMMDDSSSS_zzzzzz_vvvvvv (35 characters)

Format of list name TIFxxxxxxYYYYMMDDSSSS_vvvvvv (28 characters)

Where is:

- xxxxxx = Identifier of the sender of the Transit Information File (6 characters), that means the Actor ID of the TC.
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SSSS = Sequence within the day (sequential number increased separately for each file/list per sender/receiver combination per day starting with 0001)
- zzzzzz = Identifier of the receiver of the Transit Information File (6 characters)
- vvvvvv = Version name

Each TC shall generate one TIF file for each TSP for all transactions between the RSE of the Toll Charger and the OBE issued by the Toll Service Provider. The TC claims periodic payments from the TSP for those transactions. This is done by transferring the TIF file or files to the EGH that forwards the file to the relevant receiver TSP.

2.8.2 Principles of transfer

All transactions stored in the TC system which can be connected to a TSP based on the field "Actor ID of TSP" in the transaction record will be transferred via TIF file or files to the EGH. EGH forwards the TIF files unchanged to the receiver.

It is important to distinguish between the information related to the filename and information in the list in the file:

Transaction list: A list containing transactions from one TC to be sent to a final destination of one specific TSP. A Transaction list is embraced by a header and footer. In case of both Debit and Credit transactions to a TSP, these transactions shall be divided in to two transaction list to the TSP i.e. SSSS = 0001 and 0002. A list shall only contain transactions in the same currency. The combination of TIF name of the list and receiver in the header gives the list unique identity.

Transaction file contains only one Transaction list in the file. A TSP returns a transaction list confirmation file to the TC, following the same principles as described above. Each TIF list shall be confirmed by exactly one TIC list. The header of each TIC list contains the name of TIF list, version number and receiver which identifies the TIF file it is related to.

2.8.3 Format TIF (Version 130001)

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E1/T1). Body only	Mand. / Optional/ On invoice	Value if Nothing
Header								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=List Body, "2"=List Footer,	-	Mandatory	
Sender Identifier	6	AlphaN	2	7	6 digits Actor ID identifier of the TC (Company having created this file).	-	Mandatory	
Receiver Identifier	6	AlphaN	8	13	6 digits Actor ID identifier of the Company TSP having received this file. The TSP who will invoice the customer.	-	Mandatory	
File Sequence	21	AlphaN	14	34	TIFxxxxxxYYYYMMDDSSSS	-	Mandatory	
Previous File Sequence	21	AlphaN	35	55	TIFxxxxxxYYYYMMDDSSSS (TIF000000000000 in first list)	-	Mandatory	
Currency	3	AlphaN	56	58	Currency coding. ISO 4217 Currency Codes	-	Mandatory	
Number of records in body	15	Numeric	59	73	Number of records (lines) in Body	-	Mandatory	
Credit/Debit	3	AlphaN	74	76	State the contents of the lines (All lines in the body is either credit or debit) Value to be used: CRE/DEB	-	Mandatory	
Number of transactions	15	Numeric	77	91	Number of transactions to be included in calculation of TSP fee. In case of more than one line for a transaction due to different VAT or a number of sections regarded as one transaction like in Austria this number will be different form the number of lines. The number is the sum of: Number of E/T transactions and the number of C/R transactions not being part of an E/T transaction.	-	Optional/ Mandatory if different	
Moment of creation	14	Numeric	92	105	Timestamp (UTC) when the original file has been created (YYYYMMDDhhmmss)	-	Mandatory	
List format version	6	AlphaN	106	111	The value to be filled in is defined above. This will allow actors for individual time schedules for updating of systems.	-	Mandatory	
Filler	50	AlphaN	112	161	Reserved for future use, filled with Zeros	-	Mandatory	0
End of header	1	AlphaN	162	162	End of line	-	Mandatory	
Body								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer	Mandatory	Mandatory	

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E1/T1). Body only	Mand. / Optional/ On invoice	Value if Nothing
Type of transit	2	AlphaN	2	3	Indicates different characteristics of the transit: Cx/Dx/Ex = Debit transactions and Rx/Sx/Tx = Credit transactions Cx/Rx primary transactions, Dx/Sx used if transaction has amount with divided VAT or VAT is calculated in one line, Ex/Tx used for aggregated transactions. Described in detail in section 2.8.4	Mandatory	Mandatory	
PersonalAccountNumber	19	AlphaN	4	22	Atr. ID 32 according to PISTA and 15509 no. According to 7812. Expiry date and usage control is not used and filled in this field.	Mandatory	Mandatory	
Actor ID of TSP	6	AlphaN	23	28	Actor ID of the TSP is the first 6 digits of the context mark.	Mandatory	Mandatory	
ContractAuthenticator	5	AlphaN	29	33	Part of the ContractAuthenticator attribute retrieved during the transaction Currently not used.	Optional	Optional	
Date and time of the entry transit	14	Numeric	34	47	Timestamp when the transit took place (in local time of the toll network). (YYYYMMDDhhmmss) (filled with zeroes in case of open system)	Optional	Optional	
Entry Station – Country Code	2	AlphaN	48	49	Refer to Toll Station Table (filled with zeroes in case of open system)	Optional	Optional	0
Entry Station – Actor ID	6	AlphaN	50	55	Refer to Toll Station Table (filled with zeroes in case of open system)	Optional	Optional	0
Entry Station – Network Code	1	Numeric	56	56	Refer to Toll Station Table (filled with zeroes in case of open system) (only last digit of TST)	Optional	Optional	
Entry Station – Station Code	4	Numeric	57	60	Refer to Toll Station Table (filled with zeroes in case of open system)	Optional	Optional	
Date and time of the exit transit	14	Numeric	61	74	Timestamp when the transit took place (in local time of the toll network). (YYYYMMDDhhmmss) In EasyGo used on invoice. Time-part (hhmmss) only filled for actual single transits, aggregated sum records have no time-part. (e-g- Austria, where it's filled with zeros)	Mandatory hhmmss= 000000	Mandatory	
Exit Station – Country Code	2	AlphaN	75	76	Refer to Toll Station Table	Optional	Optional	0
Exit Station – Actor ID	6	AlphaN	77	82	Refer to Toll Station Table (Actor ID of the TC)	Mandatory	Mandatory	
Exit Station – Network Code	1	Numeric	83	83	Refer to Toll Station Table (only last digit of TST value)	Optional	Optional	
Exit Station – Station Code	4	Numeric	84	87	Refer to Toll Station Table	Mandatory =9999	Mandatory	
Lane Identification	4	AlphaN	88	91	Identification code of the lane – Only Exit station	Mandatory =9999	Mandatory	0
Tariff Classification	2	AlphaN	92	93	TC specific vehicle class applied for tariff calculation	Mandatory =99	Mandatory	0
VehicleClass	1	Numeric	94	94	As retrieved from the OBE during transaction; filled with zeroes in case of measured classification (Class from OBE)	Optional	Optional	
VehicleDimensions	9	Numeric	95	103	As retrieved from the OBE during transaction; filled with zeroes in case of measured classification	Optional	Optional	
VehicleAxles	6	Numeric	104	109	As retrieved from the OBE during transaction; filled with zeroes in case of measured classification or the TC does not use number of axels for classification.	Optional	Optional	

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E1/T1). Body only	Mand. / Optional/ On invoice	Value if Nothing
VehicleAuthenticator	5	Numeric	110	114	As retrieved from the TC in case of claimed classification; filled with zeroes in case of measured classification. Not used	Optional	Optional	
Fee (VAT excluded)	11	Numeric	115	125	Fee associated to the transaction (in the smallest unit, e.g. euro cents if euro is the currency if not explicitly defined differently in field "Number of decimal digits for amounts" field (780-780))	Mandatory =total of Fee in Cx	Mandatory	
Amount of VAT	11	Numeric	126	136	Fee associated to the transaction (in the smallest unit, e.g. euro cents if euro is the currency if not explicitly defined differently in field "Number of decimal digits for amounts" field (780-780))	Mandatory =calculated from total in E1/T1 record	Mandatory	
Fee (VAT included)	11	Numeric	137	147	Fee associated to the transaction (in the smallest unit, e.g. euro cents if euro is the currency if not explicitly defined differently in field "Number of decimal digits for amounts" field (780-780)) In case of aggregated VAT calculation the C tx shall be filled with 0	Mandatory = total of Fee in Cx + VAT from E1/T1 record	Mandatory	
Currency	3	AlphaN	148	150	Currency coding. ISO 4217 Currency Codes	Mandatory	Mandatory	
Applied VAT rate	4	Numeric	151	154	Uudd (percentage as for uu.dd %)	Mandatory	Mandatory	
Transaction result	2	Numeric	155	156	Field indicating the transaction result, over two digits Not used	Optional	Optional	
OBE status	2	Numeric	157	158	Indicates OBE status as reported during the transaction: "01" Low battery "02" OBE tampered "03" No smart card inserted "04" No communication "05" OK	Optional	Optional	
Level of Security	2	Numeric	159	160	"00" No security key used for access OBE "01" Use of security key to access OBE	Optional	Mandatory	
Payment aggregation number	29	AlphaN	161	189	A sequence number used for all transactions within a calendar month. Required by Swedish Transport Agency (STA) as TC to mark a payment from a TSP. All transaction within one TIF file must have the same aggregation number. If transactions with different aggregation numbers are sent, they shall be included in different TIF files. The aggregation number is to be stated by the TSP when the monthly payment to the TC is settled.	Optional	Optional	0
Text Description	25	AlphaN	190	214	Text field with an explanation of the transaction by the TC, to be copied by the TSP in the user's invoice. Field is used for specification of purchase and not for location of transaction (Entry/Exit Station code).	Mandatory	Mandatory	

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E1/T1). Body only	Mand. / Optional/ On invoice	Value if Nothing
Type of toll lane	2	Numeric	215	216	"01" Manual "02" Automatic Card "03" EFC OBE Dedicated "04" Mixed "05" ORT – EFC / Video tolling "06" Distance based free flow DSRC system only (e.g. Austria) "07" Distance based free flow Virtual transaction only (Austria) "99" Aggregated transaction free flow DSRC system only (e.g. Austria)	Mandatory =99	Mandatory	
Type of operation of the specific lane	2	Numeric	217	218	Used if it is possible to operate a lane different from type of toll lane or when a mixed lane is set to a specific type of operation. "01" Manual "02" Card "03" EFC "04" Mixed "05" ORT – EFC / Video tolling "06" Distance based free flow – DSRC "07" Distance based free flow – virtual transaction only	Optional	Optional/ Mandatory if type of operations is different from type of toll lane	
Mode of operation (OK, Degraded)	2	Numeric	219	220	"01" Normal (used for all transactions also virtual and keyed in as long as the RSE is operating correct. "02" Degraded. To be used in case of abnormal use of RSE i.e. Known technical failure or maintenance of RSE causing no automatic registration "03" No DSRC equipment – only virtual transactions (only Austria).	Optional	Optional	
Manual Entry Classification	2	Numeric	221	222	Possible values from "00" to "99"	Optional	Optional	
Change of class indicator	1	Numeric	223	223	"1" Change	Optional	Optional	
Pre DAC (Class Automatic Detection) exit	1	Numeric	224	224	Possible values from "0" to "9"	Optional	Optional	
Post DAC exit	1	Numeric	225	225	Possible values from "0" to "9"	Optional	Optional	
DAC entry	1	Numeric	226	226	Possible values from "0" to "9"	Optional	Optional	
Height detector entry	1	Numeric	227	227	Possible values from "0" to "9"	Optional	Optional	
For future use	12	AlphaN	228	239	Reference field where TC can fill in relevant information to identify the transaction if needed when 12 Characters is sufficient.	Optional	Optional	
License Plate number declared	10	AlphaN	240	249	License plate number personalized in the OBE or on the HGV list if applicable.	Mandatory	Optional/ Mandatory for EasyGo+	
Nationality of License Plate number declared	2	AlphaN	250	251	Nationality of license plate number personalized in the OBE or on the HGV list if applicable using 3166 Alpha 2. Mandatory if licence plate declared is filled.	Mandatory	Optional/ Mandatory for EasyGo+	
License Plate number detected	10	AlphaN	252	261	Licence plate from OCR or manually control	Optional	Optional	

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E1/T1). Body only	Mand. / Optional/ On invoice	Value if Nothing
Nationality of license Plate number detected	2	AlphaN	262	263	Nationality of Licence plate from OCR or manual control using 3166 Alpha 2. Mandatory if licence plate detected is filled.	Optional	Optional	
ID of NAT list used for validation	19	AlphaN	264	282	List name of NAT list which is used to verify the passing. IF no NAT list has been used the field is filled with zeros	Mandatory =000.	Mandatory	0
Video Picture Counter	10	Numeric	283	292	Sequential counter of video pictures taken	Optional	Optional	
Fuel type	3	AlphaN	293	295	Used by AutoPASS and other TCs where defined: First two characters indicate Fuel Type: <ul style="list-style-type: none"> AutoPASS shall use column "Fuel Type" of Table 3 - HGV Values for "Fuel Type" (used for "TSP product code") and "Engine Characteristics" in section 2.4 all others shall use column "Engine Characteristics". Character 3 ("Y" or "N"), indicates if the vehicle is a chargeable hybrid (able to drive 40 km or more on only battery power) TCs outside Norway do not use this field. Instead the value is inserted in pos. 738-740 for values according to EN14906 HGV Table 3 Engine characteristics.	Mandatory	Optional	0
AutoPASS emission class	2	AlphaN	296	297	Used by AutoPASS and EasyGo basic TC where defined: Use value from HGV Used by EasyGo+: Personalized in OBE (Declared) Emission class. See Table 2 in section 2.4.1	Mandatory	Optional	0
Tariff classification	2	AlphaN	298	299	Used by AutoPASS and other TCs where applicable: See Table 1 – HGV/TIF Values for "Tariff Classification" in section 2.4.1 Specific vehicle class applied for tariff calculation Byte 1: Classification code according to EU standard Byte 2: Classification code according to national standard having created this information. This means in EasyGo the local Norwegian class.	Mandatory	Optional	0
VehicleSpecialClassification	2	AlphaN	300	301	First number trailer bit: 0= No trailer/no info; 1= Trailer detected Second number is AutoPASS Ferry Class Table 7 - AutoPASS Ferry Class.	Optional	Optional	0
Lane Mode	2	Numeric	302	303	No longer in use. Used by AutoPASS: Determines the mode of the lane at the time of passage,	Optional	Optional	0
Signal code bitmap	8	Numeric	304	311	No longer in use. Used by AutoPASS	Optional	Optional	0
Applied discount rate	3	Numeric	312	314	Used by AutoPASS: Applied discount percentage	Mandatory	Optional	0
Pricing correction	2	Numeric	315	316	Used by AutoPASS and other TCs where defined: 01...Wrong weight class 02...Incorrect fuel class 03...Incorrect euro class	Mandatory	Optional	0
Signal Code	2	Numeric	317	318	Used by AutoPASS:		Mandatory	0

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E1/T1). Body only	Mand. / Optional/ On invoice	Value if Nothing
Applied pricing rules	9	AlphaN	319	327	Used by AutoPASS and other TCs where defined: Applied pricing rules, 3 characters for each applied pricing rule. Pricing rule 3: Digit 319-321 Pricing rule 2: Digit 322-324 Pricing rule 1: Digit 325-327		Mandatory	0
For future use	2	AlphaN	328	329		Optional	Optional	0
ID of HGV list used for validation	19	AlphaN	330	348	Determines identification of HGV used for validation and/or pricing.	Optional	Optional	0
Additional QA data	4	AlphaN	349	352	Additional QA parameters: 0000 – no information DSRC – Based on a physical OBE VIRT – If based on an ANPR contract and a Virtual OBE	Optional	Optional	0
For local use	250	AlphaN	353	602	Data string which can be used for local purpose and be used differently. Cannot be used for EasyGo unless otherwise decided.	Optional	Optional	0
Context mark	12	AlphaN	603	614	ContractProvider+ TypeOfContract+ ContextVersion 3+2+1 bytes represented as 6+4+2 in Hex e.g. “C04001”+”0004”+”01” = “C04001000401”	Mandatory	Optional/ Mandatory for EasyGo+	
OBE ID	18	AlphaN	615	632	3+2+4 bytes represented as 6+4+8 characters in Hex e.g. ASFINAG “C04001”+”001D”+”07900108” = “C04001001D07900108” , e.g. Storebælt “978003” + “0003” + 120002AD” = “9780030003120002AD” .Equipment ID BroBizz value in Atr. ID 24 from the application element.	Mandatory	Optional/ Mandatory for EasyGo+ TC	
TSPAuthenticator (1)	8	AlphaN	633	640	TSPAuthenticator is calculated during transaction by the OBE	Mandatory =0	Optional/ Mandatory for Security level 1	0
RNDRSE	8	AlphaN	641	648	Random number provided by the RSE for the calculation of the TSP Authenticator	Mandatory =0	Optional/ Mandatory for Security level 1	0
KEYREF for TSP key	3	AlphaN	649	651	Reference to the key used during calculation of the TSP Authenticator	Mandatory =0	Optional/ Mandatory for Security level 1	0
Invoice transaction aggregation number	16	Numeric	652	667	To link several lines as one transaction - Mandatory if lines are to be linked to one transaction)	Mandatory	Optional/ Mandatory	
UTC time stamp	14	Numeric	668	681	Needed in Austria. Format aggregated line (E1/T1): YYYYMMDD000000 Detailed line (C/D/R/S) YYYYMMDDhhmmss (Time of passage)	Mandatory =Date	Mandatory	

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E1/T1). Body only	Mand. / Optional/ On invoice	Value if Nothing
TC-transaction identification (2)	16	AlphaN	682	697	TC shall fill in information to identify the transaction or identify transaction lines which shall be seen as one transaction. E.g. When Cx/Dx are part of the same transaction they have the same number. When discount or corrected price result in several lines they must be identified with the same number.	Mandatory	Mandatory	
External costs Noise	11	Numeric	698	708	Amount of external costs for noise pollution included in the fee. This amount has the number of decimal digits as stated in field "Number of decimal digits"	Optional	Optional	
External costs Air	11	Numeric	709	719	Amount of external costs for air pollution included in the fee. This amount has the number of decimal digits as stated in field "Number of decimal digits"	Optional	Optional	
Mark-up Special Construction	11	Numeric	720	730	Mark-up Special Constructions Amount of mark up for special constructions included in the fee. This amount has the number of decimal digits as stated in field "Number of decimal digits".	Optional	Optional	
Number of decimal digits	1	Numeric	731	731	The number of decimal digits used in these monetary fields: <ul style="list-style-type: none"> External costs Noise (698-708) External costs Air (709-719) Mark-up Special Construction (720-730) External costs Air and Noise (747-757) External costs CO2 (758-768) External costs Sum (769-779) E.g. "4" for Austria uses 4 decimal digits, Slovenia uses 6.	Mandatory =0 (4)	Optional	
Emission class (3)	6	AlphaN	732	737	Personalized (declared) Emission class as read from OBE during transaction or on HGV list	Mandatory =0 (4)	Mandatory for EasyGo+ TC or if used in tariff scheme	0
Engine Characteristics (3)	3	Numeric	738	740	Personalized Engine Characteristics as read from OBE during transaction or on HGV list	Mandatory =0 (4)	Mandatory for EasyGo+ TC or if used in tariff scheme	
CO2 (CopValue) (3)	2	Numeric	741	742	Personalized carbon dioxide emission/pollution value as read from OBE during transaction or on HGV list	Mandatory =0 (4)	Mandatory for EasyGo+ TC or if used in tariff scheme	
Filler	1	Numeric	741	741	Reserved for future use, filled with Zero	Mandatory	Mandatory	0

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E1/T1). Body only	Mand. / Optional/ On invoice	Value if Nothing
CO2 Emission Class (3)	1	Numeric	742	742	Personalized CO2 Emission Class as read from OBE during transaction or on HGV list	Mandatory = 0 (4)	Mandatory for EaysGo+ TC or if used in tariff scheme	
VehicleMaxLadenWeight (3) Technically permissible maximum laden mass (3)	4	Numeric	743	746	Personalized Maximum permissible total weight value Technically permissible maximum laden mass as read from OBE during transaction or on HGV list (10 kg units rounded down to the next 10 kg step. For example: 349 = 3491-3500 kg, 350 = 3501 – 3510 kg, 351 = 3511 – 3520 kg etc.)	Mandatory =0 (4)	Optional	
External costs Air and Noise	11	Numeric	747	757	Amount of external costs for air and noise pollution included in the fee. This amount has the number of decimal digits as stated in field “Number of decimal digits” (731-731)	Optional	Optional	0
External costs CO2	11	Numeric	758	768	Amount of external costs CO2 included in the fee. This amount has the number of decimal digits as stated in field “Number of decimal digits” (731-731)	Optional	Optional	0
External costs Sum	11	Numeric	769	779	Amount (Sum) of external costs for air and noise and external costs for CO2 include in the fee. This amount has the number of decimal digits as stated in field “Number of decimal digits” (731-731)	Optional	Optional	0
Number of decimal digits for amounts	1	Numeric	780	780	Decimal precision of amounts reported in fields <ul style="list-style-type: none"> • Fee (VAT excluded) (115-125) • Amount of VAT (126-136) • Fee (VAT included) (137-147) • Footer: Total amount (2-16) If value is 0 -> precision is defined by precision of Currency (EUR have 2 digit precision), otherwise precision of amounts are defined by this field. eg. value for Slovenia is 6 meaning amounts are reported with 6 digit precision.	Optional	Optional	0
Filler	63 29	AlphaN	747 781	809	Reserved for future use, filled with Zeros	Mandatory	Mandatory	0
End of record	1	AlphaN	810	810	End of line	Mandatory	Mandatory	
Footer								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=List Body, "2"=List Footer,	-	Mandatory	
Total amount	15	Numeric	2	16	In the smallest unit, e.g. euro cents if euro is the currency (Fee VAT included) if not explicitly defined differently in Body field "Number of decimal digits for amounts" field (780-780)	-	Mandatory	
Filler	90	AlphaN	17	106	Reserved for future use, filled with Zeros	-	Mandatory	0
End of Footer	1	AlphaN	107	107	End of line	-	Mandatory	

(1) TSP authenticator will only be available and valid with C1 transactions (and C3 transactions based on original C1 transactions).

(2) R2 and / or C3 transactions will have the same TC-transaction identification as the original Cx transaction.

(3) The usage of tariff relevant vehicle data within TIF, depends on TC and service:

	EasyGo basic OBE	EasyGo+ OBE
EasyGo+TC	Not applicable	A. TC read all data agreed to be personalised in the OBE and transfer data via TIF to the TSP. B. Data in the HGV list is used for i) tariffing, ii) fall back solution or iii) if data not personalised in the OBE is needed for pricing of the passage.
EasyGo basic TC	No information personalised in the OBE. (relevant data must be available at the HGV list)	1. TC <u>do not</u> read information stored in the OBE. Relevant data must be available at the HGV list. 2. TC read the information stored in the OBE. Relevant data are available at the HGV list. It must be agreed which data to be used stored in the OBE or in the HGV list.

(4) In E1/T1 this field is not relevant and shall not be validated, should be 0 or same as in Cx records

2.8.4 Codes for type of transits

The following codes for the field: “Type of transit” in the Transit detail file is described below:

Code	aggregated transaction	Text	Detailed description
	E1	Aggregated debit transaction	All codes of debit transactions
"C1 – D1"		Normal Transits Charges	A complete OBE transaction registered by RSE
"C2 – D2"		Manually Taken Transits	Keyed in at roadside as fall-back solution. Only PAN number is keyed in by Storebælt and Øresund
"C3 – D3"		Corrected Amounts Charges	OBE transaction that has been previously transferred but with an incorrect amount. The amount in this “C3”-record is the correct amount to be charged. The previous transaction is Credited by “R2”
"C4 - D4"		Virtual transits Charges	To be used for virtual transactions (i.e. used by ASFINAG) A reconstructed EasyGo transaction is generated in the event of gaps between two correct tolling transactions (following a plausibility check of the driving time)
"C5 - D5"		No Entry Data (Most Expensive Transit)	For closed toll system: The transaction has no toll station entry registration and is therefore charged max. amount.
"C6 – D6"		Incomplete transactions	A transaction that is not registered completely by RSE. These transactions are to be considered in the KPI. If the transaction can be restored in the CS, the three fee fields will be filled with the amount due and shall be stated on the invoice to the SU. If the transaction can't be restored due to missing information the three fee fields will be filled with 0 and shall not be stated on the invoice to the SU. Any missing information shall be stated with “NA” in a mandatory AlphaN field or filled with 9 in a mandatory numeric field
"C7 – D7"		”Converted” transit	A transaction that is not registered as an accepted OBE transaction by RSE, and therefore handled as a post payment or violation. Transit is later connected to a customer account/OBE manually after customer claim.

Code	aggregated transaction	Text	Detailed description
"C8 – D8"		Manually taken transits taken at CS	A transaction that is not registered at all by RSE but derived from a video picture by the TC based on the licence plate in the HGV list. If the three fee fields are filled with an amount due the transaction shall be stated on the invoice to the SU. If the three fee fields are filled with 0 the transaction shall not be stated on the invoice to the SU.
	T1	Aggregated credit transaction	All codes of credit transactions
"R2 – S2"		Amounts Refunds	Used to credit a charged price. (New correct price "C3.D3")

Table 6 - TIF Values for "Type of Transit"

The Cx, Dx and E1 codes of debit and Rx, Sx and T1 codes of credit transactions are used as follows:

- 1) All information regarding a transaction can be given in one line (including VAT)
In these cases only the code Cx is used for debit transactions and the code Rx is used for credit transactions.
- 2) Information regarding a transaction with mixed VAT rates shall be divided in several lines to cover the different VAT rates for each part of the transaction

If a transaction contains several lines – the connected lines shall appear consecutively in the file.

In these cases there will be one record with the code Cx and additional record(s) with the code Dx containing the parts of the transaction with different VAT to be represented as separate lines on an invoice.

i.e. 100€ with 20% VAT, 10€ with 10% VAT and 5€ with 5% VAT

Type of transit	Fee (VAT excluded)	Amount of VAT	Applied VAT rate
C1	10000	2000	2000
D1	1000	100	1000
D1	500	25	0500

The key to link associated Cx and Dx transactions is the field "TC-transaction identification". If - as for the limited parties (Until end of October 2016)

The key to link associated transactions is the combination of the following fields with identical values for

- "Exit Station – Actor ID"
- "Exit Station – Station Code"
- "Entry Station – Actor ID"
- "Entry Station – Station Code"
- "Lane Identification"
- "Date and time of the exit transit"

The codes Rx and Sx are used for crediting a transaction in the same manner. (All records of a transaction with mixed VAT shall be credited together).

3) Information regarding the transactions shall be divided due to aggregated VAT calculation or only one aggregated amount should be charged per day.

All Billing details of an open system for the same OBE, VAT rate and calendar day are aggregated into a single aggregate and a unique identifier (Reference number) for each aggregate is generated. This reference number is associated to the generated aggregate (E1-record) and the Billing details (Cx-records) it is stemming from in the field “Invoice transaction aggregation number”. Both types of records will be transmitted in the Billing details file (TIF) as they are needed for different purposes. The Cx-records contain all technical information (e.g. Authenticators, exact location of the transaction ...) and the field “Fee (VAT included)” shall be filled with 0. The E1-records only contain information relevant for the bookkeeping systems (Note: this means that the relevant VAT for bookkeeping systems must be calculated from the “total fee in E1” and not from the total of “VAT in Cx“ which can be different because of rounding to 2 decimal digits).

The codes Rx, Sx and T1 are used for crediting such transactions. (All records of such a transaction shall be credited together).

C1 and C2 records are made by the RSE,

C3/D3 – C8/D8 records are made by the CS (Back office).

D1 and D2 records are either made by the RSE or the CS

E1 records are always made by the CS.

For further information, please see annex 2.1

Code	Description
0	Unknown, default if not in use
1	Small vehicle, length ≤ 6 m
2	Medium vehicle length >6 m ≤ 8 m
3	Large vehicle, length >8 m ≤ 10 m)
4	Large vehicle (>10 m ≤ 12 m)
5	Large vehicle (>12 m ≤ 14 m)
6	Large vehicle (>14 m $\leq 17,5$ m)
7	Large vehicle ($>17,5$ m $\leq 19,5$ m)
8	Large vehicle ($>19,5$ m ≤ 22 m)
9	Large vehicle (>22 m)

Table 7 - AutoPASS Ferry Class

Code	Image	MMI (*)	Description	Type of Charge (IP)
02	No	0	Approved passage with OBE	OBE
08	No (**)	0	Passage with valid OBE but without corresponding vehicle detection.	OBE
19	Yes	255	Passage with valid OBE but there is also another approved OBE passage (with SC02) associated with the same vehicle detection. (There are probably more than one OBE with valid contract in the same vehicle).	No charge
21	Yes	2	Passage with valid OBE in OBU StatusFile where there is mismatch between LPN in OBU StatusFile versus result from ANPR from roadside. SignalCode 21 is only to be used when the ANPR results from the front and rear images match.	ANPR
22	Yes	N/A	Passage without detected OBE or an illegal OBE type (EFC Context Mark (EFC_CM) is not approved).	ANPR
23	Yes	1	Passage with OBE not defined in OBU StatusFile.	ANPR
25	Yes	2	Passage with legal OBE type but authentication failed.	ANPR
26	Yes	2	Passage with legal OBE type but access credential check failed.	ANPR
33	No (**)	1	(«Shadow SC» to SC23) OBE passage without vehicle detection and with OBE not defined in OBU StatusFile	No charge
35	No (**)	2	(«Shadow SC» to SC25) OBE passage without vehicle detection and legal OBE type, but authentication failed.	No charge
36	No (**)	2	(«Shadow SC» to SC26) OBE passage without vehicle detection and legal OBE type, but access credential check failed.	No charge
40	No	255	Passage in lane with modus "free of charge".	No charge
42	Yes	N/A	Passage in lane without charging equipment. To be used for passage in opposed lane or bus-bay.	ANPR

Table 8 - Signal Code

(*) Explanations of MMI (Man-Machine Interface) codes that are sent from CPE to OBE to give audible feedback to driver about the result of the processing of the passage:

0 = OK

1 = Not OK

2 = Contact Service Provider

255 = No Signalling

(**) Assumed that picture is not available

2.9 TIC (TIF Confirmation) file

2.9.1 Description

Each time a TSP receives a new Transits Information File (TIF list) from a specific TC the structure and the content of the file are checked and a confirmation list (Transits Information Confirmation or TIC) is produced and sent back in a file. One TIC list is produced for each TIF list from the TC. This file also contains the transactions, which are refused by the TSP. The name of the file and list follows the same principle. But depending of the receiver or content the name of the receiver is included in the filename if necessary, to ensure the unique identity.

Each TIF list shall be confirmed by one and only one TIC list. The header of each TIC list contains the name of TIF list and receiver which identifies the TIF list is related to.

Format of filename TICxxxxxxYYYYMMDDSSSS_ zzzzzz_vvvvvv (35 characters)
Format of list name TICxxxxxxYYYYMMDDSSSS (21 characters)

Where is

- xxxxxx = Identifier of the sender of the Transit Information Confirmation File (6 characters), that means the Actor ID of the TSP
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SSSS = Sequence within the day (sequential number increased separately for each file/list per each sender/receiver combination per day starting with 0001)
- zzzzzz = Identifier of the receiver of the Transit Information File (6 characters)
- vvvvvv = Version name

The TIC file will, in case of no rejected transits only, be composed by the header and footer.

The lists contained in the file are sent by TSP to TC to indicate which Transits Information File / List they have received, the format correctness and the date and time of reception.

The lists are included into a file in the same way, following the same principles, as described for Transit Information File.

The records have the same format and same records as the transits sent by the TC except for the inclusion of a new data element (Reason of rejection) to indicate the reason for the TSP to reject the transit. Result of the control shall be the last 2 digits in this file.

In case of rejection of the total file at the EasyGo HUB, it shall be sent again with a new name and the rejected file/list shall be marked as cancelled.

2.9.2 Format TIC (TIF confirmation) (Version 130001)

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E). Body only	Mand. / Optional	Value if Nothing
Header								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=List Body, "2"=List Footer,		Mandatory	
Sender Identifier	6	AlphaN	2	7	6 digits Actor ID identifier of the Company (TSP) having sent this file. The issuer who will invoice the customer.		Mandatory	
Receiver Identifier	6	AlphaN	8	13	6 digits Actor ID identifier of the TC (Company having received this file).		Mandatory	
File Sequence	21	AlphaN	14	34	TICxxxxxxYYYYMMDDSSSS		Mandatory	
File Received	21	AlphaN	35	55	TIFxxxxxxYYYYMMDDSSSS		Mandatory	
Date of reception	14	Numeric	56	69	Timestamp (UTC) when receiver received the file in "File Received" (YYYYMMDDhhmmss)		Mandatory	
Currency	3	AlphaN	70	72	Currency coding. ISO 4217 Currency Codes		Mandatory	
Number of accepted records in body	15	Numeric	73	87	(Number of accepted lines in body)		Mandatory	
Number of rejected record in body	15	Numeric	88	102	(Number of rejected lines in body)		Mandatory	
Credit/Debit	3	AlphaN	103	105	State the contents of the lines (All lines in the body is either credit or debit) Value to be used: CRE/DEB		Mandatory	0
Number of accepted transactions	15	Numeric	106	120	In case of more than one line per transaction the number of transactions shall be stated		Optional	
Number of rejected transactions	15	Numeric	121	135	In case of more than one line per transaction the number of rejected transaction shall be stated		Optional	
List format version	6	AlphaN	136	141	The value to be filled in is defined above. This will allow actors for individual time schedules for updating of systems.		Mandatory	
Number of TIC	6	Numeric	142	147	Used by AutoPASS		Mandatory	
Filler	46	AlphaN	148	193	Reserved for future use, filled with Zeros		Mandatory	0
File Acceptance (3)	2	Numeric	194	195	00: Full acceptance (all records OK) 01: Partial acceptance 02: Not accepted total - TIF is rejected because the same file name is previously received. 03: Not accepted total - TIF is rejected because the field "number of records or transactions" in header is not corresponding to the number of records or transactions in body 04: Not accepted total - TIF is rejected because total claimed amount in footer is not corresponding to the summarized amounts for each transaction 05: Not accepted total - TIF is rejected because of miscellaneous reasons.		Mandatory	
End of header	1	AlphaN	196	196	End of line		Mandatory	
Body								

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E). Body only	Mand. / Optional	Value if Nothing
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer		Mandatory (2)	
Copy of TIF body line	808	AlphaN	2	809	In case of rejected body line the line between Register Identifier and End of Record from the TIF list is copied and inserted in this position		Mandatory (2)	
Reason of rejection EasyGo	2	AlphaN	810	811	Indicates the reason to reject the transit: "01" Transaction has an OBE ID that is registered not valid at the time of passing. (Included in the NAT list) "02" Transaction is too old, that means sent to TSP later than the time limit for clearing "03" Transaction is not from a user with an EasyGo contract from actual Issuer. OBE not inside valid interval on the AIT list. "04" Wrong weight class. "05" Incorrect fuel class "06" Reserved for future use "07" Transaction contains a passing time outside the contract validity period – "08" Transaction has not a legal Toll Station/lane Identification "09" Transaction record has not a valid format "10" Incorrect euro class/CO2 "11" Authentication failure – transaction not accepted only performed if agreed between TC and TSP (I.e. EN 15509 OBE according to security level 1) "12" Reserved for future use "13" Transaction is sent for cancellation or correction, but is not found in TSP transaction register "14" Data has been sent previously (1) "15" Transaction has an OBE ID that is not registered for a user of the TSP "16" Amount in Ex-record differs from sum of amounts of Cx-records with the same reference number "17" Marks the lines (Cx or Rx) in a rejected E transaction which is correct and only rejected due to other lines with failure "18" Miscellaneous		Mandatory (2)	0
End of record	1	AlphaN	812	812	End of line		Mandatory (2)	
Footer								
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=List Body, "2"=List Footer		Mandatory	
Total amount Accepted	15	Numeric	2	16	In the smallest unit, e.g. euro cents if euro is the currency (fee VAT included) Note: Number of decimal digits for amounts are defined in TIF, Body field Number of decimal digits for amounts (780-780)		Mandatory	
Total amount Rejected	15	Numeric	17	31	In the smallest unit, e.g. euro cents if euro is the currency (fee VAT included)		Mandatory	

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory info (E). Body only	Mand. / Optional	Value if Nothing
					In case of a Total Rejection of a TIF file due to reason "04" (Not accepted total – Transaction file is rejected because total claimed amount in footer is not corresponding to the summarized amounts for each transaction) the Total Amount Rejected in the TIC's footer shall have the same value as the Total Amount of the footer of the rejected TIF file. Note: Number of decimal digits for amounts are defined in TIF, Body field Number of decimal digits for amounts (780-780)			
Filler	96	AlphaN	32	127	Reserved for future use, filled with Zeros		Mandatory	
End of Footer	1	AlphaN	128	128	End of line		Mandatory	

(1) Key to identify a transaction uniquely for duplicate check ("14 - Data has been sent previously") is:

- a. "TC-transaction identification" or
- b. combination of
 - "Exit Station – Actor ID"
 - "Exit Station – Network Code"
 - "Exit Station – Station Code"
 - "Date and time of the exit transit"
 - "Entry Station – Actor ID"
 - "Entry Station – Network Code"
 - "Entry Station – Station Code"
 - "OBE ID"
 - "PersonalAccountNumber"
 - "Type of Transit".

However, type of transit C1 and C8 will be considered identical when checking for alternative b). When a duplicate C1 and C8 is found any one of the two transits can be rejected (14). Besides for parking the Entry Station data is currently not used.

(2) Only in case of a partial acceptance the rejected body line/s shall be included. It shall include all lines in a file stating the individual reason of rejection for each of the lines Note that in case all lines in a valid TIF list are rejected with a reason it will be marked as a partial rejection.

(3) In case of total rejection of a TIF file ("Not accepted total") the corresponding TIC file shall not contain any bodylines.

2.10 FIF (Financial Information File) file optional

2.10.1 Description

The Financial Information File contains the information concerning activities performed by the Service Users (SU) on the toll facilities managed by a specific TC which cannot fulfil the requirements in the TIF file. The name of the file and list follows the same principle as the TIF file with one important exemption that both debit and credit transactions are allowed in the same file. The file is not mandatory, and it has to be agreed upon bilaterally between a TC and TSP.

Format of filename FIFxxxxxxYYYYMMDDSSSS_zzzzzz_vvvvvv (35 characters)

Format of list name FIFxxxxxxYYYYMMDDSSSS (21 characters)

Where is:

- xxxxxx = Identifier of the sender of the Transit Information File (6 characters), that means the Actor ID of the TC.
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SSSS = Sequence within the day (increased separately for each file/list per sender/receiver combination per day starting with 0001)
- zzzzzz = Identifier of the receiver of the Transit Information File (6 characters)
- vvvvvv = Version name

The TC shall generate one FIF file for each TSP he has an agreement with for all relevant activities between the TC and the SU with an OBE issued by the TSP. The TC claims periodic payments from the TSP for those activities. This is done by transferring the FIF file or files to the EGH that forwards the file(s) to the relevant receiver (TSP).

2.10.2 Principles of transfer

All transactions stored in the TC system which can be connected to a TSP based on the field “Actor ID of TSP” in the transaction record will be transferred via FIF file or files to the EGH. EGH forwards the FIF files unchanged to the receiver.

A TSP returns a financial list confirmation file to the TC, following the same principles as described above. Each FIF list shall be confirmed by exactly one FIC list. The header of each FIC list contains the name of FIF list, version number and receiver which identifies the FIF list it is related to.

2.10.3 Format FIF (Version 130001)

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory/Optional/On invoice	Value if Nothing
Header							
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=List Body, "2"=List Footer,	Mandatory	
Sender Identifier	6	AlphaN	2	7	6 digits Actor ID identifier of the TC (Company having created this file).	Mandatory	
Receiver Identifier	6	AlphaN	8	13	6 digits Actor ID identifier of the Company TSP having received this file. The TSP who will invoice the customer.	Mandatory	
File Sequence	21	AlphaN	14	34	FIFxxxxxYYYYMMDDSSSS	Mandatory	
Previous File Sequence	21	AlphaN	35	55	FIFxxxxxYYYYMMDDSSSS	Mandatory	
Currency	3	AlphaN	56	58	Currency coding. ISO 4217 Currency Codes	Mandatory	
Number of records in body	15	Numeric	59	73	Number of records (lines) in Body	Mandatory	
Moment of creation	14	Numeric	74	87	Timestamp (UTC) when the original file has been created (YYYYMMDDhhmmss)	Mandatory	
List format version	6	AlphaN	88	93	The value to be filled in is defined above. This will allow actors for individual time schedules for updating of systems.	Mandatory	
Filler	68	AlphaN	94	161	Reserved for future use, filled with Zeros	Mandatory	0
End of header	1	AlphaN	162	162	End of line	Mandatory	
Body							
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer	Mandatory	
Type of transit	6	AlphaN	2	7	Indicates different characteristics of the transit: DEBnnn = Debit transactions and type nnn CREnnn = Credit transactions and type nnn	Mandatory	
Actor ID of TSP	6	AlphaN	8	13	Actor ID of the TSP is the first 6 digits of the context mark.	Mandatory	
Line number	6	Numeric	14	19	ID in case of rejected line in FIC	Mandatory	
Customer number	20	AlphaN	20	39	To be agreed upon bilateral between each TC and TSP	Mandatory/Optional	
PersonalAccountNumber	19	AlphaN	40	58	Atr. ID 32 according to PISTA and 15509 no. According to 7812. Used if the line is related to one specific OBE	Optional	
OBE ID	18	AlphaN	59	76	6+4+8 characters in Hex TSP+ manufacturer ID + seq. number e.g. ASFINAG "C04001"+"001D"+"07900108" = "C04001001D07900108" Used if the line is related to one specific OBE	Optional	
Date and time	14	Numeric	77	90	YYYYMMDDhhmmss	Optional	
Fee (VAT excluded)	11	Numeric	91	101	Fee associated to the transaction (in the smallest unit, e.g. euro cents if euro is the currency)	Mandatory	
Amount of VAT	11	Numeric	102	112	Fee associated to the transaction (in the smallest unit, e.g. euro cents if euro is the currency)	Mandatory	
Fee (VAT included)	11	Numeric	113	123	Fee associated to the transaction (in the smallest unit, e.g. euro cents if euro is the currency) In case of aggregated VAT calculation the C tx shall be filled with 0	Mandatory	

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory/ Optional/ On invoice	Value if Nothing
Currency	3	AlphaN	124	126	Currency coding. ISO 4217 Currency Codes	Mandatory	
Applied VAT rate	4	Numeric	127	130	Uudd (percentage as for uu.dd %)	Mandatory	
Line format code	10	AlphaN	131	140	The code determines how the information in position 141 to 731 shall be handled. Value depends on bilateral agreement between sender and recipient. Currently used values: "Invoiceinf" ... Example see Table 11 - Example of use of "Invoiceinf" between BroBizz A/S and A/S Storebælt	Mandatory/ Optional	
Content based on the line format code	591	AlphaN	141	731	The format code defines the use. It must be coordinated by the TC to ensure unique profiles available for all TSP. Mandatory if Line format code = Invoiceinf	Mandatory/ Optional	0
Filler	78	AlphaN	732	809	Reserved for future use, filled with Zeros	Mandatory	0
End of record	1	AlphaN	810	810	End of line	Mandatory	
Footer							
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=List Body, "2"=List Footer,	Mandatory	
Total amount	15	Numeric	2	16	In the smallest unit, e.g. euro cents if euro is the currency (Fee VAT included) NET value	Mandatory	
Filler	90	AlphaN	17	106	Reserved for future use, filled with Zeros	Mandatory	0
End of Footer	1	AlphaN	107	107	End of line	Mandatory	

Example of use of "Invoiceinf" between BroBizz A/S and A/S Storebælt

Name	Number of Char.	Type of value	Begin	End	Definition	Mandatory/ Optional/ On invoice	Value if Nothing
EasyGo Aggregation reference	20	AlphaN	141	160	Reference to allow for aggregated invoice.	Optional	
Invoice layout	1	AlphaN	161	161	TC may define individual invoice layout. 0 = Layout with detailed information included. 1 = Without detailed transaction information (Standard layout).	Mandatory	
Invoice text	80	AlphaN	162	241	Always printed on the Invoice.	Mandatory	
Supplementary invoice text 1	80	AlphaN	242	321	Can only be used if "Invoice layout" = 1 is used.	Optional	
Supplementary invoice text 2	80	AlphaN	322	401	Can only be used if "Invoice layout" = 1 is used.	Optional	
Supplementary invoice text 3	80	AlphaN	402	481	Can only be used if "Invoice layout" = 1 is used.	Optional	
Supplementary invoice text 4	80	AlphaN	482	561	Can only be used if "Invoice layout" = 1 is used.	Optional	
Supplementary invoice text 5	80	AlphaN	562	641	Can only be used if "Invoice layout" = 1 is used.	Optional	
Supplementary invoice text 6	80	AlphaN	642	721	Can only be used if "Invoice layout" = 1 is used.	Optional	

Table 11 - Example of use of "Invoiceinf" between BroBizz A/S and A/S Storebælt

2.11 FIC (FIF Confirmation) file

2.11.1 Description

Each time a TSP receives a new Financial Information File (FIF list) from a specific TC the structure and the content of the file are checked and a confirmation list (Financial Information Confirmation or FIC) is produced and sent back in a file. One FIC list is produced for each FIF list from the TC. This file also contains the transactions, which are refused by the TSP. The name of the file and list follows the same principle.

Each FIF list shall be confirmed by one and only one FIC list. The header of each FIC list contains the name of FIF list, version number and receiver which identifies the FIF list is related to.

Format of filename FICxxxxxxYYYYMMDDSSSS_zzzzzz_vvvvvv (35 characters)
Format of list name FICxxxxxxYYYYMMDDSSSS (21 characters)

Where is

- xxxxxx = Identifier of the sender of the Transit Information Confirmation File (6 characters), that means the Actor ID of the TSP
- YYYY = year part (4 characters)
- MM = month part (2 characters)
- DD = day part (2 characters)
- SSSS = Sequence within the day (sequential number increased separately for each file per each sender/receiver combination per day starting with 0001)
- zzzzzz = Identifier of the receiver of the Transit Information File (6 characters)
- vvvvvv = Version name

The FIC file will, in case of no rejected entries only, be composed by the header and footer.

The lists contained in the file are sent by TSP to TC to indicate which Financial Information File / List they have received, the format correctness and the date and time of reception.

The lists are included into a file in the same way, following the same principles, as described for Financial Information File.

The records have the same format as the entries sent by the TC except for the inclusion of a new data element (Reason of rejection) to indicate the reason for the TSP to reject the transit. Result of the control shall be the last 2 digits in this file.

In case of rejection of the total file at the EasyGo HUB, it shall be sent again with a new name and the rejected file/list shall be marked as cancelled.

2.11.2 Format FIC (FIF confirmation) (Version 130001)

Name	Number of Char.	Type of value	Begin	End	Definition	Mand. / Optional	Value if Nothing
Header							
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=List Body, "2"=List Footer,	Mandatory	
Sender Identifier	6	AlphaN	2	7	6 digits Actor ID identifier of the Company (TSP) having sent this file. The issuer who will invoice the customer.	Mandatory	
Receiver Identifier	6	AlphaN	8	13	6 digits Actor ID identifier of the TC (Company having received this file).	Mandatory	
File Sequence	21	AlphaN	14	34	FICxxxxxYYYYMMDDSSSS	Mandatory	
File Received	21	AlphaN	35	55	FIFxxxxxYYYYMMDDSSSS	Mandatory	
Date of reception	14	Numeric	56	69	Timestamp (UTC) when receiver received the file in "File Received" (YYYYMMDDhhmmss)	Mandatory	
Currency	3	AlphaN	70	72	Currency coding. ISO 4217 Currency Codes	Mandatory	
Number of accepted records in body	15	Numeric	73	87	(Number of accepted lines in body)	Mandatory	
Number of rejected record in body	15	Numeric	88	102	(Number of rejected lines in body)	Mandatory	
List format version	6	AlphaN	103	108	The value to be filled in is defined above.	Mandatory	
Filler	85	AlphaN	109	193	Reserved for future use, filled with Zeros	Mandatory	0
File Acceptance (2)	2	Numeric	194	195	"00" Yes completely "01" yes partial "02" No total - transaction file is rejected because the same file name is previously received. "03" No total - Transaction file is rejected because the field "number of records" in header is not corresponding to the number of records in body "04" No total - Transaction file is rejected because total claimed amount in footer is not corresponding to the summarized amounts for each transaction	Mandatory	
End of header	1	AlphaN	196	196	End of line	Mandatory	
Body (3)							
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=Body, "2"=Footer	Mandatory (2)	
Copy of FIF body line	808	AlphaN	2	809	In case of rejected body line the line between Register Identifier and End of Record from the TIF list is copied and inserted in this position	Mandatory (2)	
Reason of rejection EasyGo	2	AlphaN	810	811	Indicates the reason to reject the transit: "01" Wrong Type of transit code. "02" Incorrect Customer number at the TSP. "03" The OBE is not issued by the TSP. "04" Transaction is too old. "05" Wrong line format code "06" Wrong Invoice layout number. "07" Invoice text missing.	Mandatory (2)	0

Name	Number of Char.	Type of value	Begin	End	Definition	Mand. / Optional	Value if Nothing
End of record	1	AlphaN	812	812	End of line	Mandatory	
Footer							
Register Identifier	1	Numeric	1	1	"0"=Header, "1"=List Body, "2"=List Footer	Mandatory	
Total amount Accepted	15	Numeric	2	16	In the smallest unit, e.g. euro cents if euro is the currency (fee VAT included) Net value	Mandatory	
Total amount Rejected	15	Numeric	17	31	In the smallest unit, e.g. euro cents if euro is the currency (fee VAT included) Net value	Mandatory	
Filler	96	AlphaN	32	127	Reserved for future use, filled with Zeros	Mandatory	
End of Footer	1	AlphaN	128	128	End of line	Mandatory	

(1) Key to identify a transaction uniquely is:

- SenderId of the corresponding FIF file
- FIF filename
- Line number within FIF file

(2) Note that in case of rejection of a complete file there shall be no body lines included. Only in case of a partial acceptance shall there be the rejected body line/s included. It shall include all lines in a file stating the individual reason of rejection for each of the lines.

(3) Fields in body are only filled in case of rejected lines in the corresponding FIF.

2.12 ADU (Application Data Unit) File

2.12.1 Description

The Application Data Unit File may contain any type of information to be exchanged according to the subtypes below. Generic files are based on minimizing the EGH knowledge of the content and validation of the files and only specify the absolute minimum standardisation of the files in order for the EGH to handle these files correctly. For these files only the filename will be validated and described.

Format of filename: ADUxxxxxx_YYYYMMDDSSSS_zzzzz_e[_ssssssssssssssssss]

Where is:

- xxxxxx = the sender's Actor ID (6 characters according to ACT-Actor Table)
- YYYY = year part (4 characters) of generation timestamp (UTC) of file
- MM = month part (2 characters) of generation timestamp (UTC) of file
- DD = day part (2 characters) of generation timestamp (UTC) of file

- SSSS = Sequence (4 characters) within the day (sequential number increased separately for each file per sender/receiver combination per day starting with 0001)
- zzzzzz = the Actor ID of the partner who should receive this file (6 characters according to ACT-Actor Table)
- e = complete or partial encryption of the file's content has been applied by the sender ("Y" or "N")
- [_ssssssssssssssssss] = optional subtype i.e. declaration of the content of an ADU file (up to 20 characters plus underscore = 21 characters)

The length of an ADU filename varies between 31 characters and 52 characters.

2.12.1.1 Subtype of an ADU file

The subtype string of an ADU file indicates the content of the ADU file. The string for a certain subtype must be bilateral between the sending actor and the receiving actor of the file. The EGH does not have any information about any subtypes used between any two actors. Therefore no validation on the subtype string will be performed by the EGH except enforcing the length constraint. The usage of a subtype is optional.

Examples of possible subtypes:

- ADU without any subtype stated, e.g. ADUABCCBA_202003040005_A12345_Y
- _request, e.g. ADUABCCBA_202003040005_A12345_Y_request
- _ack
- _status
- _trustObject
- _efcContextData
- _exceptionList
- _reportAbnormalOBE
- _retrieveTollDeclaration
- _tollDeclaration
- _billingDetails
- _paymentClaim
- _retrieveQA
- _reportQA
- _retrieveUserDetails
- _provideUserDetails
- _retrieveCCCEvent
- _reportCCCEvent

2.12.2 Format ADU file

The EGH will perform the following validations on ADU files:

2.12.2.1 Duplicate Check

Duplicates will be checked by filenames only. Content of ADU files is not analysed.

2.12.2.2 Valid Originating Actor

Actor ID of the originator (=sender) of the ADU file must be a valid Actor ID in the ACT file valid at the time of transmission of the ADU file.

2.12.2.3 Valid Receiving Actor

Actor ID of the receiver of the ADU file must be a valid Actor ID in the ACT file valid at the time of transmission of the ADU file.

2.12.2.4 Structure of Filename

The filename of the ADU file is validated against rules given in section 2.12.1.