



AP-3.1

Whitelist Formats – HGV/HGC versions 120001, 220001 and 500001

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DOCUMENT STATUS

Document number:	AP-3.1 Whitelist Formats – HGV/HGC versions 120001, 220001 and 500001
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Status	Version	Description
Final	2.01	Updated with new version 500001

DOCUMENT REVISION HISTORY

Version	Date	Author	Main changes
1.0	11.03.2022	NPRA	New document/version
2.0	01.07.2022	NPRA	Version 500001 added
2.01	03.10.2022	NPRA	Corrected table numbering

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1 Whitelist (HGV)

1.1 Description

The HGV list has the following purposes:

- Maintain the OBE register in AutoPASS IP for all vehicles (light and heavy)
- Identify the OBE based on the licence plate in the HGV list when the OBE has not been read at the charging point (this will enable the TC to charge the user via the OBE instead of via the license plate)

There are three current versions of the HGV format:

- 120001 – Identical to EasyGo format version 120001. To be used for complete or incremental TSP whitelists.
- 220001 – Identical to 120001. Only to be used for incremental whitelists. New agreements are included once. Terminated agreements are removed by use of the “Valid to” field.
- 500001 – Includes better functionality for OBE replacement. This is the preferred format for incremental whitelists. May also be used for complete TSP whitelists.

A complete HGV file (aka HGVC) is produced by AutoPASS IP for internal use, containing all valid agreements received in the “local” HGV files from all TSPs.

The “local” HGV file is generated by each TSP and is used to update the OBE register in AutoPASS IP.

Format of filename HGVxxxxxxYYYYMMDDSS_ zzzzzz _vvvvvv (33 Characters)

Format of list name: HGVxxxxxxYYYYMMDDSS (19 Characters)

- xxxxxx = Identifier of the sender of the “local” HGV list, originated by a TSP (6 characters). HGVC uses the actorID from AutoPASS IP.
 - YYYY = year (4 characters)
 - MM = month (2 characters)
 - DD = day (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
 - vvvvvv = Format Version
-
- The character format is ISO 8859-1.
 - The format of each record is described below.
 - Only a line feed is used at the end of each line.

In AutoPASS, a HGV list shall normally be incremental. The TSP shall contact AutoPASS in advance if there is a need for a full update.

1.2 Whitelist Format (Versions 120001/220001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Adjusted	Mandatory/Optional	Value if Nothing	Padding
Header										
Register Identifier	1	Numeric	1	1	"0"=Header	Generation	Right	Mandatory	Not Applicable	Zeros
Sender Identifier	6	AlphaN	2	7	6 digit identifier of the Company having created this file.	Generation	Left	Mandatory	Not Applicable	Zeros
Receiver Identifier	6	AlphaN	8	13	6 digit identifier of the Company intended as receiver of this file.	Generation	Left	Mandatory	Not Applicable	Zeros
List Sequence	19	AlphaN	14	32	HGVxxxxxxYYYYMMDDSS	Generation	Left	Mandatory	Not Applicable	Zeros
Previous File Sequence	19	AlphaN	33	51	HGVxxxxxxYYYYMMDDSS (HGV0000000000000000 if first)	Generation	Left	Mandatory	Not Applicable	Zeros
Moment of activation	14	Numeric	52	65	It is not possible to state a future moment of activation. As it is only possible to use immediate activation, this field must be filled with zeros.	Generation	Right	Mandatory	Not Applicable	Zeros
Number of records	15	Numeric	66	80	Number of records (lines) in the Body	Generation	Right	Mandatory	Not Applicable	Zeros
Moment of creation	14	Numeric	81	94	YYYYMMDDhhmmss UTC	Generation	Right	Mandatory	Not Applicable	Zeros
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.	Generation	Left	Mandatory	Not Applicable	Zeros
Filler	27	AlphaN	101	127	Reserved for future use, filled with Zeros	Generation	Left	Mandatory	Not Applicable	Zeros
End of header	1	AlphaN	128	128	End of line	Generation	Left	Mandatory	Not Applicable	
Body										
Register Identifier	1	Numeric	1	1	"1"=Body	TSP	Right	Mandatory	Not Applicable	Zeros
Actor ID – TSP 1)	6	AlphaN	2	7	6 digits identifier of the Company having issued this OBE according to ISO 14816	TSP	Left	Mandatory	Not Applicable	Blanks
Shadow TSP	6	AlphaN	8	13	6 digits Actor ID of the TSP which acts as shadow TSP for this OBE if issued by a different TSP (Only one TSP shall act as shadow TSP for each OBE) Not in use	TSP	Left	Optional	Blanks	Blanks
Personal Account Number	19	AlphaN	14	32	PAN Number. Shall be unique.	TSP	Left	Mandatory	Not Applicable	Blanks
License Plate number 1)	10	AlphaN	33	42	Licence Plate number of the vehicle (without spaces or other separators in between regular characters). Mandatory for all vehicles in Norway.	TSP	Left	Mandatory	Not Applicable	Blanks
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...) http://www.iso.org/iso/english_country_names_and_code_elements Left justified, spaces to the right. Mandatory for all vehicles in Norway	TSP	Left	Mandatory	Not Applicable	Blanks
Tariff Classification	2	AlphaN	46	47	Specific vehicle class applied for tariff calculation, see Table 1. Byte 1: Classification code according to EU standard Byte 2: Classification code according to national standard having created this information. This means the local Norwegian class. For valid combinations see Table 1 – HGV/TIF Values for "Tariff Classification".	TSP	Left	Mandatory	Not Applicable	Blanks
VehicleClass	1	Numeric	48	48	As personalized in the OBE – UNECE vehicle classes	TSP	Right	Optional	Blanks	Zeros

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Adjusted	Mandatory/Optional	Value if Nothing	Padding
Number of axels	1	Numeric	49	49	Personalized number of axels of the tractor unit as in the OBE	TSP	Right	Optional	Blanks	Zeros
Context mark	12	AlphaN	50	61	ContractProvider + TypeOfContract + ContextVersion according to ISO 14906. 3+2+1 bytes represented as 6+4+2 in Hex. E.g. "30C00B"+"0005"+"03" = "30C00B000503" (Oslofjordtunnelen)	TSP	Left	Mandatory	Blanks	Blanks
OBE ID	18	AlphaN	62	79	ContractProvider + ManufacturerId + EquipmentOBUId acc. to ISO 14906 3+2+4 bytes represented as 6+4+8 in Hex e.g. "30C00B" + "0012" + "22070321" = "30C00B001222070321". EquipmentOBUId: The value of attribute ID 24 from the application element of the OBE.	TSP	Left	Mandatory	Blanks	Blanks
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 - HGV Values for "Emission class".	TSP	Left	Mandatory	Zeros	Blanks
TSP product code	6	AlphaN	86	91	TSP code for use in Norway. The two first characters indicate the 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 power only. Y=Yes, N=No or unknown.	TSP	Left	Mandatory	Zeros	Blanks
Engine Characteristics	3	Numeric	92	94	Personalized Engine Characteristics (according to ISO 14906:2011). 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"	TSP	Left	Optional	Zeros ²	Zeros
CO2 (CopValue)	2	Numeric	95	96	Personalized carbon dioxide pollution values (according to ISO 14906:2011). The TSP is obligated to state only verified CO2 values in the HGV list.	TSP	Left	Optional	Zeros ²	Zeros
VehicleMaxLadenWeight	4	Numeric	97	100	Maximum permissible total weight including payload, according to ISO 1176. 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.	TSP	Right	Optional	Zeros ²	Zeros
Valid to	14	Numeric	101	114	YYYYMMDDhhmmss UTC. Used to inactivate an OBE. AutoPASS IP will inactivate the OBE at the time of reception of the HGV, alternatively at the time of the time stamp, should it be set for a future date. Note: This is not the ExpiryDate personalized in the OBE	TSP	Right	Optional	Zeros ²	Zeros
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 as described. The position/s of separator/s from 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.	TSP	Right	Optional	Zeros	Zeros
Filler	11	AlphaN	117	127	Reserved for future use, filled with Zeros.	TSP	Right	Mandatory	Not Applicable	Zeros
End of Record	1	AlphaN	128	128	End of line	Generation	Left	Mandatory	Not Applicable	
Footer										
Register Identifier	1	Numeric	1	1	"2"=Footer	Generation	Right	Mandatory	Not Applicable	Zeros
Filler	62	AlphaN	2	63	Reserved for future use, filled with Zeros	Generation	Left	Mandatory	Not Applicable	Zeros
End of Footer	1	AlphaN	64	64	End of line	Generation	Left	Mandatory	Not Applicable	

1.3 Whitelist Format (Version 500001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Adjusted	Mandatory/Optional	Value if Nothing	Padding
Header										
Register Identifier	1	Numeric	1	1	"0"=Header	Generation	Right	Mandatory	Not Applicable	Zeros
Sender Identifier	6	AlphaN	2	7	6 digit identifier of the Company having created this file.	Generation	Left	Mandatory	Not Applicable	Zeros
Receiver Identifier	6	AlphaN	8	13	6 digit identifier of the Company intended as receiver of this file.	Generation	Left	Mandatory	Not Applicable	Zeros
List Sequence	19	AlphaN	14	32	HGVxxxxxxYYYYMMDDSS	Generation	Left	Mandatory	Not Applicable	Zeros
Previous File Sequence	19	AlphaN	33	51	HGVxxxxxxYYYYMMDDSS (HGV0000000000000000 if first)	Generation	Left	Mandatory	Not Applicable	Zeros
Moment of activation	14	Numeric	52	65	It is not possible to state a future moment of activation. As it is only possible to use immediate activation, this field must be filled with zeros.	Generation	Right	Mandatory	Not Applicable	Zeros
Number of records	15	Numeric	66	80	Number of records (lines) in the Body	Generation	Right	Mandatory	Not Applicable	Zeros
Moment of creation	14	Numeric	81	94	YYYYMMDDhhmmss UTC	Generation	Right	Mandatory	Not Applicable	Zeros
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.	Generation	Left	Mandatory	Not Applicable	Zeros
Filler	27	AlphaN	101	127	Reserved for future use, filled with Zeros	Generation	Left	Mandatory	Not Applicable	Zeros
End of header	1	AlphaN	128	128	End of line	Generation	Left	Mandatory	Not Applicable	
Body										
Register Identifier	1	Numeric	1	1	"1"=Body	TSP	Right	Mandatory	Not Applicable	Zeros
Actor ID – TSP 1)	6	AlphaN	2	7	6 digits identifier of the Company having issued this OBE according to ISO 14816	TSP	Left	Mandatory	Not Applicable	Blanks
Shadow TSP	6	AlphaN	8	13	6 digits Actor ID of the TSP which acts as shadow TSP for this OBE if issued by a different TSP (Only one TSP shall act as shadow TSP for each OBE) Not in use	TSP	Left	Optional	Blanks	Blanks
Personal Account Number	19	AlphaN	14	32	PAN Number. Shall be unique.	TSP	Left	Mandatory	Not Applicable	Blanks
License Plate number 1)	10	AlphaN	33	42	Licence Plate number of the vehicle (without spaces or other separators in between regular characters). Mandatory for all vehicles in Norway.	TSP	Left	Mandatory	Not Applicable	Blanks
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...) http://www.iso.org/iso/english_country_names_and_code_elements Left justified, spaces to the right. Mandatory for all vehicles in Norway	TSP	Left	Mandatory	Not Applicable	Blanks
Tariff Classification	2	AlphaN	46	47	Specific vehicle class applied for tariff calculation, see Table 1. Byte 1: Classification code according to EU standard Byte 2: Classification code according to national standard having created this information. This means the local Norwegian class. For valid combinations see Table 1 – HGV/TIF Values for "Tariff Classification".	TSP	Left	Mandatory	Not Applicable	Blanks
VehicleClass	1	Numeric	48	48	As personalized in the OBE – UNECE vehicle classes	TSP	Right	Optional	Blanks	Zeros

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Adjusted	Mandatory/Optional	Value if Nothing	Padding
Number of axels	1	Numeric	49	49	Personalized number of axels of the tractor unit as in the OBE	TSP	Right	Optional	Blanks	Zeros
Context mark	12	AlphaN	50	61	ContractProvider + TypeOfContract + ContextVersion according to ISO 14906. 3+2+1 bytes represented as 6+4+2 in Hex. E.g. "30C00B"+"0005"+"03" = "30C00B000503" (Oslofjordtunnelen)	TSP	Left	Mandatory	Blanks	Blanks
OBE ID	18	AlphaN	62	79	ContractProvider + ManufacturerId + EquipmentOBUId acc. to ISO 14906 3+2+4 bytes represented as 6+4+8 in Hex e.g. "30C00B" + "0012" + "22070321" = "30C00B001222070321". EquipmentOBUId: The value of attribute ID 24 from the application element of the OBE.	TSP	Left	Mandatory	Blanks	Blanks
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 - HGV Values for "Emission class".	TSP	Left	Mandatory	Zeros	Blanks
TSP product code	6	AlphaN	86	91	TSP code for use in Norway. The two first characters indicate the 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 power only. Y=Yes, N=No or unknown.	TSP	Left	Mandatory	Zeros	Blanks
Engine Characteristics	3	Numeric	92	94	Personalized Engine Characteristics (according to ISO 14906:2011). 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"	TSP	Left	Optional	Zeros ²	Zeros
CO2 (CopValue)	2	Numeric	95	96	Personalized carbon dioxide pollution values (according to ISO 14906:2011). The TSP is obligated to state only verified CO2 values in the HGV list.	TSP	Left	Optional	Zeros ²	Zeros
VehicleMaxLadenWeight	4	Numeric	97	100	Maximum permissible total weight including payload, according to ISO 1176. 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.	TSP	Right	Optional	Zeros ²	Zeros
Valid to	14	Numeric	101	114	YYYYMMDDhhmmss UTC. Used to inactivate an OBE. AutoPASS IP will inactivate the OBE at the time of reception of the HGV, alternatively at the time of the time stamp, should it be set for a future date. Note: This is not the ExpiryDate personalized in the OBE	TSP	Right	Optional	Zeros ²	Zeros
LPNseperator	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 as described. The position/s of separator/s from 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.	TSP	Right	Optional	Zeros	Zeros
Filler	11	AlphaN	117	127	Reserved for future use, filled with Zeros.	TSP	Right	Mandatory	Not Applicable	Zeros
PAN Replaced	19	AlphaN	128	146	ID of old PAN to be replaced. The new PAN must be given in pos. 14 - 32. The TSP is only allowed to replace their own PANs.	TSP	Right	Optional	Zeros	Zeros
End of Record	1	AlphaN	147	147	End of line	Generation	Left	Mandatory	Not Applicable	

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Adjusted	Mandatory/Optional	Value if Nothing	Padding
Footer										
Register Identifier	1	Numeric	1	1	"2"=Footer	Generation	Right	Mandatory	Not Applicable	Zeros
Number of active agreements	8	Numeric	2	9	The total number of agreements that the TSP has registered with AutoPASS. Used for quality control.	Generation	Right	Optional	Zeros	
Filler	54	AlphaN	10	63	Reserved for future use, filled with Zeros	Generation	Left	Mandatory	Not Applicable	Zeros
End of Footer	1	AlphaN	64	64	End of line	Generation	Left	Mandatory	Not Applicable	

- 1) Each TSP may not enter a licence plate more than once. For the LPN only latinAlphabetNo1 and upper case letters, numbers (without any spaces and hyphens!) shall be used. Non Latin-1 characters may be coded as lower case letters applying a translation table acc. to ISO140906:2011, Annex E. Allowed Characters are specified in Table 4 and Table 5.
- 2) AutoPASS IP Validates the content of these fields to only contain Zeros if Data is not included. Therefore these fields are an exception to the general rule for blanks representing no value.

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			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	4	Heavy Goods Vehicles up to 12 T (UNECE class N 2)	1	Large vehicle (>3.5 T)
41	Truck above 3.5 T and below or equal to 12 T			4	Electrical Vehicle zero emission
44	Truck above 3.5 T and below or equal to 12 T – Electrical zero emission	5	Group 5 - Heavy Goods Vehicles over 12 T (UNECE class N 3)	1	Large vehicle (>3.5 T)
51	Truck above 12 T			4	Electrical Vehicle zero emission
54	Truck above 12 T – Electrical zero emission	6	Group 6 – Motorcycles (UNECE class L)	3	Motorcycle not charged in Norway
63	Motorcycle			1	Large vehicle (>3.5 T)
71	Other Vehicle	7	Group 7 - Other vehicles including vehicles above 3,5 T not included in previous groups		

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

- 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.

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/DAmD1:2019 (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	Gass	LPG	5
05	Electric	Battery -- vehicle powered exclusively by battery	6
05	Electric	Solar	7
02		Hybrid -- kept for legacy compatibility, more differentiated values are available	8
06	Hydrogen	Hydrogen	9
02		* multi-fuel -- Multi-fuel engine	10*
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*

Fuel Type in TSP Product Code Usage for Norway (HGV only)		Engine Characteristics According ISO 14906:2011 and *ISO 14906:2018/DAmD1:2019 (HGV and OBE)	
Fuel Type	Description	Description	Engine Characteristics
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*
01		* hybrid-petrol-external-battery -- hybrid drive with petrol and external chargeable battery (plug-in hybrid)	30*
02		* 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*

Fuel Type in TSP Product Code Usage for Norway (HGV only)		Engine Characteristics According ISO 14906:2011 and *ISO 14906:2018/DAmD1:2019 (HGV and OBE)	
Fuel Type	Description	Description	Engine Characteristics
02		* dual-fuel-LNG-diesel -- dual operation with LNG and diesel	45*
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*
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"

* according to proposal of ISO 14906:2018/DAmD1:2019

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	£	¤	¥	ı	§	¨	©	ª	«	¬	SHY	®	-
Bx	°	±	²	³	´	µ	¶	·	,	ı	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
À	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
Ь	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
Б	U+0411	v
Ш	U+0428	w
Ж	U+0416	x
У	U+0423	y
Ž	U+017D	z
Ð	U+00D0	ä
Ć	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 HGC - Whitelist Confirmation (HGV Confirmation) file

2.1 Description

Each time the AP Hub 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 specifications. If the AP Hub detects any errors, an alarm or an e-mail is sent to the TSP. A confirmation file (HGC) is produced and sent back to the TSP when the file is accepted or partially 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 failure.

In case of partial acceptance, the HGC file points to the rejected line(s) and states the reason for the rejection(s).

Format of filename HGCxxxxxxYYYYMMDDSS_zzzzzz_vvvvvv (33 Characters)

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

- xxxxxx = Identifier of the sender of the HGC register confirmation (6 characters), that means the id of the AutoPASS IP.
- YYYYYY = Year (4 characters) of production of the file
- MM = Month (2 characters) of production of the file
- DD = Date (2 characters) of production of the file
- 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 = Format Version. Shall be the same as used in the cooresponding HGV.

2.2 HGC File Format (Versions 120001/220001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Adjusted	Mandatory/Optional	Value if Nothing	Padding
Header										
Register Identifier	1	Numeric	1	1	"0"=Header	Generation	Right	Mandatory	Not Applicable	Zeros
Sender Identifier	6	AlphaN	2	7	6 digits identifier of the Company having created this file.	Generation	Left	Mandatory	Not Applicable	Blanks
Receiver Identifier	6	AlphaN	8	13	6 digits identifier of the Company intended as receiver of this file.	Generation	Left	Mandatory	Not Applicable	Blanks
List Received	19	AlphaN	14	32	HGVxxxxxxYYYYMMDDSS	Generation	Left	Mandatory	Not Applicable	Blanks
Date of reception	14	Numeric	33	46	YYYYMMDDhhmmss Timestamp (UTC) of when the file "List Received" was received.	Receiver	Right	Mandatory	Not Applicable	Zeros
Number of records Accepted	15	Numeric	47	61		Receiver	Right	Mandatory	Not Applicable	Zeros
Number of records Rejected	15	Numeric	62	76		Receiver	Right	Mandatory	Not Applicable	Zeros
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.	Generation	Left	Mandatory	Not Applicable	Zeros
Filler	25	AlphaN	83	107	Reserved for future use, filled with Zeros	Generation	Left	Mandatory	Not Applicable	Zeros
File acceptance	2	AlphaN	108	109	Code for acceptance or rejection of received HGV list: 00: Full acceptance (all records OK) 01: Partial acceptance (AutoPASS IP only accepts correct data)	Generation	Left	Mandatory	Not Applicable	Zeros
End of header	1	AlphaN	110	110	End of line		Left	Mandatory	Not Applicable	

AP-3.1 Whitelist Formats – HGV/HGC versions 120001, 220001 and 500001 - v2.01

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Adjusted	Mandatory/Optional	Value if Nothing	Padding
Body										
Register Identifier	1	Numeric	1	1	"1"=Body		Right	Mandatory for Rejections *	Blanks	Zeros
Copy of HGV body line	126	AlphaN	2	127	For each rejected body line, the data between Register Identifier and End of Record (not including) from the HGV list is copied and inserted in this position. There will be one line in the HGC for each rejected line of the HGV.		Left	Mandatory for Rejections *	Not Applicable*	
Reason of rejection of line	2	Numeric	128	129	Code of rejection: "01" Duplicate entry" "02" PAN number not valid (Luhn code) "03" Number of digits in PAN not correct "04" PAN number or context mark not within TSPs range "05" OBE is not valid "06" Nationality of licence plate missing when licence plate is included "07" OBE ID is missing or wrong (Not used in AutoPASS) "08" Context mark missing or wrong "09" Licence plate number / licence plate nationality missing or wrong "10" Number of axels missing or wrong (Not used in AutoPASS) "11" Emission class missing or wrong (Not used in AutoPASS) "12" Miscellaneous	AutoPASS IP	Right	Mandatory for Rejections *	Not Applicable*	
End of Record	1	AlphaN	130	130	End of line		Left	Mandatory for Rejections *	Blanks	
Footer										
Register Identifier	1	Numeric	1	1	"2"=Footer		Right	Mandatory	Not Applicable	Zeros
Filler	62	AlphaN	2	63	Reserved for future use, filled with Zeros		Left	Mandatory	Not Applicable	Zeros
End of Footer	1	AlphaN	64	64	End of line		Left	Mandatory	Not Applicable	

2.3 HGC File Format (Version 500001)

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Adjusted	Mandatory/Optional	Value if Nothing	Padding
Header										
Register Identifier	1	Numeric	1	1	"0"=Header	Generation	Right	Mandatory	Not Applicable	Zeros
Sender Identifier	6	AlphaN	2	7	6 digits identifier of the Company having created this file.	Generation	Left	Mandatory	Not Applicable	Blanks
Receiver Identifier	6	AlphaN	8	13	6 digits identifier of the Company intended as receiver of this file.	Generation	Left	Mandatory	Not Applicable	Blanks
List Received	19	AlphaN	14	32	HGVxxxxxxYYYYMMDDSS	Generation	Left	Mandatory	Not Applicable	Blanks
Date of reception	14	Numeric	33	46	YYYYMMDDhhmmss Timestamp (UTC) of when the file "List Received" was received.	Receiver	Right	Mandatory	Not Applicable	Zeros
Number of records Accepted	15	Numeric	47	61		Receiver	Right	Mandatory	Not Applicable	Zeros
Number of records Rejected	15	Numeric	62	76		Receiver	Right	Mandatory	Not Applicable	Zeros
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.	Generation	Left	Mandatory	Not Applicable	Zeros
Filler	25	AlphaN	83	107	Reserved for future use, filled with Zeros	Generation	Left	Mandatory	Not Applicable	Zeros
File acceptance	2	AlphaN	108	109	Code for acceptance or rejection of received HGV list: 00: Full acceptance (all records OK) 01: Partial acceptance (AutoPASS IP only accepts correct data)	Generation	Left	Mandatory	Not Applicable	Zeros
End of header	1	AlphaN	110	110	End of line		Left	Mandatory	Not Applicable	
Body										
Register Identifier	1	Numeric	1	1	"1"=Body		Right	Mandatory for Rejections *	Blanks	Zeros
Copy of HGV body line	126	AlphaN	2	146	For each rejected body line, the data between Register Identifier and End of Record (not including) from the HGV list is copied and inserted in this position. There will be one line in the HGC for each rejected line of the HGV.		Left	Mandatory for Rejections *	Not Applicable*	
Reason of rejection of line	2	Numeric	147	148	Code of rejection: "01" Duplicate entry" "02" PAN number not valid (Luhn code) "03" Number of digits in PAN not correct "04" PAN number or context mark not within TSPs range "05" OBE is not valid "06" Nationality of licence plate missing when licence plate is included "07" OBE ID is missing or wrong (Not used in AutoPASS) "08" Context mark missing or wrong "09" Licence plate number / licence plate nationality missing or wrong "10" Number of axels missing or wrong (Not used in AutoPASS) "11" Emission class missing or wrong (Not used in AutoPASS) "12" Miscellaneous	AutoPASS IP	Right	Mandatory for Rejections *	Not Applicable*	
End of Record	1	AlphaN	149	149	End of line		Left	Mandatory for Rejections *	Blanks	

Name	Number of Char.	Type of value	Begin	End	Definition	Origin	Adjusted	Mandatory/Optional	Value if Nothing	Padding
Footer										
Register Identifier	1	Numeric	1	1	"2"=Footer		Right	Mandatory	Not Applicable	Zeros
Filler	62	AlphaN	2	63	Reserved for future use, filled with Zeros		Left	Mandatory	Not Applicable	Zeros
End of Footer	1	AlphaN	64	64	End of line		Left	Mandatory	Not Applicable	

*The body is only filled in case of rejected lines in the HGV list.

- 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 the header, format errors in header/footer, mandatory information is not specified, number of records is not the same as specified in the header, or format errors in the body.
- In case of rejection of a complete HGV file, no HGC shall be sent. An alarm with the reason for rejection will be generated.