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Federal Roads Office ASTRA

Vehicle data information products
Overview

Version date: 4 Oct. 2019, subject to change.

1. Standard data records with unrestricted access (Open Data)

Designation	Content	Intended users, function	Access restrictions	Updates	Versions	Explanation	Location	Description	No.
TYP	totals by model (especially antiques and collectors' vehicles)	collectors, dealers, vehicle owners; totals for specified make and model of vehicles (collector's items), heritage management	open data	~quarterly	TYP_MOTO.pdf	Aggregate overview table	www.ivz-fahrzeuge.ch	in data record	1.
					TYP_MOTO-SEITENWAGEN.pdf				2.
					TYP_AUTO.pdf				3.
					TYP_WOHNWAGEN				4.
					TYP_GUETERTRANS.pdf				5.
					TYP_BAUSTELLE.pdf				6.
					TYP_BUS.pdf				7.
					TYP_TRAKTOR.pdf				8.
TYP_ROH					TYP_ROH_A-G.xlsx	raw data record		data records by make description: see below	9.
					TYP_ROH_H-M.xlsx				10.
					TYP_ROH_N-R.xlsx				11.
					TYP_ROH_S-V.xlsx				12.
					TYP_ROH_W-Z.xlsx				13.
STNR	list of master numbers	manufacturers, importers; obtain the number of new registrations (for	open data	~oft	single data record	raw data record	www.ivz-fahrzeuge.ch	master numbers for all vehicles that received initial authorization in CH or PL since the start of the year	14.
CO$_2$	CO2 data	major and minor importers, emissions pools, carbon trading schemes; monitoring CO2 emissions	open data	biweekly	single data record	raw data record	www.ivz-fahrzeuge.ch	master numbers with CO2 data description: see below model approval owner code: may be provided at the request of the importer	15.

Designation	Content	Intended users, function	Access restrictions	Updates	Versions	Explanation	Location	Description	No.
NEUZU_W	new registrations, weekly	automobile trade; short-term market trends, raw data	open data	weekly	single data record, Excel file	aggregate overview table and raw data records	www.ivz-fahrzeuge.ch	provisional data, not suitable for statistical purposes description: see data record	16.
NEUZU	new registrations	general statistics	open data	monthly	single data record	raw data record, all vehicles	www.ivz-fahrzeuge.ch	limited location information provided: first two digits of postal code description: see below GEBR: vehicles first registered in a country other than Switzerland or the PL.	17.
BEST	totals	general statistics	open data	monthly	BEST.txt				18.
					BEST_ANH.txt	~Anhänger			19.
					BEST_MOTO.txt	~Motorrad			20.
					BEST_ANDERE.txt	~Andere			21.
GEBR	imported used vehicles	general statistics	open data	monthly	single data record	all vehicles			22.

2. Fee-based standard data records

Designation	Content	Intended users, function	Access restrictions	Updates	Versions	Explanation	Location	Description	No.
KS_TYP	number plate / vehicle model data	web portals, car trade; matching vehicle model to number plate	registered user account	monthly	single data record	raw data record	protected. test data records: www.ivz-fahrzeuge.ch	description: see below	23.
STNR_TYP	master number / vehicle model data	matching vehicle model to master number		monthly	single data record				24.
NEUZU_R	new registrations / postal code	general statistics	registered user account	monthly	single data record	raw data record	protected. test data records: www.ivz-fahrzeuge.ch	with location information (geographical) description: see below	25.
BEST_R	vehicle totals / postal code			monthly	single data record				26.

3. Fee-based data access

Designation	Content	Intended users, function	Access restrictions	Updates	Versions	Explanation	Location	Description	No.
DWH	data warehouse VAIS vehicle data	data services; generation of studies and data excerpts, data distributions	registered user account, personal access	biweekly	tool: SAP Business Objects 4.2	DWH access		description: see below	27.

4. Fee-based analysis and customized raw data records

Designation	Content	Intended users, function	Access restrictions	Updates	Versions	Explanation	Location	Description	No.
	analysis, customized studies	research projects, technical agencies, federal authorities, trade and commerce; research purposes	registration for user account may be required	as required			protected or www.ivz-fahrzeuge.ch		28.

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Vehicle data information products
**Number in circulation (BEST), new registrations (NEUZU)
and used vehicle imports (GEBR)**

Version date: 4 Oct. 2019, subject to change.

Data record	Contents	Layout; format; remarks
BEST **BEST_R**	All vehicles in circulation (Switzerland and FL on a given date). Data based on specified date.	Every row in the data record represents the data of a specific vehicle; Txt file, line-separated;
BEST_ANH	as for BEST, but only trailers	BEST and BEST_R have over one million lines. Other files will be shorter. They can be copied directly into an Excel file for further processing.
BEST_MOTO	as for BEST, but only vehicle models 060 to 068	
BEST_ANDERE	as for BEST, but only vehicle models 002-024, 035-052, 080-084	**Suffix _R:** Data record with geographical information down to the postal code (PLZ)
NEUZU **NEUZU_R**	New registrations for vehicles in Switzerland or PL. Not for vehicles with a first-time authorization for another country. Results for January will give total authorization for the previous calendar year. All other months will give total authorizations since the start of the current year. Data based on the query date.	Overview of vehicle categories: see below
GEBR	Imported used vehicles, i.e. vehicles that had their initial authorization in a country other than Switzerland and PL, and were authorized for Swiss roads for the first time during the current year.	

Data_fields_within_the_data_record:

Data_field	Explanation	BEST BEST_ANH BEST_MOTO BEST_ANDERE	BEST_R	NEUZU	NEUZU_R	GEBR
1. Fahrzeugklasse	Vehicle_class: European vehicle segment	✓	✓	✓	✓	✓
2. Fahrzeugart_Code	Vehicle_category: Swiss vehicle classification, item 19 in the vehicle registration certificate	✓	✓	✓	✓	✓
3. Fahrzeugart		✓	✓	✓	✓	✓
4. Marke_Code	Make_code: Official make code, based on country and manufacturer	✓	✓	✓	✓	✓
5. Marke	Make: Vehicle make	✓	✓	✓	✓	✓
6. Marke_und_Typ	Make_and_model: Make and precise model of vehicle as per model authorization or description provided by the traffic expert. Item 21 in the vehicle registration certificate.	✓	✓	✓	✓	✓
7. Typ1	model1-4: Excerpted data from the "Make"	✓	✓	✓	✓	✓
8. Typ2	and "Make and model" fields.	✓	✓	✓	✓	✓
9. Typ3	Removes make information and separates model designation at spaces.	✓	✓	✓	✓	✓
10. Typ4		✓	✓	✓	✓	✓
11. Typengenehmigungs-Nr	Model_approval_number: Number of the model approval for Switzerland, also called certificate of conformity. For direct imports: X or blank; parallel imports: .X….; imports authorized by the manufacturer: all other letters.	✓	✓	✓	✓	✓
12. Typengenehmigungs-Nr_Zusatz	Model_approval_number_suffix: M: Vehicle with technical modifications from the model that was approved C: Vehicle category changed from that shown for the model approval number X: Exempt from model approval but corresponds to an existing model approval Y: Combination of X+M or X+C	✓	✓	✓	✓	✓
13. Karosserieform_Code	Body_type: Body type code	✓	✓	✓	✓	✓
14. Karosserieform	Item 25 in the vehicle registration certificate.	✓	✓	✓	✓	✓
15. Farbe	Colour: Dominant colour scheme, up to three colours, item 26 in the vehicle	✓	✓	✓	✓	✓
16. Farbe_Zusatz	Colour_details: e.g. metallic	✓	✓	✓	✓	✓

Bestände (BEST), Neuzulassungen (NEUZU), Gebrauchimporte (GEBR)

#	Field	Description					
17.	Sitzplätze	Number_of_seats: Number, as per item 27 in the vehicle registration certificate.	✓	✓	✓	✓	✓
18.	Stzpläte_vorne		✓	✓	✓	✓	✓
19.	Stehplätze	Standing_capacity: Number	✓	✓	✓	✓	✓
20.	Leergewicht	Empty_weight: Item 30 in the vehicle registration certificate [kg].	✓	✓	✓	✓	✓
21.	Nutzlast	Load_capacity: Item 32 in the vehicle registration certificate [kg].	✓	✓	✓	✓	✓
22.	Gesamtgewicht	Loaded_weight: Item 33 in the vehicle registration certificate [kg].	✓	✓	✓	✓	✓
23.	Gesamtzugsgewicht	Total_traction_load: Item 35 in the vehicle registration certificate [kg].	✓	✓	✓	✓	✓
24.	Anhängelast	Trailer_load_capacity: Item 31 in the vehicle registration certificate [kg].	✓	✓	✓	✓	✓
25.	Dachlast	Roof_load_capacity: Item 55 in the vehicle registration certificate [kg].	✓	✓	✓	✓	✓
26.	Tankinhalt_Aufbau	Capacity_of_cargo_tank: E.g. for tanker trucks.	✓	✓	✓	✓	✓
27.	Hubraum	Capacity: Item 37 in the vehicle registration certificate [cc].	✓	✓	✓	✓	✓
28.	Zylinder	Cylinders: Number	✓	✓	✓	✓	✓
29.	Leistung	Engine_power: [kW]. For hybrid vehicles, the higher of the fitted motor/engine power power. Item 76 in the vehicle registration certificate.	✓	✓	✓	✓	✓
30.	Motorkennzeichen	Engine_identification_letter	✓	✓	✓	✓	✓
31.	Treibstoff_Code	Fuel_code	✓	✓	✓	✓	✓
32.	Treibstoff	Fuel	✓	✓	✓	✓	✓
33.	CO2	CO2 emissions in g/km.	✓	✓	✓	✓	✓
34.	Emissionscode	Emissions_code: Swiss emissions code. Item 72 in the vehicle registration	✓	✓	✓	✓	✓
35.	Energieeffizienzkategorie	Energy_efficiency_category: Current category, not the category on first	✓	✓	✓	✓	✓
36.	Getriebe_Code	Gearbox type (not how gears are shifted).	✓	✓	✓	✓	✓
37.	Getriebe		✓	✓	✓	✓	✓
38.	Getriebe_Detailcode	Gearbox_details_Code: Code for gearbox type and mode of operation. First character: gearbox type (A=automatic, M=manual, S=shiftless, H=hydrostatic). Number: number of gear speeds. Other characters: mode or other design features (A=automatic mode; M=int., manual change or speeds for shiftless gearbox, S=shiftless manual shift).	✓	✓	✓	✓	✓
39.	Antrieb_Code	Drive_code	✓	✓	✓	✓	✓
40.	Antrieb	Drive: Off-road capability declared as per art. 12 of the Ordinance on Technical Requirements for Road Vehicles (VTS).	✓	✓	✓	✓	✓
41.	Achsen	Axles: Number	✓	✓	✓	✓	✓
42.	Erstinverkehrsetzung_Jahr	Date of first registration of vehicle.	✓	✓	✓	✓	✓
43.	Erstinverkehrsetzung_Monat	For imported used vehicles: date for that country.	✓	✓	✓	✓	✓
44.	Erstinverkehrsetzung_Kanton	First_registration_canton	✓	✓	✓	✓	✓
45.	Erstinverkehrsetzung_Staat	First_registration_country: If Switzerland: leave blank	✓	✓	✓	✓	✓
46.	Gebrauchtcode	Used_vehicle_code: A=imported used vehicle, date of first registration in country of origin known; G=First registration was in Switzerland, used vehicle operated for >20 hours or >2000 km *or* Date of first registration in country of origin not known.	✓	✓	✓	✓	✓
47.	Ersterfassungsdatum_Jahr	Swiss_registration_year/month: Date vehicle was registered in Switzerland, used only for vehicles that were imported in used condition.	(✓)	(✓)			✓
48.	Ersterfassungsdatum _Monat		(✓)	(✓)			✓
49.	Schildfarbe_Code	Colour of number plate	✓	✓	✓	✓	✓
50.	Schildfarbe		✓	✓	✓	✓	✓
51.	Schildart Code	Type of number plate	✓	✓	✓	✓	✓
52.	Schildart		✓	✓	✓	✓	✓
53.	Inverkehrsetzung_Status_Code	Registration_status_Code:I=registered;A= not registered	✓	✓	✓	✓	✓

Bestände (BEST), Neuzulassungen (NEUZU), Gebrauchimporte (GEBR)

#	Field	Description					
54.	Inverkehrsetzung_Kanton	Registration_canton: Current canton of registration (as shown on number plate).	✓	✓	✓	✓	✓
55.	PLZ	Postal_code, Location,	two digits	✓	two	✓	two digits
56.	Ort	BFS_municipal_number, Country_Code, Country:		✓		✓	
57.	BFS-Gemeinde-Nr	If given: vehicle location.		✓		✓	
58.	Staat_Code	otherwise: location of current or last known	✓	✓	✓	✓	✓
59.	Staat	owner. Muncipal number issued by statistics office (BFS): postal code indication (approximate). Foreign address: typically used for temporary plates (e.g. for vehicle delivery).	✓	✓	✓	✓	✓
60.	Halterart_Code	Owner_category		✓		✓	
61.	Halterart			✓		✓	
62.	Altersklasse_Halter	Owner_age_group: Age rounded down to whole years, then allocated to ten-year age		✓		✓	
63.	Besondere_Verwendung_Code	Special_use: Item 17 in the vehicle		✓		✓	
64.	Besondere_Verwendung	registration certificate.		✓		✓	

Vehicle category as per data record

Vehicle category		approximate number on the road (=number of rows in BEST data record)	BEST BEST_R NEUZU NEUZU_R	BEST _ANH	BEST _MOTO	BEST _ANDER	GEBR
001 Passenger car	Personenwagen	4 600 000	✓				✓
002 Heavy passenger car	Schwerer Personenwagen	620	✓			✓	✓
010 Light motor vehicle	Leichter Motorwagen	55 000	✓			✓	✓
011 Heavy motor vehicle	Schwerer Motorwagen	5 300	✓			✓	✓
020 Coach or bus	Gesellschaftswagen	7 200	✓			✓	✓
021 Minibus	Kleinbus	6 200	✓			✓	✓
022 Articulated bus	Gelenkbus	1 800	✓			✓	✓
024 Articulated trolley bus	Gelenktrolleybus	320	✓			✓	
030 Delivery vehicle	Lieferwagen	380 000	✓				✓
035 Goods truck (lorry)	Lastwagen	49 000	✓			✓	✓
036 Light articulated vehicle	Leichtes Sattelmotorfahrzeug	6	✓			✓	✓
037 Heavy articulated vehicle	Schweres Sattelmotorfahrzeug	66	✓			✓	✓
038 Articulated truck (lorry)	Sattelschlepper	12 000	✓			✓	✓
042 Tow tractor	Traktor	5 000	✓			✓	✓
043 Farm tractor	Landwirt. Traktor	140 000	✓			✓	✓
050 Utility	Arbeitsmaschine	16 000	✓			✓	✓
051 Industrial utility vehicle	Arbeitskarren	32 000	✓			✓	✓
052 Farm utility vehicle	Landw. Arbeitskarren	9 700	✓			✓	✓
060 Motorcycle	Motorrad	650 000	✓		✓		✓
061 Small motorcycle	Kleinmotorrad	21 000	✓		✓		✓
062 Three-wheel motorcycle	Motorrad-Dreirad	570	✓		✓		✓
063 Motorcycle sidecar	Motorrad-Seitenwagen	3 000	✓		✓		✓
064 Small three-wheel motorcycle	Kleinmotorrad-Dreirad	6 800	✓		✓		✓
065 Lightweight ATV	Leichtmotorfahrzeug	150	✓		✓		✓
066 Small ATV	Kleinmotorfahrzeug	16 000	✓		✓		✓
067 Three-wheel ATV	Dreirädr. Motorfahrzeug	3 500	✓		✓		✓
068 Snowmobile	Motorschlitten	1 200	✓		✓		✓
080 Motor cart	Motorkarren	22 000	✓			✓	✓
081 Farm motor cart	Landw. Motorkarren	33 000	✓			✓	✓
082 Powered wheelbarrow	Motoreinachser	280	✓			✓	✓
083 Walk-behind tractor	Landw. Motoreinachser	8 200	✓			✓	✓
084 Farm ATV	Landw. Kombinations-Fahrzeug	32	✓			✓	✓
085 Farm trailer	Landw. Anhänger	12 000	✓	✓			✓
086 Motorcycle trailer	Motorradanhänger	6 500	✓	✓			✓
087 Farm utility trailer	Landw. Arbeitsanhänger	8 000	✓	✓			✓
088 Caravan semitrailer	Sattel-Wohnanhänger	120	✓	✓			✓
089 Semitrailer	Sattel-Anhänger	120	✓	✓			✓
090 Cargo trailer	Sachentransportanhänger	290 000	✓	✓			✓
091 Passenger trailer	Personentransportanhänger	100	✓	✓			✓
092 Caravan	Wohnanhänger	34 000	✓	✓			✓
093 Sport trailer	Sportgeräteanhänger	21 000	✓	✓			✓
094 Utility trailer	Arbeitsanhänger	48 000	✓	✓			✓
095 Cargo semitrailer	Sattel-Sachentransportanhänger	18 000	✓	✓			✓
097 Sport semitrailer	Sattel-Sportgeräteanhänger	26	✓	✓			✓
098 Utility semitrailer	Sattel-Arbeitsanhänger	210	✓	✓			✓
099 Trailer	Anhänger	6 400	✓	✓			✓

Bestände (BEST), Neuzulassungen (NEUZU), Gebrauchimporte (GEBR)

Vehicles counted, by used vehicle code and first registration country:

Gebrauchtcode Used vehicle code	Erstinverkehrsetzung_Staat First registration country	BEST BEST_ANH BEST_MOTO BEST_ANDERE BEST_R	NEUZU NEUZU_R NEUZU_W	GEBR
empty	empty	✓	✓	
empty	PL	✓	✓	
empty	neither empty nor PL	✓		✓
G	empty	✓		✓
G	PL	✓		✓
G	neither empty nor PL	✓		✓
A	empty	✓		✓
A	PL	✓	✓	
A	neither empty nor PL	✓		✓

Bestände (BEST), Neuzulassungen (NEUZU), Gebrauchimporte (GEBR)

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Vehicle data information products
**Vehicle model data by number plate
or master number**

Version date: 4 Oct. 2019, subject to change.

Data record	Data content	Layout; format; conditions
KS_TYP **STNR_TYP**	KS_TYP: All vehicles legally on the road, except antiques (reason: portable number plates can be used on unlimited number of vehicles) STNR_TYP: All vehicles currently on the road or taken out of circulation less than five years ago. Data current as of given date.	Each row in the data record gives the data for a specific vehicle; Column-separated TXT file; It is forbidden to cross-link the data in records KS_TYP and STNR_TYP, in particular, to link number plate and master number.

Data field	Explanation	KS_TYP	STNR_TYP
1. Stamm-Nr	Master_number: Unique vehicle number in the registry. Not on vehicle. Eight-digit number with a ninth digit for the checksum. Item 18 in the vehicle registration certificate.		✓
2. Wechselschild	changeable plate: Several vehicles are registered for this plate.	✓	
3. Schildkanton	Plate_canton, Plate_number, Plate_colour, Plate_type: These four pieces of information together are required to specify a number plate. Thus, within any given canton a single number may be assigned more than once.	✓	
4. Schild-Nr		✓	
5. Schildfarbe		✓	
6. Schildart		✓	
7. Marke	Make: Make of the vehicle	✓	✓
8. Marke_und_Typ	Make_and_model: Make and model of vehicle as per model approval, or as specified by traffic expert. Item 21 in the vehicle registration certificate.	✓	✓
9. Typengenehmigungs-Nr	Model_approval_number: Number of the model approval for Switzerland, also called certificate of conformity. For direct imports: X or blank; parallel imports: .X....; imports authorized by the manufacturer: all other letters.	✓	✓
10. Fahrzeugart_Code	Vehicle_category: Swiss vehicle classification, item 19 in the vehicle registration certificate	✓	✓
11. Fahrzeugart		✓	✓
12. Fahrzeugklasse	Vehicle_class: European classification	✓	✓
13. Erstinverkehrsetzung_Jahr	Date_of_first_registration_year/month: Date of first registration of vehicle. For imported used vehicles: date for that country.	✓	✓
14. Erstinverkehrsetzung_Monat		✓	✓
15. Farbe	Colour: Dominant colour scheme, up to three colours, item 26 in the vehicle registration certificate.	✓	
16. Getriebe_Code	Gearox_Code: gearbox type (not how gears are shifted).	✓	✓
17. Getriebe_Detailcode	Gearbox_details_Code: Code for gearbox type and mode of operation. First character: gearbox type (A=automatic, M=manual, S=shiftless, H=hydrostatic). Number: number of gear speeds. Other numbers: mode or other design features (A=automatic mode; M=int., manual change or speeds for shiftless gearbox; S=clutchless manual shift).	✓	✓

18. Karosserieform_Code	Body_type: Only given for passenger vehicles, delivery vehicles and two-wheeled vehicles.	(✓)	(✓)
19. Karosserieform	Reason: no information on specific configuration for utility vehicles. Item 25 in the vehicle registration certificate.	(✓)	(✓)
20. Antrieb_Code	Gearbox_Code	✓	✓
21. Antrieb	Drive: Off-road capability declared as per art. 12 of the Ordinance on Technical Requirements for Road Vehicles	✓	✓
22. Treibstoff_Code	Fuel_Code	✓	✓
23. Treibstoff	Fuel	✓	✓
24. Hubraum	Capacity: Item 37 in the vehicle registration certificate [ccm].	✓	✓
25. Zylinder	Cylinders: Number	✓	✓
26. Motorkennzeichen	Engine_identification_letter	✓	✓
27. Leistung	Power: Only given if Model_approval_number=X or left blank, otherwise left blank. Reason: no information about power boost. Engine power, in kW. For hybrid vehicles, the higher of the fitted motor/engine power. Item 76 in the vehicle registration certificate.	(✓)	(✓)
28. Emissionscode	Emissions_code: Swiss emissions code. Item 72 in the vehicle registration certificate.	✓	✓
29. Fahrgestell-Nr_Teil	Chassis_number_Part: Anonymized chassis number. Masked digits are replaced by periods. VIN: 11 out of 17 digits displayed.	✓	✓

Master number checksum

If a typo occurs when entering the master number, the result is usually an invalid (unallocated) number, and not a mismatched number (wrong vehicle).
Typos can often be detected using the checksum.
The checksum digit that is suffixed to the master number (the ninth digit) is calculated as follows.

Example: suppose the master number is **306285804.**

Calculating the checksum digit

		Weighting	Product
1st digit	**3**	*3*	*3 * 3 = 9*
2nd digit	**0**	*2*	*0 * 2 = 0*
3rd digit	**6**	*7*	*6 * 7 = 42*
4th digit	**2**	*6*	*2 * 6 = 12*
5th digit	**8**	*5*	*8 * 5= 40*
6th digit	**5**	*4*	*5 * 4 = 20*
7th digit	**8**	*3*	*8 * 3 = 24*
8th digit	**0**	*2*	*0 * 2 = 0*
9th digit (checksum)	*147* :11 = 13 rem. **4**		*147* Sum of the products

if remainder is 10, checksum = 0

valid master number	306285804
invalid master numbers (checksum wrong):	306285800
	306285801
	306285802
	306285803
	306285805
	306285806
	306285807
	306285808
	306285809

KS_TYP, STNR_TYP

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Vehicle data information products
TYP_ROH, Vehicle totals by type

Version date: 4 Oct. 2019, subject to change.

Data record	Explanation	Layout; format
TYP_ROH_A-G.xlsx **TYP_ROH**_H-M.xlsx **TYP_ROH**_N-R.xlsx **TYP_ROH**_S-V.xlsx **TYP ROH** W-Z.xlsx	All vehicles in circulation. All vehicles taken out of circulation less than five years previously. Data current as of given date (query date).	Each row in the data record gives the data for a specific vehicle; data records are grouped by the first letter of the make; Excel file.

	Data field	Explanation
1.	Fahrzeugart_Code	Vehicle_category: Swiss vehicle classification, item 19 in the vehicle registration certificate
2.	Fahrzeugart	
3.	Marke	Vehicle make
4.	Marke_und_Typ	Make_and_model: Make and precise model of vehicle as per model authorization or description provided by the traffic expert. Item 21 in the vehicle registration certificate.
5.	Typengenehmigungs-Nr	Model_approval_number: Number of the model approval for Switzerland, also called certificate of conformity. For direct imports: X or blank; parallel imports: .X….; imports authorized by the manufacturer: all other letters.
6.	Fahrgestell-Nr_Teil	Chassis_number_Part: Anonymized chassis number. Masked digits are replaced by periods. VIN: 11 out of 17 digits displayed.
7.	Erstinverkehrsetzung_Jahr	Date_of_first_registration_year: Date of first registration of vehicle. For imported used vehicles: date for that country.
8.	Erstinverkehrsetzung_Staat	First_registration_country: If Switzerland: leave blank
9.	Inverkehrsetzung_Status	Registration_status: Registered, not registered
10.	Ausser_Verkehr_seit	Unregistered_since: For vehicles that have been taken off the registry: date of last day registered.
11.	Sitzplätze	Number_of_seats: Number, as per item 27 in the vehicle registration certificate.
12.	Leistung	Engine_power: In kW. For hybrid vehicles, the higher of the fitted motor/engine power. Item 76 in the vehicle registration certificate.
13.	Zylinder	Cylinders: Number
14.	Treibstoff	Fuel
15.	Hubraum	Capacity: Item 37 in the vehicle registration certificate [cc].

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Vehicle data information products
CO_2

Version date: 4 Oct. 2019, subject to change.

Purpose	Gives all IVZ data that is relevant to the CO2 fee, down to the vehicle level.
Period covered	Covers first-time registrations of newly imported vehicles for the current year, and first-time registration in Switzerland for imported used vehicles, if the value specified in data field "*Duration*" does not exceed 6 (i.e. six months).
Vehicle categories	Passenger car (code 01), delivery vehicle (code 30) and articulated truck (code 38) up to 3.5 tonnes loaded weight.

No responsibility will be assumed for any aspect of the information provided. IVZ vehicle data in general cannot be used to calculate the amount of CO2 emitted by a vehicle fleet or an individual vehicle. The data is provided only for the purposes of a very approximate indication.

	Data field	Description
1.	TG-Inhabercode	model_approval_owner_code: This information is only displayed if requested by the owner of the model approval, otherwise it is left empty.
2.	Stamm-Nr	Master_number: Unique vehicle number in the registry. Not on vehicle. Eight-digit number with a ninth digit for the checksum. Item 18 in the vehicle registration certificate.
3.	Erstinverkehrsetzung_Monat	Date_of_first_registration_month/year: Date of first registration of vehicle.
4.	Erstinverkehrsetzung_Jahr	For imported used vehicles: date for that country.
5.	Typengenehmigung_X	model approval_X: Indicates vehicles with the model approval number X
6.	Gebrauchtcode	Used_vehicle_code: A=imported used vehicle, date of first registration in country of origin known; G=First registration was in Switzerland, used vehicle operated for >20 hours or >2000 km or Date of first registration in country of origin not known
7.	Ersterfassung_Monat	Swiss_registration_month/year: Only used for imported used vehicles (except from PL). Date the vehicle was registered, often corresponds to the date the vehicle was first authorized for road operation in Switzerland.
8.	Ersterfassung_Jahr	
9.	Dauer	Duration: Only used for imported used vehicles (except from PL). The time elapsed from the day the vehicle was first authorized for road operation in the country of origin to the day it was registered in Switzerland, rounded off to the nearest month. May correspond to the length of time the vehicle was registered in the other country. Note: For the purpose of the CO2 fee, what counts is the time from initial approval for road operation in the other country to the day the vehicle was cleared through customs. This information cannot be obtained from the registry data.
10.	Fahrzeugart_Code	Vehicle_category: Swiss vehicle classification, item 19 in the vehicle registration certificate. Vehicle category as per the vehicle registration certificate: either the current one or the most recent one. Note: For the purposes of the CO2 fee, what counts is the vehicle category specified on first registration.
11.	Fahrzeugart	
12.	Fahrzeugklasse	Vehicle_class: European classification
13.	Treibstoff_Code	Fuel_code
14.	Treibstoff	Fuel
15.	CO2	CO2 emissions [g/km].
16.	CO2_erdgaskor	CO2_biogas: The calculation assumes 10% biogas admixture [g/km].
17.	Marke	Make, Make_and_model, Capacity, Model_approval_number, Power: Only given if CO2 value is not present, or if the model approval code is being displayed. Displacement in [cc].
18.	Marke_und_Typ	
19.	Hubraum	
20.	Typengenehmigungs-Nr	Only given if the model approval code is being displayed.
21.	Leistung	Only given if CO2 value has not been recorded. Engine power, in kW. For hybrid vehicles, the higher of the fitted motor/engine power. Item 76 in the vehicle registration certificate.
22.	Leergewicht	Empty_weight: Item 30 in the vehicle registration certificate [kg]. Determines the status for minor importers.
23.	Leergewicht_TG	Empty_weight_TA: Maximum empty weight as per model approval certificate. Determines the status for major importers. Given in [kg].

Vehicle data information products
Data Warehouse for IVZ vehicle data (DWH)

Version date: 4 Oct. 2019, subject to change.

Name	DWH
Updated	Once per two weeks
Data contained	All vehicles in circulation. All vehicles taken out of circulation less than five years previously.
Tool	SAP Business Objects 4.2
Access	Personal, based on a registered user account
Fees	In line with ASTRA fee schedule, CHF 2000 per year per person

Attributes available (at individual vehicle level)

	Groupe	Data field	Explanation
1.	Typidentifikation Model identification	Marke_Code	Make_code: Official code for make, depends on country and manufacturer. Database: MF_MARKE
2.		Marke	Make: Vehicle make Plain language version for database field: MF_MARKE
3.		Marke_und_Typ	Make_and_model: Vehicle make and model, as per model approval certificate or traffic expert decision. Item 21 in the vehicle registration certificate. Database: MF_MAUTY
4.		Fahrgestell-Nr_Teil	Chassis_number_Part: Anonymized chassis number. Masked digits are replaced by periods. VIN: 11 out of 17 digits displayed. Based on database: MF_FAGNR
5.		Typengenehmigungs-Nr	Model_approval_number: Number of the model approval for Switzerland, also called certificate of conformity. For direct imports: X or blank; parallel imports: .X….; imports authorized by the manufacturer: all other letters. Database: MF_TYGNR
6.		Typengenehmigungs-Nr_Zusatz1	Model_approval_number_suffix1: M: Vehicle has modifications not covered under the model approval number. C: Vehicle model differs from model approval. X: Not subject to model approval but corresponds to an approved vehicle model. Y: Combination of X+M or X+C. Database: MF_TYSZ1
7.		Motorkennzeichen	Engine_identification_letter Database: MF_MOTKZ
8.	Inverkehrsetzung Registration	Erstinverkehrsetzung_Jahr	Date_of_first_registration_year: Date of first registration in Switzerland or another country. Based on database: MF_D1IVS
9.		Erstinverkehrsetzung_Monat	Date_of_first_registration_month: Date of first registration in Switzerland or another country. Based on database: MF_D1IVS
10.		Erstinverkehrsetzung_Kanton	First_registration_canton: Canton of first registration Database: MF_KT1IV
11.		Erstinverkehrsetzung_Staat_Code	First_registration_country_Code: Code for country of first registration Database: MF_ST1IV
12.		Erstinverkehrsetzung_Staat	First_registration_country: Country of first registration Plain language version of database field: MF_ST1IV
13.		Gebrauchtcode	Used_vehicle_code: A=imported used vehicle; G=First registration was in Switzerland, used vehicle operated for >20 hours or >2000 km Database: MF_GEBRA

14.		Ersterfassung_Jahr	Swiss_registration_month: Year vehicle was first registered in Switzerland. Only for imported used vehicles. Based on database: MF_KEDAT, MF_GEBRA und MF_ST1IV
15.		Ersterfassung_Monat	Swiss_registration_year: Month vehicle was first registered in Switzerland. Only for imported used vehicles. Based on database: MF_KEDAT, MF_GEBRA und MF_ST1IV
16.		Inverkehrsetzung_Kanton	Registration_canton: Canton of current registration (Kanton des Kontrollschilds).
17.		Inverkehrsetzung_Status_Code	Registration_status_Code I= in circulation; A= out of circulation. Database: MF_IVAVC
18.		Inverkehrsetzung_Status	Registration_status: Plain language version of database field: MF_IVAVC
19.		Ausser_Verkehr_seit_Jahr	Unregistered_since_year: For vehicles no longer registered: year of last date of registration. Based on database: MF_FZAVD und MF_IVAVC
20.		Ausser_Verkehr_seit_Monat	Unregistered_since_month: For vehicles no longer registered: month of last date of registration.
21.		Besondere_Verwendung_Code	Special_use_Code: Item 17 in the vehicle registration certificate. Database: MF_BESVW
22.		Besondere_Verwendung	Special_use: Item 17 in the vehicle registration certificate. Plain language version of database field: MF_BESVW
23.		LSVA_Code	HVC_Code: Mandatory code for HVC reporting (performance-related heavy vehicle charge).
24.	Halter Owner	Halterart_Code	Database: MH_HAART
25.		Halterart	Plain language version of database field: MH_HAART
26.		Altersklasse_Halter	Calculated from birth date and date of last report, rounded off to nearest year and distributed into ten-year categories. Based on database: MH_GEBDA
27.	Fahrzeugeinteilung Vehicle classification	Fahrzeugart_Code	Vehicle_category_Code: Swiss classification, item 19 in the vehicle registration certificate. Database: MF_FARZ1
28.		Fahrzeugart	Vehicle_category: Swiss classification, item 19 in the vehicle registration certificate. Plain language version of database field: MF_FARZ1
29.		Fahrzeugklasse	Vehicle_class: European classification Vehicle class MF_FARKL
30.		Karosserieform_Code	Body_type_code Item 25 in the vehicle registration certificate. Database: MF_KFO11
31.		Karosserieform	Body_type Item 25 in the vehicle registration certificate. Plain language version of database field: MF_KFO11
32.		Karosserieform2_Code	Body_type2_Code: Code for a second body type. Database: MF_KFO12
33.		Karosserieform2	Body_type2: Second body type. Plain language version of database field: MF_KFO12
34.	Fahrzeugtechnik Vehicle technology	Antrieb_Code	Gearbox_code: Database: MF_ANTRI
35.		Antrieb	Drive: Type of drive Plain language version of database field: MF_ANTRI
36.		Achsen	Number of axles. Database: MF_AZCHS
37.		Getriebe_Code	Gearbox_code: Code of gearbox type (not how gears are shifted). Database: MF_GETRI
38.		Getriebe	Gearbox type (not how gears are shifted). Plain language version of database field: MF_GETRI
39.		Getriebe_Detailcode	Gearbox_details_Code: Code for gearbox type and mode of operation. First character: gearbox type (A=automatic, M=manual, S=shiftless, H=hydrostatic). Number: number of gear speeds. Other characters: mode or other design features (A=automatic mode; M=int., manual change or speeds for shiftless gearbox; S=clutchless manual shift). Database: MF_GTNEU
40.		Leistung	Engine_power: In kW. For hybrid vehicles, the higher of the fitted motor/engine power. Item 76 in the vehicle registration certificate. Based on database: MF_LEIKW

41.	kW_pro_kg	kW_per_kg: Engine power [kW] divided by empty weight [kg] without driver. Database: MF_VLKWG
42.	Zylinder	Number of cylinders Database: MF_ZYLIN
43.	Hubraum	Capacity: Item 37 in the vehicle registration certificate [ccm]. Database: MF_HUBRA
44.	Treibstoff_Code	Fuel_code: Code for fuel Database: MF_TSTOF
45.	Treibstoff	Fuel Plain language version of database field: MF_TSTOF
46.	Sitzplätze	Number_of_seats, as per item 27 in the vehicle registration certificate. Database: MF_SIZPL
47.	Sitzplätze_vorne	Number of seats in front. Item 27 in the vehicle registration certificate. Database: MF_VORPL
48.	Stehplätze	Standing_capacity Database: MF_STEPL
49.	Anhängevorrichtung	Trailer_coupling Database: MF_ANHVO
50.	Hebebühne	Database: MF_HEBEB
51.	Ladekran	Fitted_crane Database: MF_LKRAN
52.	Seilwinde	Cable_winch Database: MF_SEILW
53.	Tankinhalt	Fuel_tank_capacity: Capacity of cargo tank [l] (e.g. tanker trucks). Database: MF_TAINH
54. Emissionen Emissions	C02	CO2 emissions [g/km]. Database: MF_CO2WT
55.	Emissionscode	Emissions_code: Swiss emissions code. Item 72 in the vehicle registration certificate. Database: MF_EMCOD
56.	Energieeffizienzkategorie	Energy_efficiency_category: Current energy efficiency category (not the category upon initial registration). Database: MF_EEKAT
57.	Partikelemission	Particulate_emission Database: MF_PARTI
58.	Katalysator	Catalytic_converter Database: MF_KATAL
59.	Partikelfilter	Particulate_filter P= Factory-installed particle filter. R= Retrofitted Swiss-approved diesel particle filter. Used for HGVC rebate. No. 924 of ASA guideline 6. S= Fitted diesel particle filter does not qualify for HGVC rebate. Database: MF_PARTF
60. Gewichte Weights	Leergewicht	Empty_weight Leergewicht [kg] des konkreten Fahrzeugs. Item 30 in the vehicle registration certificate. Database: MF_LEGE1
61.	Gesamtgewicht	Loaded_weight: Item 33 in the vehicle registration certificate [kg]. Database: MF_GEGE1
62.	Nutzlast	Load_capacity: Item 32 in the vehicle registration certificate [kg]. Database: MF_NUZLA
63.	Gesamtzugsgewicht	Total_traction_load: Item 35 in the vehicle registration certificate [kg]. Database: MF_GEZU1
64.	Dachlast	Roof_load_capacity: Item 55 in the vehicle registration certificate [kg]. Database: MF_DACLA
65.	Anhängelast	Trailer_load_capacity: Item 31 in the vehicle registration certificate [kg]. Database: MF_ANHL1

66.	Farben Colour information	Farbe_Code	Colour_Code: Code of principal colour of vehicle (out of a max. of three colours), item 26 in the vehicle registration certificate. Database: MF_FACO1
67.		Farbe	Colour: Principal colour of vehicle (out of a max. of three colours), item 26 in the vehicle registration certificate. Plain language version of database field: MF_FACO1
68.		Farbe2_Code	Colour2_Code: Code of second vehicle colour (max. three colours). Database: MF_FACO2
69.		Farbe2	Colour2: Second vehicle colour (max. three colours). Plain language version of database field: Database: MF_FACO2
70.		Farbe3_Code	Colour3_Code: Code of third vehicle colour (max. three colours) Database: MF_FACO3
71.		Farbe3	Colour3: Third vehicle colour (max. three colours). Plain language version of database field: Database: MF_FACO3
72.		Farbton_Code	Colour_tone_Code: Tone code (light, dark) for first vehicle colour. Datenbank: MF_FTON1
73.		Farbton	Colour_tone: Tone (light, dark) of the first of the vehicle colours (max. three colours). Plain language version of database field: MF_FTON1
74.		Farbton2_Code	Colour_tone2_Code: Tone code (light, dark) of the second vehicle colour (max. three colours) Database: MF_FTON2
75.		Farbton2	Colour_tone2: Tone (light, dark) of the second vehicle colour (max. three colours). Plain language version of database field: MF_FTON2
76.		Farbton3_Code	Colour_tone3_Code: Tone code (light, dark) of the third vehicle colour (max. three colours) Database: MF_FTON3
77.		Farbton3	Colour_tone3: Tone (light, dark) of the third vehicle colour (max. three colours). Plain language version of database field: MF_FTON3
78.		Farbzusatz_Code	Colour_details_Code: Code for the colour detail (metallic) of the first of the vehicle colours (max. three colours) Database: MF_FZUS1
79.		Farbzusatz	Colour_details: Colour detail (metallic) of the first of the vehicle colours (max. three colours). Plain language version of database field: MF_FZUS1
80.		Farbzusatz2_Code	Colour_details2_Code: Code for the colour detail (metallic) of the second vehicle colour (max. three colours) Database: MF_FZUS2
81.		Farbzusatz2	Colour_details2: Code for the colour detail (metallic) of the second vehicle colour (max. three colours). Plain language version of database field: MF_FZUS2
82.		Farbzusatz3_Code	Colour_details3_Code: Code for the colour detail (metallic) of the third vehicle colour (max. three colours) Database: MF_FZUS3
83.		Farbzusatz3	Colour_details3: Code for the colour detail (metallic) of the third vehicle colour (max. three colours). Plain language version of database field: MF_FZUS3

#	Category	Field	Description
84.	Ortsangaben Location information	PLZ_Halter	Postal_code_owner Database: MH_AKPLZ
85.		Ort_Halter	Location_owner Database: MH_AKORT
86.		BFS-Gemeinde-Nr_Halter	BFS_municipality_number_owner: Number of the owner's municipality, as allocated by the Federal Statistics Office (BFS). Database: MH_AKGDN
87.		BFS-Gemeinde_Halter	BFS_municipality_owner: The owner's municipality, as per the Federal Statistics Office (BFS) Database: MH_AKGDE
88.		Staat_Code_Halter	Country_Code_Owner Database: MH_AKSTA
89.		Staat_Halter	Country_Owner Plain language version of database field: MH_AKSTA
90.		PLZ_Standort	Postal_code_vehicle_location: Postal code of vehicle location, if different from owner's. Database: MF_STPLZ
91.		Ort_Standort	Location_vehicle: Vehicle location, if different from owner's. Database: MF_STORT
92.		BFS-Gemeinde-Nr_Standort	BFS_municipality_number_location: Municipality number (as per BFS) of vehicle location, if different from owner's. Database: MF_STGDN
93.		Staat_Standort	Country_Vehicle: Code for the country where the vehicle is located, if different from owner's. Database: MF_STSTA
94.		Staat_Code_Standort	Country_Code_Vehicle: The country where the vehicle is located, if different from owner's. Plain language version of database field: MF_STSTA
95.	Schildangaben Number plate	Schildart_Code	Type_of_number_plate_Code Database: MS_SCHAR
96.		Schildart	Type_of_number_plate Plain language version of database field: MS_SCHAR
97.		Schildfarbe_Code	Colour_of_number_plate_Code Database: MS_SCHFA
98.		Schildfarbe	Colour_of_number_plate Plain language version of database field: MS_SCHFA
99.	Datumsobjekte Date objects	aktuelles_Datum	Current_date
100.		Jahresbeginn	Year_beginning: Date object for query filter. Date depends on current date. During the month of January: Jan. 1 of the previous year. Otherwise, Jan. 1 of current year
101.		Monatsbeginn	Month_beginning: Date object for query filter. Date depends on current date. Always the first day of the current month.
102.		Nächster_Monatbeginn	Next_month_beginning: Date object for query filter. Date depends on current date. Always the first day of the next month.
103.		6_Monate_zurück	6_months_ago: Date object for query filter. Date depends on current date. Always taken as six months prior to the first day of the current month.
104.	Kennzahl Total	Anzahl_Fahrzeuge	Number_of_vehicles: Gives the number of unique master numbers (aggregated tables). Database: MF_STANR

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Vehicle data information products
Best Practice Vehicle Statistics

Version date: 4 Oct. 2019, subject to change.

Background

ASTRA does not publish official data statistics, but provides raw data records that can be used to generate statistics. For this information to be useful, it is important to take into account how the vehicle authorization system works. Users are required to certify that they will use data carefully and responsibly.

The raw data records contain vehicle registration data for - Switzerland - the Principality of Liechtenstein, PL - the German enclave Büsingen - vehicles of the ICRC that are stationed outside Switzerland.	Büsingen vehicles are registered with German number plates, but for customs purposes some basic information for those vehicles is also registered in the VAIS. PL vehicles are registered only in the VAIS. For the purposes of VAIS, PL is handled at the level of a canton.
Vehicles may be - imported in used condition and then registered, - imported in new condition and then registered, - imported in new condition and subsequently registered as used (e.g. following use for internal transport, construction or agriculture)	Categorization will inevitably be approximate in some cases. The derived statistics may therefore show slight deviations from one user to another. Use the explanations provided for the data.
Vehicles may originate - from a direct import - from a parallel import - from a general importer authorized by the manufacturer.	
Vehicles may be - in circulation - out of circulation.	
Vehicles may have an owner - in another country - in another canton.	
Registration data are subject to correction or modification by the cantonal authorities (road traffic offices) at any time. Initial registration may take effect retroactively or be post-dated.	

Type of information	Best practice	Information product; recommended filter combinations; remarks
Obtain statistics on new registrations in Switzerland	- New vehicles registered for the first time in CH or PL - Exclude the German enclave Büsingen. - Include the Principality of Liechtenstein, PL. - Include ICRC vehicle stationed in other countries, - Update new registrations for previous months with every new release; raw data is updated on a monthly basis and covers all new registrations since Jan. 1 of the current year.	NEUZU, NEUZ-R (no filter needed, see data record explanation); ICRC vehicles are not identifiable in the data records. For Büsingen, the canton is shown as "BU".
For the current year, obtain initial registrations in CH or PL of vehicles previously registered in a foreign country.	For imported used vehicles, the date of the first registration in the other country is used. The date of the initial registration in Switzerland is not recorded. Approximation for analysis by year: Use the technical database field "*Swiss_registration_year*".	GEBR (no filter needed, see data record explanation);

Type of information	Best practice	Information product; recommended filter combinations; remarks
Obtain the total population of registered cars in Switzerland	- Include imported used vehicles - Exclude the German enclave Büsingen - Include the Principality of Liechtenstein, PL - Include ICRC vehicles stationed in another country - Count only vehicles that are in circulation	BEST, BEST-R; No filter needed
Obtain direct imports	- Use a proxy: count all new vehicles that are exempt from the Swiss model authorization requirement. - Exclude imported used vehicles, or treat them separately (except for vehicles imported from PL)	'NEUZU, NEUZ-R, Filter model_approval_number= X or empty; BEST, BEST-R: Filter model_approval_number= X or empty and Used_vehicle_code= empty and First_registration_country= PL or empty
Obtain parallel imports	- Use a proxy: count all vehicles with a parallel import model authorization. - Imported used vehicles do not need to be excluded explicitly, as they are exempt from the Swiss model authorization requirement.	NEUZU, NEUZ-R, Filter model_approval_number has the form .X.... BEST, BEST-R; Filter model_approval_number has the form .X....
Obtain manufacturer-authorized imports	- Use a proxy: count all vehicles covered by a general importer's model authorization. - Imported used vehicles do not need to be excluded explicitly, as they are exempt from the Swiss model authorization requirement.	NEUZU, NEUZ-R, Filter: (model_approval_number does not have the form .X.... and model_approval_number is not X and model_approval_number is not empty) BEST, BEST-R: wie NEUZU, NEUZ-R
Obtain the regional distribution of new registrations	Postal code and location of new authorizations are not known. *Postal code* and *Location* always refer to the current or most recent owner, who may not be the first owner. Analysis of initial registration is only possible using *First_registration_canton* .	
Obtain the regional distribution of the total car population	*Postal code, Location* and *BFS_municipality_number* do not always match the canton given in the *Registration_canton field.* Possible reasons include: - temporary number plates (*Type_of_number_plate_Code* listed as either of { **K, Z** }) with a foreign owner address - failure to register a vehicle location that is different from the owner location (for example, because the owner is a company headquartered in a different canton; the owner has a different address as a weekly commuter or a secondary resdience; or it is a	
Obtain the total number of motorized campers	Small motorized campers without a kitchen (i.e. not fitted out for cooking and dining) are registered as personal cars, not as campers.	Small motorized campers can be identified using the *Make_and_model* field. For others, use *Body_type* =**Motorized_camper**