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Vehicle data information products

Overview and description

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Content

Summary

This document gives an overview of the vehicle data information products made available by the Federal Roads Office FEDRO from its Vehicle Admission Information System (VAIS; subsystem vehicles).

Chapter 1 outlines the range of standard data sets and reports available (open data or fee-based). These standard data sets and analyses are then described in detail in Chapter 2. Chapter 3 provides information about the data sets which may be useful for their interpretation.

1 Overview of the range of information products

1.1 Information products available free of charge (open data)

The following table lists the information products available free of charge, which can be accessed at this link: https://opendata.astra.admin.ch/ivzod/.

Name (linked to detailed description)	Format	Brief description	Available periodicity	Link to data set
NEUZU	Raw data set	New registrations in the current year	biweekly	Data set
NEUZU_W	Report incl. raw data set	New registrations in the current year incl. diagrams and tables on the data	weekly	Data set
NEUZU_IMPORT-KANAL	Raw data set	Number of new registrations by import channel aggregated by make and type	quarterly	Data set
BEST BEST_MOTO BEST_ANH BEST_ANDERE	Raw data set	Stock of all vehicles in circulation	monthly	Data set
GEBR	Raw data set	Imported used vehicles in the current year	monthly	Data set
STNR	Raw data set	List of all master numbers of new registrations in the current year with CO_2-relevant data	daily	Data set
TYP ROH	Raw data set	Vehicle stock as Excel files, e.g. to search for specific models/makes; also contains vehicles out of circulation	quarterly	Data set
eDatenblatt	Raw data set	CoC data on vehicles registered via eCoC	monthly	Data set
Type approval data	json/Raw data set	3rd generation type approvals as individual data (json format) and as raw data sets	monrhly	Directory
AHOI	Raw data set	Change of holder, change of location, initial or re-registration, change of driving licence class (motorcycles)	monthly	Data set
Fahrzeugbestand nach Marke und Typ	Report	Title in English: Vehicle stock by make and type Aggregated overview tables on stocks per vehicle type and make incl. vehicles out of circulation	quarterly	Data set
Altersverteilung	Report	Title in English: Age distribution Vehicle stock by vehicle make, age of the vehicle and age of the vehicle holder	irregular / on request	Data set
Mietwagen	Report	Title in English: Rental cars List of vehicles in the current fleet of the five largest car rental companies	irregular / on request	Data set
E-Fahrzeugbestand nach Gemeinde	Report	Title in English: Electric vehicle stock by commune Vehicle stock by fuel type (plug-in vehicles), broken down by commune	monthly	Data set
Marktanteile nach Region	Report	Title in English: Market shares by region Cross-comparison of market shares of vehicle makes at cantonal, district and commune level for passenger cars, motorcycles and tractors	irregular / on request	Data set
Fahrschulfahrzeuge	Report	Title in English: Driving school vehicles Number and characteristics of officially registered driving school passenger cars	irregular / on request	Data set

1.2 Fee-based information products

A one-off framework agreement must be entered into before purchasing fee-based data sets (cf. Vehicle data on FEDRO website). The following table gives an overview of the range of fee-based information products. Test data sets are available at the following link: https://opendata.astra.admin.ch/ivzod/.

Name (link to detailed description)	Format	Brief description	Available periodicity	Link to test data set
NEUZU_R	Raw data set	New registrations in the current year incl. geographical information and details of the holder	monthly	Test data set
BEST_R BEST_R_MOTO BEST_R_ANH BEST_R_ANDERE	Raw data set	Stock of all vehicles in circulation incl. geographical information (postcode) and information on the holder	monthly	Test data set
GEBR_R	Raw data set	Imported used vehicles in the current year incl. geographical information and details of the holder	monthly	Test data set
KS_STNR_TYP	Raw data set	List of all registration plates with the master number and information on the type of associated vehicles	monthly	Test data set
KS_TYP	Raw data set	List of all registration plates with information on the type of associated vehicles	monthly	Test data set
STNR_TYP	Raw data set	List of all master numbers with information on the type of associated vehicles	monthly	Test data set
STAT_BEST*	Raw data set	Stock of all vehicles in circulation with a focus on the holder's details	monthly	Test data set
STAT_NEUZU*	Raw data set	New registrations in the current year with a focus on the holder's details	monthly	Test data set
NEUZU_IMPORTEUR**	Raw data set	Vehicle list (VIN) with the new registrations in the current year that were self-imports	individual	Test data set
STNR_eDatenblatt	Raw data set	Master number with CoC data of all vehicles registered via eCoC	monthly	Test data set

* The data sets STAT_BEST and STAT_NEUZU are only available to statistical offices.
** This data set contains only vehicles self-imported by a company or individual.

2 Detailed information on the individual information products

2.1 NEUZU and NEUZU_R

Data description:

These data sets contain all new registrations, i.e. all vehicles with their initial registration in Switzerland or the Principality of Liechtenstein. Vehicles that are newly registered in Switzerland or the Principality of Liechtenstein but were first registered outside Switzerland or the Principality of Liechtenstein are not included. January includes the new registrations of the entire previous year. Otherwise, the new registrations are included since the beginning of the year. All details refer to the time when the data set was created and not the date of initial registration. Unlike the free NEUZU data set, the NEUZU_R data set also contains geographical information (postcode) on the vehicle's location or the holder's address, information about the holder and the intended use of the vehicle.

The location and personal information does not necessarily refer to the first holder but to the current or last known person at the time the data set was created.

For example: one-day registration to a vehicle dealer on 05.02.2023, subsequent registration to the buyer on 06.05.2023. → The vehicle is entered first in the data set NEUZU_R-20230301.txt with a legal entity as the holder and its postcode; as of the data set NEUZU_R-20230601.txt the vehicle is entered with a natural person as the holder and that person's postcode. In the NEUZU_R-20230301.txt data set, the vehicle is out of circulation, but it is listed with the dealer as the last known holder.

It is not always possible to make a clear distinction between the initial registration of as-new vehicles and imported used vehicles. See Section 3.3 for more information on the classification of vehicles into the different new registration data sets.

Intended use:

Creating general statistics

Format:

- Tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.
- The data can simply be copied into an Excel sheet for further processing.

Periodicity:

NEUZU: biweekly
NEUZU_R: monthly

Availability:

NEUZU: available for free (open data)
NEUZU_R: subject to contract and fees

Further information:

- Archive data sets with fewer attributes are available for the years 2011 to 2018.
- For changes from 2022, see Section 3.1

2.2 NEUZU_W

Description:

This file gives an overview of new registrations and is intended for anyone who does not wish to conduct their own raw data analysis.

The file contains predefined charts and tables and the corresponding raw data set. The data set contains the new registrations in the current year. Vehicles that are newly registered in Switzerland or the Principality of Liechtenstein but were first registered outside Switzerland or the Principality of Liechtenstein are not included.

The registration figures for the last evaluated calendar week could still increase as a result of subsequent registrations. This is especially the case after monthly or quarterly changes and for distribution channels with calendar-based sales targets. Given its weekly publication, this data set is also not created on the exact same data basis as the NEUZU(_R) and BEST(_R) data sets. Slight deviations from these data sets will therefore occur.

For more reliable statistics, the monthly NEUZU(_R) data sets should be used.

Format:

- xlsb or xlsx file
- Raw data can be found in the 'Data' worksheet → One row per vehicle type (type approval No), canton and week
- The xlsb file is significantly smaller in volume but cannot be used in all companies. In such cases, the xlsx file with identical content can be used.

Periodicity:

weekly

Availability:

available for free (open data)

2.3 NEUZU_IMPORTKANAL

Description:

The data set contains new registrations by import channel aggregated by make and type. It differentiates between official imports (imports by the official importer), parallel imports and direct imports. The import channel is derived by type approval number for vehicles that were registered by the old approval regime: Record „X“ or “empty”→ direct import; „.X….“ → parallel import; number without X (e.g. 1AB123) → official import. Vehicles, that were registered via the new approval system «IVI» are assigned to one of the three categories based on the type approval holder code. The data set provides general information without laying any claim to correctness and completeness.

The data set contains all new registrations, i.e. all vehicles with their initial registration in Switzerland or the Principality of Liechtenstein (same principle as for the "NEUZU" and "NEUZU_R" datasets). No used vehicles and no vehicles that were already registered in another country before their first registration in Switzerland or the Principality of Liechtenstein are taken into account. In January, the data for the entire previous year is published. Otherwise, new registrations since the beginning of the year are included..

The data set is published quarterly with a two-week delay. This ensures that late registrations from the road traffic authorities are also included. For this reason, the total number of vehicles may differ slightly from the total of the NEUZU and NEUZU_R datasets, which are published two weeks earlier..

It is not always possible to make a clear distinction between the initial registration of as-new vehicles and imported used vehicles. See Section 3.3 for more information on the classification of vehicles into the different new registration data sets.

Intended use:

- Creating general statistics
- Analysis and assessment of the market situation

Format:

- Tab-delimited txt file
- Windows-1252 encodedThe data can simply be copied into an Excel sheet for further processing.

Periodicity:

quarterly, two weeks after the end of a quarter

Availability:

available for free (open data)

2.4 STAT_NEUZU

Data description:

These data sets contain all new registrations, i.e. all vehicles with their initial registration in Switzerland or the Principality of Liechtenstein. Vehicles that are newly registered in Switzerland or the Principality of Liechtenstein but were first registered outside Switzerland or the Principality of Liechtenstein are not included. January includes the new registrations of the entire previous year. Otherwise, the new registrations are included since the beginning of the year. All details refer to the time when the data set was created and not the date of initial registration.

It is not always possible to make a clear distinction between the initial registration of as-new vehicles and imported used vehicles. See Section 3.3 for more information on the classification of vehicles into the different new registration data sets.

Intended use:

Creating public statistics

Format:

- Tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.

Periodicity:

monthly

Availability:

- subject to contract and fees
- available exclusively for statistical offices

2.5 BEST and BEST_R

Data description:

The data set contains the vehicle stock, i.e. all vehicles in Switzerland and the Principality of Liechtenstein that are in circulation on the reference date. Unlike the free BEST data sets, the BEST_R data sets also contain geographical information (postcode) on the vehicle's location or the holder's address, information about the holder and the intended use of the vehicle.

Intended use:

Creating general statistics

Versions with different vehicle types:

Data set:	**Included vehicle types:**
BEST, BEST_R	All vehicle types
BEST_ANH, BEST_R_ANH	Trailers
BEST_MOTO, BEST_R_MOTO	Motorcycles, small motorcycles, three-wheel motorcycles, motorcycle sidecars, small three-wheel motorcycles, lightweight motor vehicles, small motor vehicles, three-wheel motor vehicles, snowmobiles (vehicle types 060–068)
BEST_ANDERE, BEST_R_ANDERE	All other vehicle types excluding passenger cars, trailers and the vehicle types included in BEST-MOTO (vehicle types 002–024, 035–052, 080–084)

Format:

- Tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.
- BEST contains more than 1,000,000 rows, which makes postprocessing in Excel difficult. BEST_ANH, BEST_R_ANH, BEST_MOTO, BEST_R_MOTO, BEST_ANDERE and BEST_R_ANDERE contain fewer rows; the data can simply be copied into an Excel sheet for postprocessing.

Periodicity:

monthly

Availability:

BEST: available for free (open data)
BEST_R: subject to contract and fees

Further information:

- Archive data sets with fewer attributes are available for the years 2011 to 2018.
- For changes from 2022, see Section 3.1.

2.6 STAT_BEST

Data description:

The data set contains the vehicle stock, i.e. all vehicles in Switzerland and the Principality of Liechtenstein that are in circulation on the reference date.

Intended use:

Creating public statistics

Format:

- Tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.

Periodicity

monthly

Availability:

- subject to contract and fees
- available exclusively for statistical offices

2.7 GEBR and GEBR_R

Data description:

These data sets contain imported used vehicles, i.e. first registered outside of Switzerland or the Principality of Liechtenstein, which came into circulation in Switzerland or the Principality of Liechtenstein for the first time in the current year. Unlike the free GEBR data set, the GEBR_R data set also contains geographical information (postcode) on the vehicle's location or the holder's address, information about the holder and the intended use of the vehicle.

It is not always possible to clearly identify an imported used vehicle. The data set may also contain as-new vehicles that were only registered for the transfer journey abroad. Transfer journeys in Switzerland are usually made with dealer plates and no initial registration is required for this. See Section 3.3 for more information on the classification of vehicles into the different new registration data sets.

Intended use:

Creating general statistics

Format:

- Tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.

Periodicity:

monthly

Availability:

GEBR: available for free (open data)
GEBR_R: fee-based

Further information:

For changes from 2022, see Section 3.1.

2.8 STNR

Data description:

The data set comprises a list of master numbers of new registrations in the current year with CO_2-relevant data. The data set includes the following vehicles:

- all vehicles that were first registered in Switzerland or the Principality of Liechtenstein in the current year,
- used vehicles from abroad that were registered in Switzerland or the Principality of Liechtenstein for the first time in the current year and
- vintage cars that were electronically registered for the first time in the current year after a long period out of circulation.

This data set is updated daily and contains data from the current year – defined here as:

- during January: new registrations since 01.01. of the previous year and
- from February to December: new registrations since 01.01. of the current year.

Intended use:

- Ongoing monitoring of CO_2 target achievement
- Ongoing monitoring of sales targets
- Quality control for CO_2-relevant data
- This data set is primarily aimed at vehicle importers. Data users must know the master numbers of the vehicles of relevance to them and can then conduct a data comparison (e.g. which vehicles were registered with which data).

Format:

- Tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.

Periodicity:

daily

Availability:

available for free (open data)

Further information:

Important: In the context of compliance with the CO_2-emission regulations for vehicles, only the calculations issued by the SFOE have legal effect for large importers. Any adjustments of the enforcement data shall be in accordance with the SFOE's specifications.

2.9 KS_STNR_TYP

Data description:

The data set includes the registration plate, the unique master number and technical vehicle type data.

This data set includes all vehicles that are in circulation in Switzerland or the Principality of Liechtenstein or whose last deregistration was no more than five years ago.

For classic cars, an unlimited number of vehicles per registration plate is possible; for all other vehicles, there is a maximum of two vehicles per registration plate. In order to protect (vintage) vehicle collections, a maximum of two vehicles are specified per registration plate.

Intended use:

- Type identification via registration plate or master number
- Vehicle identification via registration plate or master number

Format:

- Tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.

Periodicity:

monthly

Availability:

subject to contract and fees

Restriction on use:

This data set comes with a restriction on use that extends beyond the provisions of the framework agreement. By default, the restriction on use is regulated by the request for disclosure of data.

Information from KS_STNR_TYP data sets that has been obtained previously must be destroyed before a new KS_STNR_TYP data set is processed. The data may not be linked between the periods (e.g. to build up a vehicle history for a number plate, plate histories for a vehicle, vehicle inspection histories).

2.10 TYP_ROH

Data description:

This stock data set is made available as a multi-part Excel file. The focus is on simple searches by specific vehicle makes or models and is not designed for compiling general statistics.

This data set includes all vehicles that are in circulation in Switzerland or the Principality of Liechtenstein or whose last deregistration was no more than five years ago.

Intended use:

Targeted search for specific models (e.g. searches for vintage cars)

Format:

- xlsx file
- Each row in the data set represents the data of a specific vehicle.
- The data sets are divided according to the first letter of the vehicle make.

Periodicity:

quarterly

Availability:

available for free (open data)

2.11 KS_TYP

Data description:

The data set includes all vehicles that are in circulation in Switzerland or the Principality of Liechtenstein, with the exception of vehicles with 'vintage vehicle' as the intended use (reason: in the case of classic cars, an unlimited number of vehicles are possible for an interchangeable plate).

Instead of KS_TYP, the more extensive data set KS_STNR_TYP can also be used, provided that its narrower restriction on use can be observed.

Intended use:

Type determination via registration plate

Format:

- Tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.

Periodicity:

monthly

Availability:

subject to contract and fees

Restriction on use:

This data set comes with a restriction on use that extends beyond the provisions of the framework agreement. By default, the restriction on use is regulated by the request for disclosure of data.

The KS_TYP and STNR_TYP data sets may only be processed separately, and they must not be linked to each other.

2.12 STNR_TYP

Data description:

The data set includes all vehicles that are in circulation in Switzerland or the Principality of Liechtenstein or whose last deregistration was no more than five years ago. Therefore, type determination for vehicles out of circulation (without a registration plate) is also possible. All details refer to the reference date.

Instead of STNR_TYP, the more extensive data set KS_STNR_TYP can also be used, provided that its narrower restriction on use can be observed.

Intended use:

Type identification via master number

Format:

- Tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.

Periodicity:

monthly

Availability:

subject to contract and fees

Restriction on use:

This data set comes with a restriction on use that extends beyond the provisions of the framework agreement. By default, the restriction on use is regulated by the request for disclosure of data.

The KS_TYP and STNR_TYP data sets may only be processed separately, and they must not be linked to each other.

2.13 NEUZU_IMPORTEUR

Data description:

The data set lists the vehicles (VIN) that were imported by a specific importer in the current year and registered for the first time in Switzerland or the Principality of Liechtenstein. January includes the new registrations of the entire previous year. Otherwise, the new registrations are included since the beginning of the year.

The data set is only available to companies or persons who have imported vehicles themselves. Importers receive only the data on their own imports. The list does not include any vehicles of other importers. This is the only data set that contains the vehicle identification number (VIN).

The NEUZU_IMPORTEUR data set differs in many respects from the data basis used for compliance with the CO_2 emission regulations for vehicles. The main differences are as follows:

- Vehicle assignments between importers are not included in the data set.
- Vehicles with type approval X (individual vehicle approval by the road traffic office) are not included.
- I Emission pools of importers are not taken into account.
- The status of an importer is not taken into account (Art. 18–22 CO_2 Ordinance; SR 641.711).
- The unladen weight and CO_2 emissions stated in the data set may deviate from the values applicable for CO_2 compliance. Among other things, there is no adjustment of the CO_2 value in the following cases (list not exhaustive):
  - no deductions based on eco-innovations;
  - no CO_2 value from additionally submitted CoC;
  - no deductions for the biogas content of vehicles powered by gas;
  - no calculation of CO_2 emissions as per Annex 4 of the CO_2 Ordinance for vehicles that do not have a recognised CO_2 emissions certificate as per Art. 24 or 25 of the CO_2 Ordinance;
  - the data set does not take account of any tests for applicability of the CO_2 emission regulations.

Intended use:

- Determine the start of the warranty period based on the date of initial registration
- Ongoing monitoring of CO_2 target achievement
- Ongoing monitoring of sales targets

Format:

- On request as (human-readable) xlsx file or (machine-readable) tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.

Periodicity:

individual

Availability:

- subject to contract and fees
- available exclusively to companies or persons for their self-imported vehicles

Restriction on use:

This data set comes with a restriction on use that extends beyond the provisions of the framework agreement. By default, the restriction on use is regulated by the request for disclosure of data.

In deviation from No 4.3 of the framework agreement, the data recipient is permitted to pass on the NEUZU_IMPORTEUR standard data set to third parties (e.g. in the context of emissions pools) for the purpose of monitoring its own CO2 targets. If the data recipient makes use of

this possibility, they must inform all persons to whom they make the data available for the aforementioned purpose of the legal obligations and the obligations set out in the underlying framework agreement and to oblige them to comply with these.

Further information:

- **Important: In the context of compliance with the CO_2-emission regulations for vehicles, only the SFOE's calculations have legal effect for large importers. Any adjustments of the enforcement data shall be in accordance with the SFOE's specifications.**
- The data is transmitted exclusively by email to internal corporate email recipients. Several email recipients may be included in each mailing.
- The day and time of delivery can be freely selected (e.g. Fridays at 5pm, the first day of the month at 7am).
- Each delivery is subject to a fee in accordance with the FEDRO Fees Ordinance (SR 172.047.40).

2.14 eDatenblatt, STNR_eDatenblatt

Data description:

The data set is based on the information set out in the template for the paper version of the Certificate of Conformity (CoC) in accordance with Commission Implementing Regulation (EU) 2020/683. Only vehicles registered via eCoC are included in the data set. They can be recognised by the note 'IVI' in field 24 (type approval) on the vehicle registration document. The data set also contains national data that do not appear in the EUin the same manner. On the 'eDatasheet' portal (https://edatenblatt.astra.admin.ch/edatenblatt/), the individual vehicle's CoC data can be retrieved by entering the master number. The data concerning a vehicle that was imported without initial registration (e.g. importer's stock vehicle) can only be viewed individually via the 'eDatasheet' portal.

The STNR_eDatenblatt data set, which is subject to fees and a contract, also contains the unique master number. In all other respects, this data set is the same as the eDatenblatt data set, which is available free of charge.

Intended use:

- Vehicle type identification by means of the master number and the manufacturer's CoC data
- Creates a basis for grouping vehicle models, e.g. with the EU Type Approval number, type, variant and version

Format:

csv file

Periodicity:

monthly

Availability:

eDatenblatt: available for free (open data)
STNR_eDatenblatt: subject to contract and fees

2.15 Type approval data

Data description:

The data records comprise type approval data from the TAS (Type Approval System) specialist application. The following data products are available:

- **json files** (directories 4100 and 4200 on the FEDRO data platform)
  - For each of the more than 200,000 third-generation type approvals, there is a bilingual json file (German and French, with English attribute names). Third-generation type approvals can be recognised by their six-digit number with exactly two or three letters. There are no json files for 1st and 2nd generation type approvals (1946 to approx. 1995).
  - As before, the json files are divided into the following vehicle groups based on their different data structures and are identified accordingly by their file names:
    - **M**otor **v**ehicle (MV) for two-track vehicles (example: MV_1SB601.json),
    - **M**otor**b**ike (MB) for single-track vehicles (example: MB_6CB208.json) and
    - **Tr**ailer (TR; example: TR_9SF301.json).
- **Data sets** (directory 4300 on the FEDRO data platform)
  - A data set is available for each of the three vehicle groups, listing all type approvals in that group (one type approval per line).
  - The data sets are available in the form of an xlsb Excel file and a csv file, each in German and French.
  - Due to the size of the xlsb version of the data set for the car group, the data set has been divided into passenger cars and other vehicles for easier manual use.
  - Emission data (exhaust, noise) is provided in a separate data set. This data set uses English attribute names and numerical content. It covers the automobile and motorcycle groups. Automobiles can have one to four variants of gear boxes with different emission data. Each gear box is listed in a separate row (i.e. one to four data rows). Motorcycles can have one to two variants of gear boxes (i.e. one or two data rows).
  - This results in the following range of data sets:

Vehicle group		xlsb	csv
Automobiles			TAS_Automobil.csv TAS-automobile.csv
	Passenger cars	TAS_Personenwagen.xlsb TAS_voiture_de_tourisme.xlsb	
	Other automobiles	TAS_restliche_Automobilgruppen.xlsb TAS_autres_automobiles.xlsb	
Motorcycles		TAS_Motorrad.xlsb TAS_moto.xlsb	TAS_Motorrad.csv TAS_moto.csv
Trailers		TAS_Anhaenger.xlsb TAS_remorque.xlsb	TAS_Anhaenger.csv TAS_remorque.csv
Emissions		TAS_Emission.xlsb	TAS_Emission.csv

- **General information on type approval data products**
  - In case of changes to type approvals, the previous data will be overwritten (json files and data records).
  - Information on the holder of a type approval (holder code) will not be disclosed.
  - FEDRO does not offer PDF printouts of data sheets (exception: historical type approvals of the 1st and 2nd generation, years 1946 to 1995, see previous directories 2310 and 2400 on the FEDRO data platform).

Intended use:

- Analysis of detailed type data
- Quality control in the type approval process
- Model identification for vehicle and parts trade

Format:

- json files (per type approval)
- csv and xlsb files, UTF-8 encoded (data records)

Frequency:

Monthly

Availability:

Freely available (open data)

2.16 AHOI

Data description:

The data set includes all vehicles in Switzerland and the Principality of Liechtenstein in anonymised form for which there has been at least one relevant change in the status of the holder or registration since the reference date one month before. The reference date is the night before the first day of each month.

The data set provides the basis for independent evaluations or observations of the used vehicle market.

The recorded changes of state include:

- Change of holder (change of ownership),
- Change of location (postcode of the holder's address changes due to a change of holder or relocation),
- Initial or re-registration and
- Change of driving licence class (graded motorcycle driving licence).

For interpretation of the data, see also section 3.4.

Intended use:

The data set is suitable for own analyses and assessments of the used vehicle market, e.g.:

- Ratio of holder changes to new registrations,
- Periods of time out of service before change of holder, by make, type or canton,
- Migration of vehicles between cantons.

Format:

- Tab-delimited txt file
- UTF-8 encoded
- Each row in the data set represents the data of a specific vehicle.
- Naming convention: AHOI-yyyymm-MMM.txt , e.g. AHOI-202201-JAN.txt for status changes during January 2022 (month abbreviations [German]: JAN, FEB, MRZ, APR, MAI, JUN, JUL, AUG, SEP, OKT, NOV, DEZ)

Periodicity:

monthly

Availability:

available for free (open data)

2.17 Fahrzeugbestand nach Marke und Typ (engl. Vehicle stock by make and type)

Description:

The reports list in tabular form the current vehicle stock of Switzerland and the Principality of Liechtenstein by make and type. They are particularly useful for determining the frequency of certain makes or models (e.g. rare classic cars).

The following reports are available; the vehicle types included are shown in parentheses:

- Cars and vans (passenger cars, vans, light motor vehicles (without light motor vehicles with body type “caravan”),
- Construction site (utilities, work carts, motor carts),
- Bus (coaches, minibuses, articulated buses, heavy motor vehicles (without heavy motor vehicles with body type “caravan”)
- Goods transport (lorries, light articulated vehicles, heavy articulated vehicles ((without light motor vehicles with body type “caravan”), articulated lorries,
- Sidecars (motorcycle sidecars),
- Motorcycles (includes motorcycles and small motorcycles),
- Tractors (includes tractor, agricultural tractors, agricultural work carts, agricultural motor carts, motorised single-axle vehicles, agricultural motorised single-axle vehicles, agricultural combination vehicles),
- Motorhome (includes motor vehicles with body type “caravan”).

Format:

pdf file

Periodicity:

irregular / on request

Availability:

available for free (open data)

2.18 Altersverteilung (engl. Age distribution)

Description:

The reports show graphically the age distribution of vehicles in circulation in Switzerland and the Principality of Liechtenstein and of the vehicle holders by make. In addition to the reports, the raw data used for the diagrams is also available.

Versions:

- Passenger cars (German: Personenwagen)
- Motorcycles (without scooters) (German: Motorräder)
- Scooters (German: Roller)

Format:

Reports: pdf files
Raw data: xlsx files

Availability:

available for free (open data)

Periodicity:

irregular / on request

2.19 Mietwagen (engl. Rental cars)

Description:

The report includes an analysis on rental cars in Switzerland and the Principality of Liechtenstein. The report examines, on behalf of the entire industry, the current vehicle stock of the 'big five' in the car rental business, without revealing the identity of the companies or allowing individual vehicles to be assigned to a company.

The report includes the following points:

- Age structure of the vehicle stock (chart),
- New arrivals by make, series and type (list),
- Stock by make, series and type (list),
- Stock by other vehicle characteristics (list) and
- Out of circulation vehicle stock (former rental vehicles of the big five that are currentlyout of circulation) by make, series and type (list).

In addition to the report, the raw data used for the report is also available.

Format:

Report: pdf file with various lists of rental cars

Raw data:

- xlsx file
- list of all attributes

Periodicity:

irregular / on request

Availability:

available for free (open data)

2.20 E-Fahrzeugbestand nach Gemeinde (engl. Electric vehicle stock by commune)

Description:

The report covers the vehicle stock in Switzerland and the Principality of Liechtenstein by commune and vehicle fuel type. The fuel type is broken down into: total, electric, hybrid (plug-in), hybrid (non-plug-in), petrol, diesel, gas (bivalent) and others.

Format:

xlsx file with aggregated table and raw data

Periodicity:

monthly

Availability:

available for free (open data)

2.21 Marktanteile nach Region (engl. Market shares by region)

Description:

The reports show the market shares of the vehicle makes in cross-comparison at cantonal, district and communal level for passenger cars, motorcycles and agricultural tractors.

Intended use:

The data set is used to identify potentials or gaps in the vehicle makes' distribution network, especially for dealerships that do not run their own data evaluations.

Versions:

- Agricultural tractors
- Motorcycles
- Passenger cars

Format:

- xlsx file
- one row per canton / district / commune

Periodicity:

irregular / on request

Availability:

available for free (open data)

2.22 Fahrschulfahrzeuge (engl. Driving school vehicles)

Description:

The evaluation includes the officially registered driving school passenger cars (special use 'Driving school vehicle' noted in field 17 on the vehicle registration document) in Switzerland and the Principality of Liechtenstein. For own analyses, the standard data set BEST_R (subject to contract and a fee) can also be evaluated.

The report includes:

- individual tables on the vehicle stock by transmission operation (gear shift), fuel type, make, series, type, colour, drive, gearbox, body style, carbon emissions, power;
- new arrivals by make, series, type;
- graphical representation of the age distribution of driving school vehicles.

In addition to the report, the raw data used for the report is also available.

Format:

Report:

- pdf file
- individual stock list for the various attributes
- graphical representation of the age distribution of driving school vehicles.

Raw data:

- xlsx file
- one row per vehicle

Periodicity:

irregular / on request

Availability:

available for free (open data)

3 Useful information

3.1 Changes from 2022

Concerns the data sets BEST(_R), NEUZU(_R) and GEBR(_R):

- Vehicles can be registered via the electronic Certificate of Conformity (eCoC). These vehicles are not assigned a type approval number, which is why they have 'IVI' (initial vehicle information) in the field 'Type approval No'. As a form of type identification, these vehicles are identified by the new data points 'type, variant and version'.
- For vehicles registered via the eCoC, the data for CO2_WLTP, electricity consumption (German: El-Verbrauch) and hybrid code (German: Hybridcode) is now available.
- The energy efficiency category (German: Energieeffizienzkategorie) is now only stated for new registrations as the information for existing vehicles is partially outdated.

3.2 Check digit in the master numbers

The nine-character master number contains a check digit. Typing errors when entering the master number can thus be detected in many cases. The check digit in position 9 of the master number is calculated according to the following rule:

Example using master number 318724969	Check digit calculation		
	Number	Weight	Product
1. position	3	3	3 * 3 = 9
2. position	1	2	1 * 2 = 2
3. position	8	7	8 * 7 = 56
4. position	7	6	7 * 6 = 42
5. position	2	5	2 * 5 = 10
6. position	4	4	4 * 4 = 16
7. position	9	3	9 * 3 = 27
8. position	6	2	6 * 2 = 12
9. position (check digit)	174:11 = 15 Remainder 9	=174 (sum of the products)	
	If remainder is 10: check digit = 0		

Therefore, in this example:
Valid master number: 318724969
Invalid master numbers (incorrect check digit):~~318724960~~, ~~318724961~~, ~~318724962~~, ~~318724963~~, ~~318724964~~, ~~318724965~~, ~~318724966~~, ~~318724967~~, ~~318724968~~

3.3 Overview of vehicles included in the new registration data sets

This overview makes it easier to understand the classification of vehicle data in the NEUZU(_R), STAT_NEUZU and GEBR(_R) data sets.

The vehicles are allocated to the various data sets based on the data fields Gebrauchtcode (engl. 'Used vehicle code') and Erstinverkehrsetzung_Staat (engl. 'Initial registration country'). The table below shows for which combination of values the vehicles are included in which data sets. Because of their customs union and shared Vehicle Admission Information System VAIS, Switzerland and the Principality of Liechtenstein are treated as *one* vehicle market.

Information may be incomplete or contradictory. Therefore, imported used vehicles or new registrations cannot always be identified with absolute certainty.

This table shows which vehicles are in the NEUZU(_R), STAT_NEUZU and NEUZU_IMPORTKANAL data sets and which are in the GEBR(_R) data sets.

	Attribute combination				
	Gebrauchtcode (engl. Used vehicle code)*	**Erstinverkehrsetzung_Staat (engl. Initial registration country)****		**NEUZU(_R), NEUZU_IMPORTKANAL STAT_NEUZU**	**GEBR(_R)**
1.	Blank	Blank	→	✔	
2.	Blank	FL	→	✔	
3.	Blank	Not blank and not FL	→		✔
4.	G	Blank	→		✔
5.	G	FL	→		✔
6.	G	Not blank and not FL	→		✔
7.	A	Blank	→		✔
8.	A	FL	→	✔	
9.	A	Not blank and not FL	→		✔

* This field contains a code that describes the condition of the vehicle at its first registration. Definition of the possible entries:
- Blank: Vehicle is as new (<=2000km and <=70 operating hours)
- A: Initial registration abroad
- G: Initial registration in Switzerland, used vehicle (>2000km or >70 operating hours), or initial registration abroad but country unknown

** This field contains the country of initial registration:
- Blank: Switzerland (can in some cases also mean a missing value or 'country unknown')
- FL: Principality of Liechtenstein
- Not blank and not FL: Not Switzerland and not the Principality of Liechtenstein

Interpretation of the table:

Row 1: The vehicle had its initial registration in Switzerland (Erstinvekrehrsetzung_Staat = blank) as a new vehicle (Gebrauchtcode = blank). The vehicle is in the NEUZU(_R) / STAT_NEUZU / NEUZU_IMPORTKANAL data sets.

Row 2: The vehicle had its initial registration in the Principality of Liechtenstein (Erstinvekehrsetzung_Staat = FL) as a new vehicle (Gebrauchtcode = blank). Because FL is counted as part of the Swiss vehicle market, the vehicle is listed as a new registration. The vehicle is in the NEUZU(_R) / STAT_NEUZU / NEUZU_IMPORTKANAL data sets.

Row 3: The vehicle had its initial registration abroad (Erstinvekehrsetzung_Staat = not blank and not FL). The blank field for the “Gebrauchtcode” is interpreted here as missing information. The vehicle is in the GEBR(_R) data sets.

Row 4: The vehicle is not new (Gebrauchtcode = G) and no initial registration country is entered (Erstinverkehrsetzung_Staat = blank). There is no indication of the country of initial registration. It may be a vehicle used within the company. In most cases, however, these are vehicles from abroad with missing information. The vehicle is thus listed as an imported used vehicle. The vehicle is in the GEBR(_R) data sets.

Row 5: The vehicle is not new (Gebrauchtcode = G) and had its initial registration in the Principality of Liechtenstein (Erstinverkehrsetzung_Staat = FL). The vehicle is in the GEBR(_R) data sets.

Row 6: The vehicle is not new (Gebrauchtcode = G) and had its initial registration abroad (Erstinverkehrssetzung_Staat = not blank and not FL). The vehicle is in the GEBR(_R) data sets.

Row 7: The vehicle had its initial registration abroad (Gebrauchtcode = A). The blank field for “Erstinvekerhsetzung Staat” should be interpreted here as a missing value. The vehicle is in the GEBR(_R) data sets.

Row 8: The vehicle had its initial registration in the Principality of Liechtenstein (Erstinverkehrsetzung_Staat = FL). Because the Principality of Liechtenstein is counted as part of the Swiss vehicle market, the vehicle is listed as a new registration. It is in the NEUZU(_R) / STAT_NEUZU / NEUZU_IMPORTKANAL data sets.

Row 9: The vehicle had its initial registration abroad (Erstinvekehrsetzung_Staat = not blank and not FL, Gebrauchtcode = A). The vehicle is in the GEBR(_R) data sets.

3.4 AHOI case analysis

The following shows which changes in the status of the vehicle and holder (left side) lead to which information in the data set (right side). The details on the left are not included in the data set for data privacy reasons. There are a total of 35 possible constellations, some of which occur only rarely or are caused by data errors.

	Reference date January 1		→	Reference date February 1		→	Interpretation	→	Output data AHOI										
	Condition (old) of the vehicle	Holder*		Holder*	Condition (new) of the vehicle				invVerkehrsetzungs status_von	invVerkehrsetzungs status_alt	Erstinverkehr_ setzung	Gebrauchtimport	Gebrauchtimport _aus_Staat	Wiederinver_ kehrsetzung	inverkehrsetzung _nach_Standzeit1	Halterwechsel	PLZ_Wechsel	PLZ_Wechsel _von_Kt	PLZ_Wechsel _nach_Kt
1	Out of circulation	Graf-ZH-PLZ 8000	→	Kunz-BS-PLZ 4001	In circulation	→	Re-registration with change of holder and postcode	→	AV	IV				ja	Number of days	ja	ja	ZH	BS
2	In circulation		→		In circulation	→	Change of holder and postcode	→	IV	IV				ja	< 31 days**	ja	ja	ZH	BS
3	Out of circulation		→		Out of circulation	→	Re-registration and deregistration within the month with change of holder and postcode	→	AV	AV				ja	Number of days	ja	ja	ZH	BS
4	In circulation		→		Out of circulation	→	Deregistration with change of holder and postcode	→	IV	AV				ja	< 31 days**	ja	ja	ZH	BS
5	Out of circulation	Graf-ZH-PLZ 8000	→	Schmidt-ZH-PLZ 8005	In circulation	→	Re-registration with change of holder and postcode, **without change of canton**	→	AV	IV				ja	Number of days	ja	ja	ZH	ZH
6	In circulation		→		In circulation	→	Change of holder and postcode, **without change of canton**	→	IV	IV				ja	< 31 days**	ja	ja	ZH	ZH
7	Out of circulation		→		Out of circulation	→	Re-registration under the month with change of holder and postcode, **without change of canton**	→	AV	AV				ja	Number of days	ja	ja	ZH	ZH
8	In circulation				Out of circulation		Deregistration with change of holder and postcode, **without change of canton**		IV	AV				ja	< 31 days**	ja	ja	ZH	ZH
9	Out of circulation	Graf-ZH-PLZ 8000	→	Fuchs-ZH-PLZ 8000	In circulation	→	Re-registration with change of holder, **without change of postcode** (e.g. change of holder within the same household)	→	AV	IV				ja	Number of days	ja			
10	In circulation		→		In circulation	→	Change of holder, **without change of postcode** (e.g. change of holder within the same household)	→	IV	IV				ja	< 31 days**	ja			
11	Out of circulation		→		Out of circulation	→	Re-registration and deregistration within the month with change of holder, **without change of postcode** (e.g. change of holder within the same household)	→	AV	AV				ja	Number of days	ja			
12	In circulation		→		Out of circulation	→	Deregistration with change of holder, **without change of postcode** (e.g. change of holder within the same household)	→	IV	AV				ja	< 31 days**	ja			
13	Out of circulation	Graf-ZH-PLZ 8000	→	Graf-ZH-PLZ 8000	In circulation	→	Re-registration without change of holder or postcode	→	AV	IV				ja	Number of days				
14	In circulation		→		In circulation	→	No changes	→	no data output (Exception: In the case of a change of driving licence class)										
15	Out of circulation		→		Out of circulation	→	No changes	→	no data output (Exception: In the case of a change of driving licence class)										
16	In circulation		→		Out of circulation	→	Ordinary deregistration	→	IV	AV									
17	Out of circulation	Graf-ZH-PLZ 8000	→	Graf-ZH-PLZ 8005	In circulation	→	Re-registration with change of address (change of postcode within a canton)	→	AV	IV				ja	Number of days		ja	ZH	ZH
18	In circulation		→		In circulation	→	Change of address (change of postcode within a canton)	→	IV	IV							ja	ZH	ZH
19	Out of circulation		→		Out of circulation	→	Re-registration and deregistration within the month, with change of address (change of postcode)	→	AV	AV							ja	ZH	ZH
20	In circulation		→		Out of circulation	→	Deregistration with change of address (change of postcode within a canton)	→	IV	AV							ja	ZH	ZH
21	Out of circulation	Graf-ZH-PLZ 8000	→	Graf-LU-PLZ 6003	In circulation	→	Re-registration with change of postcode, relocation to a new canton)	→	AV	IV				ja	Number of days		ja	ZH	LU
22	In circulation		→		In circulation	→	change of postcode, relocation to a new canton	→	IV	IV				ja	Number of days		ja	ZH	LU
23	Out of circulation		→		Out of circulation	→	Re-registration and deregistration within the month with change of postcode, relocation to a new canton	→	AV	AV				ja	Number of days		ja	ZH	LU
24	In circulation		→		Out of circulation	→	Deregistration with change of postcode, relocation to a new canton	→	IV	AV				ja	< 31 days**		ja	ZH	LU
25	Vehicle uknown	Holder unknown	→	Graf-ZH-PLZ 8000	In circulation	→	New registration	→	N/A	IV	ja								
26			→			→	Imported used vehicle (first registration in CH-FL of an imported used vehicle)	→	N/A	IV		ja	state						
27			→			→	>5 year out of circulation (the vehicle was not in the analysis database anymore)	→	N/A	IV				ja	>5 years***				
28			→			→	other cases = data errors	→	N/A	IV									
29	Vehicle unknown	Holder unknown	→	Graf-ZH-PLZ 8000	Out of circulation	→	New registration which is only in circulation for a short time within the month.	→	N/A	AV	ja								
30			→			→	Imported used vehicle which is only in circulation for a short time within the month.	→	N/A	AV		ja	state						
31			→			→	>5 years out of circulation, re-registration and in circulation for a short time within the month.	→	N/A	AV				ja	>5 years***				
32			→			→	Other cases = data errors	→	N/A	AV									
33	Vehicle unknown	Holder unknown	→	Holder unknown	Vehicle unknown	→	No changes	→	No data output										
34	In circulation	Graf-ZH-PLZ 8000	→	Holder unknown	Vehicle unknown	→	Data errors	→	No data output										
35	Out of circulation	Graf-ZH-PLZ 8000	→			→	Data errors	→	No data output										

* Current holder; in the case of vehicles out of circulation, the last known holder
** Period of time out of circulation cannot be determined, but it is shorter than one month
*** Period out of circulation cannot be determined, but it is longer than five years (a vehicle is removed from the evaluation database after five years out of circulation)