
Data notice ("Pre-contractual information")

In accordance with the transparency requirements under Article 3.2 of the EU Data Act¹, this document describes how the Connected Product generates product data, how it is collected, how you as a user can access it, and how it is used by Volvo Construction Equipment AB. Note that depending on the specific customizations, add-ons selected, technical progress, and additional services acquired, the types, frequencies and amounts of data gathered and processed may vary. This pre-contractual information and the Data Management Agreement ("DMA") is located at <https://volvoce.com/global/en/data-act> and <https://connect.volvoce.com/customers/s/terms-and-privacy> respectively. Where information changes during the lifetime of the Connected Product, including any changes to the purpose for which the data are to be used from the originally specified purpose, this information will be updated at the previously mentioned location(s).

Connected Product: Excavator

The Connected Product is capable of generating data continuously and in real-time: Yes, data accessibility is described below.

The Connected Product is capable of storing data on-device or on a remote server: Yes, data accessibility is described below.

Data Management Agreement:

If Volvo and a buyer, lessee, or renter of the Connected Product have not entered into a Data Management Agreement, the earlier of (i) the use of the Connected Product and (ii) conclusion of a sales, leasing, rental or other relevant agreement for the Connected Product shall conclude the Data Management Agreement, located at <https://connect.volvoce.com/customers/s/terms-and-privacy>. If the Connected Product is being (re)sold, leased, or rented, each seller, lessor, or rental provider must comply with the 'transparency obligation' outlined in article 3 of the EU Data Act. This requires the seller, lessor, or rental provider to provide this pre-contractual information for the future user to exercise their data access rights under the EU Data Act and to be provided with Volvo's standard Data Management Agreement.

Data in scope:

In scope for the sharing obligations under the EU Data Act is data that is "raw" or "pre-processed" (raw data is unprocessed, automatically generated data points, while pre-processed data is modified to be understandable and usable for further analysis). The manufacturer of the Connected Product and/or data holder might also have opted to voluntarily share inferred or derived data (refined data due to being the outcome of processing beyond pre-processing). Such voluntary sharing does not alter the manufacturer's or data holder's classification of the data as inferred or derived, and the sharing status is at the discretion of the manufacturer and data holder, respectively. Data classified as trade secrets or security-related data might be subject to additional non-disclosure and safeguard measures required to be fulfilled.

Indirectly accessible data (readily available data under EU Data Act articles 4.1 and 5.1) - The Connected Product may be capable of generating the following product data which might be indirectly accessible as readily available data. Not all data elements are generated and collected for all individual products. Please visit <https://volvoce.com/global/en/data-act> for more information on how to access data.

Product data can become readily available data in two situations:

- 1. Data Collection by Volvo for Volvo Purposes (see table below).** This collection is specifically designed for Volvo's Purposes². The scope of the Data Collection for Volvo Purposes is determined by Volvo and scope of data collection (which Connected Product and what data), volume, frequency and collection will vary over time and differ between specific Connected Products.
- 2. Additional Service Data Collection.** If the user has purchased additional digital services from Volvo, Volvo may collect additional data, referred to as Additional Service Data Collection, as a result of these services. The specifications for each service will provide detailed information regarding the types of data that will be collected and the procedures for the user to request access to this data. Please visit

¹ Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data ("Data Act")

² Volvo Purposes: (i) conducting Product and Services research and development to enhance, maintain, and develop new Products and Services, (ii) solving quality issues, (iii) performing accident research investigations, (iv) managing warranty, contract, or regulatory compliance surveillance (such as product liability), (v) marketing Products and/or Services, (vi) performing proactive maintenance, (vii) enabling battery monitoring and diagnostics, (viii) updating the Information Systems with accompanying software (including providing over-the-air updates), (ix) the development, training, and monitoring of artificial intelligence systems and machine learning models for the Volvo Purposes, including, without limitation, large language models, predictive analytics, autonomous driving algorithms, and (x) any additional purposes further described in the applicable Privacy Notices and/or relevant Service Descriptions (as applicable).

Data Collection by Volvo for Volvo Purposes - Note that the data below are examples and might not be collected from your specific product. What data is available for a specific vehicle can be provided in conjunction with a data access request.

Format and estimated volume

Format: As the data is collected for Volvo's Purposes, the format is normally accumulated / binned data rather than instantaneous for a certain point in time. The data made available is typically structured into JSON format to facilitate readability and interoperability.

Volume: Will vary depending on product and over time. Depending on the type of data elements, the size of the data elements may vary between a few bytes for simple data elements and several megabytes for complex data elements.

Collection frequency: Data collection frequency depends on the readout from the specific product – typically weekly but varies from hourly to weekly, and even up to monthly. Exceptions might apply.

Access & retention

Data is made accessible over API in 2 weeks rolling window after a first data sharing request has been completed for a specific vehicle. As unpacking of collected data is done every 24 hours, the API will contain updated data with the same interval.

Data for the period before the data sharing request's completion can be requested as a manual one-off request (not covering any period before becoming the user of the Connected Product).

Vehicle/Product/Driver generated data connected to a certain Vehicle/Product may be processed for the entire expected life of the Vehicle/Product type, which could be up to 25 years (e.g. for research and development projects or to ensure that Volvo can manage product liability claims)

Type of data	Example
Engine with mounting and equipment	Engine speed Engine oil temperature
Electric power supply; lighting; instruments; software; warning and information system	Charged energy Traction battery voltage status
Power transmission	Gearbox modes Gearbox oil temperature Top Gear Mode, distance
Brake	Brake pedal usage, counter and distance Brake lining percentage
Wheel suspension; steering; axle suspension	Steering wheel angle Tire pressure
Body, cab and interior	Ambient temperature
Hydraulic system; special functions; miscellaneous	Hydraulic Oil Temperature Hydraulic hybrid system usage

Directly accessible data (under EU Data Act article 3.1) - The Connected Product may, subject to the stated conditions and pre-requisites, be capable of generating the following product data which is directly accessible to the user. Please visit via <https://volvoce.com/global/en/data-act> for more information on how to access data.

Direct Offboard Data Access

Applicable for affected models:

EW160E, EW180E EW220E

EW200EMH, EW240EMH

EWR130E

EWR150F, EWR170F

JEWR150F

Note that the data below are examples and might not be directly accessible from your specific product.

Format and estimated volume

Format: The data made available under this section is structured into JSON format to facilitate readability and interoperability. The format of each value depends on the data element concerned: some elements are provided as the latest instantaneous value at the time of transmission (for example fuel level, battery level or position), while others are provided as accumulated or aggregated values covering a period of use (for example total fuel consumed or machine hours).

Volume: Will vary depending on product and over time. Depending on the type of data elements, the size of the data elements may vary between a few bytes for simple data elements and several megabytes for complex data elements.

Collection frequency: The collection frequency is set per data element and depends on the data element concerned and the telematics unit fitted to the specific product. Typical intervals are once per minute, every 15 minutes, on machine start-up, or monthly. Exceptions might apply. When the collected data becomes available to the user is described under 'Access & retention' below.

Access & retention: Access is requested and administered through the Data Act portal at <https://volvoce.com/global/en/data-act>. Once access has been established for a specific Connected Product, the data is made available over an API on a continuous basis. The only delays are those inherent in the telematics unit, network connectivity and transmission times, and Volvo applies no additional processing interval. For most Connected Products these delays are minimal, typically in the order of seconds to a few minutes. For certain long-established telematics unit generations, data is made available continuously and in real-time only where technically feasible within the meaning of EU Data Act article 4.1: the transmission interval is determined by the unit's own readout and transmission cycle and cannot be shortened by Volvo, and data is made available as soon as it is received.

Because providing this access involves transmitting the data from the Connected Product to a Volvo-hosted API, the same data also constitutes readily available data held by Volvo as data holder within the meaning of EU Data Act article 4.1. Retention of that data is therefore governed by the terms set out under 'Access & retention' in the section on indirectly accessible data (readily available data under EU Data Act articles 4.1 and 5.1) above, which apply equally to the data listed in this section.

Type of data	Example
Engine / Motor with mounting and equipment	Engine Speed Engine Fuel Rate Engine Total Fuel Consumed
Electric power supply; lighting; instruments; software; warning and information system	Battery Voltage Error LED Status Fuel Level Total Vehicle Hours
Brake	Parking Brake Engaged
Wheel suspension; steering; axle suspension	GPS Data Direction
Body, cab and interior	Ambient Air Temperature

Direct Onboard Data Access

Applicable for affected models:

EC140E, EC160E, EC530E, EC750E

EC380EHR, EC480EHR, EC750EHR

EC140EL, EC160EL

EC210F, EC230F, EC260F, EC300F, EC360F, EC400F, EC500F, EC560F

EC210F3

EC220FL3, EC300FL3,

EC230FL5, EC260FL5, EC360FL5, EC500FL5

EC400FHR, EC500FHR

ECR145F, ECR255F, ECR355F

ECR145FL5, ECR255FL5

EW205E

JEC230F, JEC500F

Note that the data below are examples and might not be directly accessible from your specific product.

Format and estimated volume

Format: The data is generated onboard the machine and formatted according to industry standards where applicable. Current formats include:

- Fleet Management System Interface standard (FMS)
- SAE J1939 standard of higher-layer communication protocols (J1939)
- VCE, OEM specific (VCE OEM).

Volume: Will vary depending on product and over time. Depending on the type of data elements, the size of the data at each generated instance varies between 2 to 48 bits.

Collection frequency: Different data types are generated at different frequencies (Cycle time)– typically this varies between once every 20 ms to once every 1000 ms.

Access & retention: Data is made directly accessible over the CAN bus interface on the machine. Specific instructions per machine model can be found via the documents in the EU Landing page – under Direct Onboard Data Access - Affected Products/Model List.

Type of data	Examples
Engine / Motor with mounting and equipment	Engine Speed Engine Fuel Rate Engine Total Fuel Consumed
Electric power supply; lighting; instruments; software; warning and information system	Battery Voltage Error LED Status Fuel Level Total Vehicle Hours
Brake	Parking Brake Engaged
Wheel suspension; steering; axle suspension	GPS Data Direction
Body, cab and interior	Ambient Air Temperature
Hydraulic system; special functions; miscellaneous	Catalyst Tank Level