



Vehicle Certification Agency

Guidelines to manufacturers for the notification of errors in the provisional data on CO₂ emissions from passenger cars and light commercial vehicles.

2022

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CHECK LIST FOR ERROR NOTIFICATIONS

In order to ensure the quality of error notifications and minimize the need for follow-up clarifications, manufacturers are strongly encouraged to use this check list. This takes into account the main recurring errors and omissions identified in the course of the past monitoring exercises.

Please note that the Man-field is used to determine the performance of an individual manufacturer. The Mp-field indicates the name of the pool that a manufacturer is a member of.

In these guidelines "entry" means the content of a parameter (e.g., mass), while "record" means a series of entries specifying all the parameters for a vehicle in the monitoring data.

1. Include correct error codes for all changed entries

All records that have been changed must include one of the following error codes in the field "ErrorCode":

- *Error code A* shall be used when the entry is changed for a vehicle that can be identified by the manufacturer.
- *Error code B* shall be used if a vehicle cannot be fully identified by the manufacturer.
- *Error code C* shall be used for vehicles which are falling outside the scope of the Regulation, individually approved or national small series, or unknown.
- *Error code D* shall be used only by the final stage manufacturer of multi-stage N1 vehicles if it is not the manufacturer of the base vehicle.

The data set needs to be returned in its original format and should not be changed by adding, removing, or re-arranging columns.

- a) A comment should be added to the "comment" field to indicate which fields have had data added or changed.
- b) Any entries that have been changed should be highlighted to clearly indicate the changes made.
- c) Whole line entries should not be deleted or removed – use the Error Code and Comments columns to notify any reason why the entry is not applicable.

For more information on which code to use see Section 3.2 of this document.

2. Submit the entire dataset

All records attributed to a manufacturer (or pool) according to the Man-field (or Mp-field) – whether changed or not – need to be submitted with the error notification.

Manufacturers of **multi-stage N1 vehicles** that report data in accordance with Annex III to Regulation (EU) 2019/631, should **add this data to the dataset** and report it **together with the error notification (not as a separate dataset)**.

3. Leave entries blank in case of missing data

Entries for which data is missing or which should not contain data (e.g., where a parameter is not applicable for a given vehicle) should be left **blank**. Please do not use "0" or any other characters for those entries.

4. Entries requiring particular attention

The completeness and accuracy of the following entries are particularly important for identifying the vehicles concerned and for determining the manufacturer's compliance situation:

(a) Vehicle identifiers

- Vehicle identification number (VIN)
- Vehicle interpolation family identifier (VFN)
- Type approval number (TAN)
- Type, Variant and Version code (T, Va, Ve)

(b) Compliance data

- WLTP CO₂ emissions (Ewltp)
- Mass in running order (M)

Where applicable, also:

- Eco-innovation savings (Erwltp) and eco-innovation code (IT)

5. Submission of the dataset via ShareFile

The dataset should be submitted in its **original format** to the Vehicle Certification Agency (VCA) through their secure ShareFile platform using the link provided.

Notification of submission of the dataset should be provided via email, and **must** include a summary declaration in the format provided in Annex I of these guidelines (page 12) to the following mailbox: fleetaverage@vca.gov.uk

1. INTRODUCTION

This document provides guidance to manufacturers that wish to notify errors in the provisional CO₂ emissions monitoring data for **calendar year 2021** to the VCA.

Regulation (EU) 2019/631 as amended sets CO₂ emission performance standards for new passenger cars and for new light commercial vehicles (“vans”) in the UK. Under Article 7(1) to (6), it sets out the monitoring and reporting requirements, with more details set out in Annexes II and III to that Regulation.

Commission Implementing Regulations (EU) 1014/2010 and (EU) 293/2012 as amended, set out more detail on monitoring and reporting provisions for cars and vans, respectively.

2. NOTIFICATION OF ERRORS

2.1. Procedure

Manufacturers can notify the VCA of errors in the provisional CO₂ emissions dataset. The notification must be submitted to the VCA within **three months** from the receipt of the VCA's notification of the provisional calculation of the average specific CO₂ emissions and specific emissions targets (see Article 7 of Regulation (EU) 2019/631 as amended).

Manufacturers should notify the errors using the format and error codes indicated in Article 9 of Regulation (EU) 1014/2010 as amended for passenger cars and Article 10a of Regulation (EU) 293/2012 as amended for vans.

For manufacturers of **multi-stage N1 vehicles** who have not already reported data in accordance with point 1.2.2 of Annex III to Regulation 2019/631 or need to make corrections to data previously reported, this data should be added in the relevant columns of the dataset and be communicated to the VCA as part of the error notification.

The dataset should be submitted in its **original format** to the Vehicle Certification Agency (VCA) through their secure ShareFile platform using the link provided.

Notification of submission of the dataset should be provided via email, and **must** include a summary declaration in the format provided in Annex I of these guidelines (page 12) to the following mailbox: fleetaverage@vca.gov.uk

Also, in the case of **pools**, the error notifications should be submitted **separately for each individual manufacturer** that is part of the pool, into that manufacturer's folder in ShareFile.

Once the notification of errors is uploaded to ShareFile, the VCA will assess the error notification and will get back to the manufacturer (or pool manager) in case notified errors cannot be accepted without further clarification. The manufacturer (or pool manager) responsible should reply to such clarification requests **within 10 working days**.

2.2. Manufacturer name and contact details

In the notification of errors, manufacturers must indicate the manufacturer name they have notified to the VCA pursuant to Article 8 of Regulation (EU) 1014/2010 as amended and Article 9 of Regulation (EU) 293/2012 as amended.

Once GB type-approval is mandatory, a manufacturer established outside the EU must provide the VCA where possible with contact details of a UK/GB representative. Once GB type-approval is mandatory it is expected this will be the same entity appointed to represent the manufacturer before GB type approval authorities.

Changes to the manufacturer's contact person should be communicated to the VCA without delay via the functional mailbox fleetaverage@vca.gov.uk.

2.3. Description of the data

Annex II to these guidelines sets out a detailed description of the different entries in the dataset. Annex III to these guidelines gives examples of the data records and possible false content.

3. CORRECTION OF ERRORS IN THE PROVISIONAL MONITORING DATA

3.1. Introduction

Priority should be given to verifying the completeness and accuracy of those entries in the dataset that are directly relevant for the calculation of the specific emission targets and the average specific emissions:

- WLTP CO₂ emissions (Ewltp).
- Mass in running order (M).
- Eco-innovations savings (Erwltp) and codes (IT): verify that both entries are completed for each record where this is relevant, and that only the codes and savings of eco-innovations approved under WLTP are included.

For the purpose of correctly identifying the vehicles concerned, manufacturers should also verify the following entries:

- Vehicle interpolation family identifier (VFN).
- Type approval number (TAN).
- Type (T), Variant (Va), Version (Ve).

Manufacturers should verify all the above entries and, where necessary, highlight and correct the dataset or complete it where entries are missing.

3.2. Correcting the data set

When notifying corrections to the VCA, a manufacturer or pool manager shall include the whole dataset, containing all records and all entries that are relevant, i.e., both those that it considered correct as well as those that have been corrected.

For each correction made, an **error code – A, B, C or D** as explained below – should be indicated in a separate column with the heading "**Errorcode**" together with the record concerned. The error codes represent different possible modifications of the dataset as explained below.

The column "**ManufacturersComments**" allows for providing additional relevant information that the manufacturer would like to provide to aid acceptance of the correction.

For any correction notified, the VCA may request supporting documents (e.g., a copy of the certificate of conformity) before accepting the correction in the final dataset.

3.2.1. Error Code A

Error Code A shall be used when an entry is changed for a vehicle that can be identified by the manufacturer. This concerns corrections of records where the manufacturer has the necessary information about the vehicle to correct or complete the data.

For example, in case eco-innovation savings have not been reported by the Driver and Vehicle Licensing Agency (DVLA), a manufacturer may correct the dataset by completing the entries "IT" and "Erwltpl" while using Error Code A.

Following the verification by the VCA, the corrected records will be taken into account for the final calculation of the specific emissions target and the average specific CO₂ emissions of the manufacturer.

Should the record include the Error Code A but not have been changed, the VCA will use the original record for the final calculations.

3.2.2. Error Code B

Error Code B should only be used when a record that can be attributed to a specific manufacturer contains entries for CO₂ emissions and mass but the vehicle referred to in the record cannot be fully identified by the manufacturer, because the VIN is not reported, or is clearly wrong or incomplete and it is not possible to correct it.

The use of Error Code B should therefore be **exceptional**.

Records with Error Code B will be taken into account for the final calculations, but an **error margin** will be applied to take account of the fact that the values could not be verified by the manufacturer.

3.2.3. Error Code C

Error Code C shall be used if the record refers to a vehicle that is either:

- falling out of the scope of Regulation (EU) 2019/631 as amended (see point 3.3.3 of these Guidelines for more details on the evidence needed to support such claims). In this case the entry in column "Mh" should be changed to "OUT OF SCOPE."

or

- individually approved or approved as national small series: this should be substantiated by providing a copy of the individual approval certificate or national approval certificate. In this case the entry in column "Mh" should be changed to "AA-IVA" or "AA-NSS."

or

- unknown: this is the case for a record attributed to a manufacturer that is unable to identify the vehicle concerned after considering all parameters available in the record, i.e., where the VFN, VIN **and** the TVV are incorrect, missing, or not matching. In this case the entry in column "Mh" should be changed to "UNKNOWN".

The manufacturer notifying the error should indicate in the column "ManufacturersComments" the reasons (see above) for which the error code is used.

Records with Error Code C **will not be taken into account** for the final calculation of the specific emissions target and the average specific emissions. There is no need to modify numerical or text values except the column Mh where applicable.

3.2.4. Error Code D (multi-stage N1 vehicles)

Error Code D should be used in cases where only the name of the manufacturer of the final completed vehicle is recorded in the provisional dataset, and not the name of the base vehicle manufacturer.

Where available, the manufacturer notifying the error should provide in the column "ManufacturersComments" the name of the base vehicle manufacturer as well as the TAN of the base vehicle as stated in the type approval documents or the certificate of conformity.

Records with Error Code D **will not be taken into account** for the final calculation of the average specific emissions or the specific emission targets.

3.3. Specific cases

3.3.1. Errors in the attribution of manufacturer

If a manufacturer considers that another manufacturer is responsible for a record that has been attributed to it, it should change the manufacturer name in the column "Mh" while using Error Code A.

If the record is transferred from one manufacturer to another, **both manufacturers** should correct the Mh entries and use Error Code A. In such cases, a copy of the certificate of conformity of the vehicles should be included in the error notification.

3.3.2. Duplicates

Where more than one record is associated to the same VIN, the Mh-field for all of them is marked in the provisional data as "DUPLICATE" and they have not been taken into account for the provisional calculations.

Duplicate records are also reported in a separate file in ShareFile.

Manufacturers should verify these duplicate records and confirm which record shall be taken into account for the final calculations by correcting the Mh-field and using Error Code A.

Duplicate records not to be taken into account for the final calculations shall be marked with Error Code C.

3.3.3. *Issues relating to the scope of Regulations (EU) 2019/631 as amended*

Vehicles fall **within the scope** of Regulation (EU) 2019/631 and are taken into account for the purposes of calculating the average specific emissions and specific emission targets, where they have been **registered for the first time** in the UK. A vehicle first registered outside the UK falls within scope if it is registered in the UK within three months of that vehicle's initial registration.

Similarly, if a vehicle was first registered in the UK, but then within 3 months of that initial registration moved and re-registered outside of the UK, it will no longer be in scope.

For 2021, vehicles registered in Northern Ireland between 1st January to 31st August are out of scope of all CO₂ emission calculations pursuant to Regulation (EU) 2019/631 as amended, Article 6 (a) and (b).

3.3.3.1. *Vehicle category and reference mass*

A vehicle falls within the scope of the Regulation in the following cases:

- If registered under category M1, irrespective of its reference mass¹
- If registered under category N1, with a reference mass
 - a) of not more than 2610 kg and type-approved under Regulation (EC) No 715/2007,
or
 - b) of 2380 to 2610 kg and type-approved under Regulation (EC) No 595/2009 ('HDV-derived vans', i.e., downward extension of the heavy-duty emissions approval), or
 - c) of 2610 kg to 2840 kg and type-approved under Regulation (EC) No 715/2007
with entry 49.4 of the CoC (WLTP emissions of CO₂) completed (upward extension of the light-duty emission approval).

3.3.3.2. *Date of first registration*

A vehicle is considered to be falling within scope of the monitoring exercise for a given calendar year if it is first registered in the calendar year concerned. The date of first registration is determined by the DVLA and is on that basis reported.

A claim by a manufacturer that a vehicle was registered in a calendar year other than that reported must be supported by evidence, such as a copy of a registration certificate based on the templates set out in Council Directive 1999/37/EC, with a clear indication in entry B of the date of first registration.

Should a manufacturer identify that the number of registrations reported is significantly

¹ The reference mass of a vehicle is defined as the mass in running order + 25 kg.

lower than could reasonably be expected based on the number of vehicles it has sold over the whole calendar year, this should be reported separately to the VCA, indicating the number of registrations considered missing and any information relevant for raising the issue.

3.3.3.3. End-of-series vehicles

The UK may in accordance with Article 49 of Regulation (EU) 2018/858 permit vehicles to be placed on the market and registered after the last date of registration specified in Regulation (EU) 2017/1151 during the following periods:

- Complete vehicles: for a period of 12 months from last date of registration.
- Completed vehicles: for a period of 18 months from last date of registration.

For records reported in the provisional data, if the date of first registration falls within this end-of-series period, the vehicle will be taken into account for the calculation of the average specific emissions/specific emissions target.

If the manufacturer claims that a vehicle should not be taken into account, due to the vehicle being first registered after the end-of-series period, this should be supported by the applicable type-approval documentation indicating the relevant emission character with its last date of registration.

3.3.3.4. Special purpose vehicles

Special purpose vehicles (SPV) fall outside the scope of Regulation (EU) 2019/631 in accordance with its Article 2(3).

A vehicle is considered an SPV if the certificate of conformity includes the following:

- **Complete or completed vehicles:** entry 51 of the CoC specifies one of the following codes: SA, SB, SC, SD, SE, SF, SG, SH, SJ, SK, SL or SM (point 5 of Part A of Annex I to Regulation (EU) 2018/858).
- **Incomplete N1 vehicles:** entry 0.4 of the CoC specifies N1S.

A claim that a vehicle is an SPV should be supported by a copy of the CoC with the above entries completed as applicable, or a copy of the relevant type approval documentation proving that the TVV (entry 0.2 of the CoC) the vehicle belongs to is covered by the codes mentioned above and specified in entries 0.4 or 9.1 of the type-approval information document. Documentation other than the certificate of conformity or the type approval documentation will not be considered. Where such a correction is made, the entry "Mh" should be changed to "OUT OF SCOPE".

4. MULTISTAGE N1 VEHICLES: ADDITIONAL DATA TO BE REPORTED AS PART OF THE ERROR NOTIFICATION

If an N1 vehicle is type-approved in multiple stages ('multi-stage van', 'MSV'), the base vehicle manufacturer, i.e., the manufacturer of the incomplete or complete base vehicle, will be responsible for the CO₂ emissions of the completed vehicle (see Point 2 of Part B of Annex III to Regulation (EU) 2019/631).

4.1. MSV data

A specific procedure is set out in Annex III to Regulation (EU) 2019/631, according to which the base vehicle manufacturer may determine the emission and mass values for MSV (MSV data).

The base vehicle manufacturer shall, in accordance with Annex III of Regulation (EU) 2019/631, calculate and report the following MSV data:

- **Incomplete base vehicles:** the calculated CO₂ emissions (CO_{2mon}) and the calculated mass in running order (M_{mon}).
- **Complete base vehicles:** the CO₂ emissions (CO₂) and mass in running order of the complete base vehicle (MRO_{baseC}) as indicated in the certificate of conformity of that base vehicle.

Where these MSV data are reported, they will be taken into account by the VCA for determining the average specific emissions and the specific emissions target of the base vehicle manufacturer.

Should the base vehicle manufacturer not report the above values, the CO₂ emissions and/or mass in running order of the completed vehicle will be used for that purpose instead.

4.2. Ewltp and M (completed vehicle)

The entry "Ewltp" contains the CO₂ emissions of the completed vehicle as reported by the DVLA and the entry "M" contains the mass in running order of the completed vehicle as reported by the DVLA.

Where MSV data is reported, these entries should in principle not be replaced or changed by the base vehicle manufacturer as it is assumed that the base vehicle manufacturer does not have information about the CO₂ emissions or mass in running order of the completed vehicle. Only if the base vehicle manufacturer is also the manufacturer completing the vehicle and can provide the CoC of the completed vehicle, a correction of the Ewltp or M may be accepted.

4.3. Reporting the MSV data

The MSV data should be reported by the base vehicle manufacturer as part of its error notification in the columns specifically foreseen for this purpose²: "CO_{2mon}", "M_{mon}", "CO₂", "MRO_{base}" and "MRO_{baseC}".

² Next to these data, manufacturers of incomplete base vehicles are also required to report the following data, which have been used to calculate the MSV data: frontal area of the incomplete base vehicle; rolling resistance of incomplete base vehicle; mass representative of the vehicle load of the incomplete base vehicle.

MSV data should not be reported as a separate dataset, but only one dataset will be used, including both the corrections made as part of the verification of the provisional data and any added MSV data.

The MSV data contains only new values and not corrections, so no error codes should be indicated where such data is added to the dataset.

4.4. MSV out of scope

A manufacturer may report an MSV as falling outside the scope of the Regulation if the reference mass exceeds the maximum thresholds (or, where range is mentioned, the maximum of the range) mentioned in section 3.3.3.1 of these guidelines.

The reference mass to be used for this purpose should be calculated as follows:

- **Incomplete base vehicles:** monitoring mass (M_{mon}) + 25 kg.
- **Complete base vehicles:** mass in running order of the complete base vehicle (MRO_{baseC}) + 25 kg.

In this case, the manufacturer should add the MSV data in the relevant columns and change entry "Mh" to "OUT OF SCOPE", adding error code C.

In case the manufacturer did not report the monitoring mass or the mass in running order of the complete base vehicle, the **reference mass of the completed vehicle** will be used to decide whether or not the vehicle concerned falls into the scope of the Regulation.

ANNEX I
Notification Standard Format

"Notification of error – [CO₂ from M1 category vehicles / N1 category vehicles]"

In accordance with Article 7(5) of Regulation (EU) 2019/631 as amended, *[name of the manufacturer or pool and its members]* hereby notifies the VCA of certain errors in the data on CO₂ emissions from vehicles, on the basis of which the following corrections should be made to the provisional calculations provided by the VCA for *[calendar year]*:

the average specific emissions of CO₂ of *[notified provisional figure]* should be replaced by *[corrected figure]*.

the specific emissions target of *[notified provisional target]* should be replaced by *[corrected target]*.

the difference between the average specific emissions of CO₂ and the specific emissions target should be *[difference]*.

the average mass in running order for all our new *[passenger cars/vans]* in that calendar year was *[average mass in running order]*:

The above corrections are based on the errors identified in the provisional data on CO₂ emissions published by the VCA as specified in the data files attached.

I hereby declare that I *[name]* am legally empowered to represent *[name of the manufacturer / pool and its members]* and that the information provided in this notification is true and accurate to the best of my knowledge.

Signature

Date

[name, function]

[name of the manufacturer / pool and its members]

ANNEX II
Description of the data

Content of the provisional dataset	Cars	Vans	Section in certificate of conformity (unless otherwise specified)
Identification number (Id)	✓	✓	N/A
Member State (Ms)	✓	✓	N/A
Name of the pool (Mp)	If applicable	If applicable	N/A
Interpolation family identifier (Vfn)	✓	✓	0.2.3.1
Name of the manufacturer UK standard denomination (Mh)	✓	✓	0.5
Name of the manufacturer OEM declaration (Man)	✓	✓	0.5, 0.5.1 (MSV)
Manufacturer name (MS registry denomination) (Mms)	✓	✓	
Type approval number (Tan)	✓	✓	0.11
Type (T)	✓	✓	0.2
Variant (Va)	✓	✓	0.2
Version (Ve)	✓	✓	0.2
Make (Mk)	✓	✓	0.1
Commercial name (Cn)	✓	Optional	0.2.1
Category of the vehicle type approved (Ct)	✓	✓	0.4
Category of the vehicle registered (Cr)	✓	✓	Point J of Part I of the Registration certificate
Mass in running order (M) (in case of MSVs, this is the mass in running order of the completed vehicle)	✓	✓	13
WLTP test mass (Mt)	✓	✓	47.1.1
Technically permissible maximum laden mass (TPMLM)	N/A	✓	16.1
Specific emissions of CO ₂ (Enedc)	If applicable	N/A	49.1

Content of the provisional dataset	Cars	Vans	Section in certificate of conformity (unless otherwise specified)
Specific emissions of CO ₂ (Ewltp)	✓	✓	49.4 (combined, or where applicable, weighted combined)
Foot-print – Wheelbase (W)	✓	✓	4
Foot-print – track width steering axle (At1)	✓	✓	30
Foot-print – track width other axle (At2)	✓	✓	30
Fuel type (Ft)	✓	✓	26
Fuel mode (Fm)	✓	✓	26.1 (BEV and OVC-HEV identified based on section 23 and 23.1)
Engine capacity (Ec)	✓	✓	25
Electric energy consumption (Z)	✓	✓	49.5.1 (pure EV) or 49.5.2 (OVC-HEV)
Eco-innovation code(s) (It)	✓	✓	49.3.1
Total eco-innovation savings (Erwltp)	✓	✓	49.3.2.2
Registrations (R)	✓	✓	
Year	✓	✓	N/A
Status	✓	✓	
Vin (Vehicle Identification Number)	✓	✓	
ErrorCode	✓	✓	
ManufacturerComments	✓	✓	

1. Short description of selected entries

This section contains a short description of some of the entries in the provisional dataset. Further details are given in Annex III.

• **Manufacturer name**

The dataset contains two names for each manufacturer: the UK standards denomination (Mh) and the name as declared by the manufacturer (MAN).

a) Name of the manufacturer – UK standard denomination (Mh)

The UK *standard denomination* is the same as the name assigned by the Commission on the basis of the information submitted by the national authorities and the name declared by manufacturers in accordance with Article 5 of Regulation (EU) 2021/392.

b) Name of the manufacturer – Manufacturer denomination (Man)

This entry corresponds to the name indicated in section 0.5 of the certificate of conformity or section 0.5.1 in case of multi-stage vehicles (manufacturer of the base vehicle). Any changes in the official name of the manufacturer should be communicated to the VCA without delay in accordance with Article 5 of Regulation (EU) 2021/392.

The average mass, average specific CO₂ emissions and specific CO₂ emission target will be calculated for the manufacturer as identified by its Manufacturer denomination

- **Category of vehicle type approved (Ct) and category of vehicle registered (Cr)**

It is the vehicle category registered that determines whether a vehicle is considered as M1 or N1 for the purpose of the CO₂ emission standards.

In the case of multi-stage N1 vehicles, Cr should indicate the vehicle category registered of the completed vehicle.

- **Mass in running order (complete/completed vehicle) (M)**

It should be noted that the mass in running order is **not the same as the actual mass** of the vehicle. The value to be reported is the **single value** recorded in the certificate of conformity (Section 13) and not a range taken from the type approval documentation.

The manufacturer should report separately the mass values for multi-stage N1 vehicles as set out in section 4 of this document.

- **WLTP test mass**

It should be noted that the WLTP test mass is **not the same as the actual mass** of the vehicle.

- **Fuel type, fuel mode**

For the **fuel mode** the permitted entries are the following:

"M" for mono-fuel vehicles, i.e., vehicles able to run on only one fuel, either petrol, diesel, LPG, natural gas (NG) or hydrogen. Note that also for **Fuel Cell electric vehicles**, i.e., vehicles equipped with a powertrain containing exclusively fuel cell(s) and electric machine(s) as propulsion energy converter(s), the fuel mode to be reported is "M."

"B" for bi-fuel vehicles, i.e., vehicles with two separate fuel storage systems, which are designed to run primarily on only one fuel at a time. This covers vehicles that can run on petrol and either LPG, NG/biomethane or hydrogen.

"F" for flex-fuel vehicles, i.e., vehicles with one fuel storage system that can run on different mixtures of two or more fuels; this concerns more specifically 'flex fuel ethanol vehicles,' which can run either on petrol or on a mixture of petrol and ethanol up to an 85 per cent ethanol blend (E85).

"E" for battery electric vehicles (BEV), i.e., "pure" electric vehicles (NOT hybrid

vehicles). These vehicles can be identified using section 23 of the certificate of conformity.

“P” for off-vehicle charging hybrid electric vehicles (OVC-HEV), i.e., plug-in hybrid vehicles. These vehicles can be identified using section 23.1 of the certificate of conformity. Their “weighted combined” CO₂ values are specified in section 49.1. (NEDC) and section 49.4 (WLTP) of the certificate of conformity.

“H” for Not-Off vehicle charging hybrid electric vehicles (NOVC-HEV). These vehicles can be identified using section 23.1 of the certificate of conformity. They cannot take electric energy from external sources and are only fueled with one of fuel types specified in section 26 of the CoC. The CO₂ values for that fuel shall be reported.

The following table specifies the entries for fuel type and fuel mode, for each fuel combination, as well as the corresponding CO₂ value to be reported.

Fuel combination	Fuel type to be reported	Fuel mode to be reported	Fuel for which the CO₂ value should be reported (entry "combined" unless mentioned otherwise)
Petrol	Petrol	M	Petrol
Diesel	Diesel	M	Diesel
LPG	LPG	M	LPG
Natural Gas (NG)	NG	M	NG
Hydrogen	Hydrogen	M	Hydrogen In case of Fuel Cell vehicles, the CO ₂ emission value is zero
Petrol-LPG	LPG	B	LPG
Petrol-NG	NG	B	NG
Petrol-hydrogen	Hydrogen	B	Hydrogen
Petrol-E85	E85	F	Petrol
Electric	Electric	E	CO ₂ emission value is zero
Off vehicle charging hybrid electric vehicle (OVC-HEV) (plug-in hybrid)	Fuel type combination with electricity: Petrol/Electric; or E85/Electric; or Diesel/Electric; or Hydrogen/Electric	P	Weighted, combined CO ₂ emission value (CoC should contain only this value)
Not off-vehicle charging hybrid electric vehicle (NOVC-HEV) (Non-plug-in hybrid)	Fuel type stated in CoC: Petrol; or E85; or Diesel	H	Fuel type stated in CoC (which should contain only one value)

- *Maximum net power (Ep)*

The “maximum net power” is specified in Section 27.1 (internal combustion engine) and Section 27.3 (electric motor)¹ of the certificate of conformity. In the case of vehicles with both an internal combustion engine and an electric motor (such as plug-in hybrid electric vehicles), only the value for the internal combustion engine should be reported.

- *Eco-innovation code(s) (IT) and total eco-innovation savings (Erwltp)*

Where technologies approved as an eco-innovation are applied, the code of the eco-innovation or group of eco-innovations and the corresponding WLTP CO₂ emission savings are indicated in Section 49.3.1. and 49.3.2.2 of the certificate of conformity, respectively.

The entry IT should include the code of the approval authority (e.g., "e1") and the individual code of each eco-innovation (e.g., "29"). For example, an eco-innovation with code 29, which is certified by the German type-approval authority should be entered as "e1 29".

From 2021 onwards, eco-innovations approved in relation to NEDC are no longer valid and therefore only IT codes and CO₂ emission savings corresponding to eco-innovations approved in relation to WLTP should be reported.

¹ Not the “maximum 30 minutes power” (entry 27.4 of the certificate of conformity).

ANNEX III

Examples of data records and possible false content

The column *field length* is the total length of the data field.

The column *content* contains more information on the maximum and minimum values, and/or details on the content. An example of a decimal number with field length 6 is a number with maximum 3 integers, a point separator and 3 decimal digits.

The column *false content* gives examples of data being incorporated in an **incorrect format**. Typical **false entries** are:

- using a comma as the separator (whereas the correct separator to be used is a point).
- using a separator for thousands (which should not be used).
- reporting decimals where integers should be used.

[OEM name] _corrected data M1 category

Parameter	Short name	Format	Field length (min/max/rules)	Content (min/max/rules)	Sample content	False content	Unit	Remarks
ID	Id	Number	Max 30	-	-	-	-	This is the unique record number attributed in the national registry to each record, in order to streamline and simplify exchanges over errors in the dataset. <u>It should not be changed.</u>
Country	Ms	Text	Max 2	-	BE	CH Switzerland		In accordance with ISO standard 3166.
Name of the Pool	Mp	Text	Max 120	-	-	-		
Vehicle family identification number	Vfn	Text	Max 30	-	IP-nnnnnnnnnnnnnnnn-WMI-x	RM21BD2		
Manufacturer name UK standard denomination	Mh	Text	Max 120	-	-	-	-	This is the short name assigned by the Commission to easily identify each manufacturer that VCA will continue to use:
Manufacturer name OEM denomination	Man	Text	Max 120	-	-	-	-	This is the name indicated in section 0.5 of the certificate of conformity or section 0.5.1 in case of multi-stage vehicles (manufacturer of the base vehicle).
Manufacturer name (MS registrydenomination)	Mms							
Type approval number	Tan	Text	Max 120	-	e1*2001/116*0249*02	e1*2001/116*24 9*02	-	-
Type	T	Text	Max 120	-	-	-	-	-
Variant	Va	Text	Max 120	-	-	-	-	-
Version	Ve	Text	Max 120	-	-	-	-	-
Make	Mk	Text	Max 120	-	-	-	-	
Commercial name	Cn	Text	Max 120	-	-	-	-	
Category of the vehicle type approved	Ct	Text	Max 3	-	M1; M1G	M2	-	

Category of the vehicle registered	Cr	Text	Max 3		M1; M1G	M2		
Mass in running order	M	Integer	Max 4	Min: 300 Max: 5000	1589	1589.4 1'589	kg	
WLTP test mass	MT	Integer	Max 4	Min: 300 Max: 5000	1589	1589.8 1'589	kg	
Specific CO ₂ Emissions (NEDC)	Enedc	Integer	Max 3	Min: 0 Max: 49	48	65 142.34	g/km	"Combined" value or, in the case of off vehicle charging hybrid electric vehicles, "weighted combined". To be reported only for passenger cars with Enedc of less than 50 g CO ₂ /km
Specific CO ₂ Emissions (WLTP)	Ewltp	Integer	Max 3	Min: 0 Max: 700	142	142.34	g/km	"Combined" value or, in the case of off vehicle charging hybrid electric vehicles, "weighted combined"
Wheel Base	W	Integer	Max. 4	Min: 500 Max: 6000	3300	3300.1 3'300	mm	
Axle width steering axle	At1	Integer	Max. 4	Min: 500 Max: 3000	1600	1600.1 1'600	mm	
Axle width other axle	At2	Integer	Max. 4	Min: 500 Max: 3000	1600	1600.1 1'600	mm	
Fuel type	Ft	Text	Max 120		petrol	gasoline	-	See table in Annex II, point 2.
Fuel mode	Fm	Text	1	M, B, E, F, P, H	M	A	-	See table in Annex II, point 2.
Engine capacity	Ec	Integer	Max. 4		1589	1589.4 1'589	cm ³	Leave blank for electric and hydrogen (fuel cell) vehicles.
Electric energy consumption	Z	integer	Max 3		101	101.4	Wh/km	
Innovative technology or group of innovative technologies	IT	Text	Max 25		e1 29 32	e1 10 15	-	Only include WLTP related eco-innovation codes
Emissions savings through innovative technologies (WLTP)	Erwltp	Two decimal places	Max 4	Min 0.5	0.83	0.4	g/km	Only include WLTP related emissions savings.
Year								
Registration	R	Integer	-	1	1	4	-	

Status								
Vehicle identification number	Vin	Text	Max 17	-	WDB9066331S111111	WDB9066331S		17 characters
ErrorCode		Text						Error Code. See section 3.2 of this guidance
ManufacturersComments		Text						The entry should be used for any kind of comments.

[OEM name]_corrected data N1 category

Parameter	Short name	Format	Field length (min/max/rules)	Content (min/max/rules)	Sample content	False content	Unit	Remarks
ID	Id	Text	Max 30	-	-	-	-	This is the unique record number attributed in the national registry to each record, in order to streamline and simplify exchanges over errors in the dataset. <u>It should not be changed.</u>
Vehicle identification number	Vin	Text	Max 17		WDB9066331S 111111	WDB9066331S		17 characters
Country	Ms	Text	Max 2	-	BE	CH Switzerland		In accordance with ISO standard 3166
Name of the Pool	Mp	Text	Max 120	-	-	-		
Vehicle family identification number	Vfn	Text	Max 30	-	IP- nnnnnnnnnn nnnn- WMI-x	RM21BD2		
Manufacturer name EU standard denomination	Mh	Text	Max 120	-	-	-	-	This is the short name assigned by the Commission to easily identify each manufacturer that VCA will continue to use :
Manufacturer name OEM denomination Complete / base vehicle	Man	Text	Max 120	-	-	-	-	This is the name indicated in section 0.5 of the certificate of conformity or section 0.5.1 in case of multi-stage vehicles (manufacturer of the base vehicle).
Manufacturer name (MS registrydenomination)	Mms							
Type approval number	Tan	Text	Max 120	-	e1*2001/116* 0249 *02	e1*2001/116*249 *02	-	
Type	T	Text	Max 120	-	-	-	-	
Variant	Va	Text	Max 120	-	-	-	-	
Version	Ve	Text	Max 120	-	-	-	-	
Make	Mk	Text	Max 120	-	-	-	-	

Commercial name	Cn	Text	Max 120	-	-	-	-	This field is optional.
Category of the vehicle type approved	Ct	Text	Max 3	-	N1; N1G	N2	-	
Category of the vehicle registered	Cr	Text	Max 3	-	N1; N1G	N2	-	
WLTP test mass	Mt	Integer	Max 4	Min: 300 Max: 5000	1589	1589.8 1'589	kg	
Mass in running order Completed/complete vehicle	M	Integer	Max 4	Min: 300 Max: 5000	1589	1589.4 1'589	kg	
Specific CO ₂ Emissions (NEDC)	Enedc	Integer	Max 3	Min: 0 Max: 49	48	65 142.34	g/km	"Combined" value or, in the case of off vehicle charging hybrid electric vehicles, "weighted combined". To be reported only for passenger cars with Enedc of less than 50 g CO ₂ /km
Specific CO ₂ Emissions (WLTP)	Ewtp	Integer	Max 3	Min: 0 Max: 700	142	142.34	g/km	"Combined" value or, in the case of off vehicle charging hybrid electric vehicles, "weighted combined"
Wheel Base	W	Integer	Max. 4	Min: 500 Max: 9999	3300	3300.1 3'300	mm	
Axle width steering axle	At1	Integer	Max. 4	Min: 500 Max: 3000	1600	1600.1 1'600	mm	
Axle width other axle	At2	Integer	Max. 4	Min: 500 Max: 3000	1600	1600.1 1'600	mm	
Fuel type	Ft	Text	Max 120		petrol	gasoline	-	See table in Annex II, point 2.
Fuel mode	Fm	Text	1	M, B, E, F, P, H	M	A	-	See table in Annex II, point 2.
Engine capacity	Ec	Integer	Max. 5	Min: 0	1589	1589.4 1'589	cm ³	Leave blank for electric and hydrogen (fuel cell) vehicles.
Electric energy consumption	Z	integer	Max 3	Min: 0	101	101.4	Wh/km	
Innovative technology or group of innovative technologies	IT	Text	Max 25		e1 29 32	e1 10 15	-	Only include WLTP related eco-innovations
Emissions savings through innovative technologies (WLTP)	Erwtp	Two decimal places	Max: 4	Min:0.5	0.83	0.4	g/km	Only include WLTP related emissions savings

Registration	R	Integer	-	1	1	4	-	
Year	Year							
Status	Status							
Technically permissible maximum laden mass	TPMLM	Integer	Max 4	Min: 300 Max: 5000	1589	1589.4 1'589	kg	
Interpolation Family Identifier	MsvInterpolationFamilyIdentifier							
Monitoring CO ₂ emissions of the complete base vehicle	MsvMonitoringCO ₂ emissions	Integer	Max 3	Min: 0 Max: 700	142	142.34	g/km	The value should be determined in accordance with point 1.2.4. of Annex III of Regulation (EU) 2019/631
Specific CO ₂ emissions of the complete base vehicle	MsvCO ₂	Integer	Max 3	Min: 0 Max: 700	142	142.34	g/km	
Frontal area of the incomplete base vehicle – Method (i)	MsvAf1	Two decimal places	Max 4	Min: 0 Max: 10	1.12	-	m ²	This entry should be filled out in case method (i) referred to in point 1.2.4.(c) of Annex III of Regulation 2019/631 is used
Frontal area of the incomplete base vehicle – Method (ii)	MsvAf2	Two decimal places	Max 4	Min: 0 Max: 10	1.12	-	m ²	This entry should be filled out in case method (ii) referred to in point 1.2.4.(c) of Annex III of Regulation 2019/631 is used
Frontal area of the incomplete base vehicle – Method (iii)	MsvAf3	Two decimal places	Max 4	Min: 0 Max: 10	1.12	-	m ²	This entry should be filled out in case method (iii) referred to in point 1.2.4.(c) of Annex III of Regulation 2019/631 is used
Rolling resistance of incomplete base vehicle	MsvRollingResistance	One decimal place	Max 3	Min: 0 Max: 20	5.5	-	kg/tonne	The value should be determined in accordance with point 1.2.4.(b) of Annex III of Regulation (EU) 2019/631
Monitoring mass	MsvMonitoringMass	Integer	Max 4	Min: 300 Max: 5000	1589	1589.4 1'589	kg	
Mass in running order of the incomplete base vehicle	MsvMRObase	Integer	Max 4	Min: 300 Max: 5000	1589	1589.4 1'589	kg	Only for complete base vehicle
Mass in running order of the incomplete base vehicle	MsvMRObaseC	Integer	Max 4	Min: 300 Max: 5000	1589	1589.4 1'589	kg	Only for complete base vehicle
Technically permissible maximum laden mass	MsvTpmlm							
Mass representative of the vehicle load of the incomplete base vehicle	MsvM _{vl}	Integer	Max 4	-	1589	-	kg	The value should be determined in accordance with point 1.2.4.(b) of Annex III of Regulation (EU) 2019/631

ErrorCode	ErrorCode	Text	1	A, B, C, D	A			
ManufacturersComments	Manufacturerscomments	Text						