



Guidelines on the monitoring and reporting of CO₂ emissions from light duty vehicles

Version 8 – December 2016

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DATA QUALITY CHECK LIST

Based on experience with past monitoring exercises some recurring errors have been identified. In order to increase data quality Member States are strongly encouraged to use this check list before data submission.

1. Are all **mandatory parameters** included in the submission?

Please pay special attention to the entries necessary for the identification of the vehicles (TAN, Type, Variant and Version). The completeness rate (defined as the ratio between the number of registrations having a value for a specific entry and the total number of registrations) of these parameters should be as high as possible.

2. Are the **TAN, Type, Variant and Version** reported correctly?

TANs must consist of four sections which must be separated by the '*'-character. Except for the lower case letter 'e', the TAN must include numbers only. For example, instead of the letter 'O', the number '0' must be used. Errors in the format should be corrected before submission. EC type-approvals of small series (e13*KS07/46*0001*00) and national type approvals (e4*NKS*0001*00) include 'KS' and 'NKS' respectively,

Example:

Correct TAN	Wrong TAN
e1*2001/116*0307*33	e1*2001/116/0307*33 e1*01/116*0307*33 e1*2001/116*O3O7*33 e1*2001/116*O3O7* e1*2001/116*O3O733

3. Are the **manufacturer names** consistent with the official manufacturer list?

Please cross-check the manufacturer names in the dataset with the official manufacturer list published on CIRCABC: https://circabc.europa.eu/sd/a/00e8fe6c-3ad8-4e9f-9a39-437501f609a4/Manufacturer_list.xls

Example:

Correct MAN	Wrong MAN
AVTOVAZ JSC	AVTOVAZ
CHEVROLET ITALIA SPA	CHEVROLET ITALIA
DAIMLER AG	DAIMLER AG STUTTGART
FERRARI SPA	FERRARI
JAGUAR LAND ROVER LIMITED	JAGUAR CARS LTD
JAGUAR LAND ROVER LIMITED	LAND ROVER
MAGYAR SUZUKI CORPORATION LTD	MAGYAR SUZUKI
RENAULT SAS	RENAULT

Please pay special attention to those manufacturers that share part of the name (e.g. HONDA AUTOMOBILE CHINA CO LTD, HONDA MOTOR CO LTD, HONDA

TURKIYE AS, HONDA OF THE UK MANUFACTURING LTD; RENAULT SAS, RENAULT TRUCKS).

If a manufacturer of a registered vehicle does not appear in the official manufacturer list, please provide a copy of the TAD, CoC or Type approval number of the vehicle assigned to this new manufacturer so that the manufacturer list can be updated.

4. *Are the vehicles reported in the submission within the scope of the Regulation?*

Please ensure that special purpose vehicles (caravans, hearses, ambulances etc.) are not included in the submission. E.g. if the make is ANDRIA or KNAUS etc. most probably those vehicles are caravans and therefore out of scope of the regulation.

5. *Are the combinations of manufacturer name and make correct?*

The following table shows **wrong** combinations which should be corrected before submission:

Mh - manufacturer harmonised name	Make
VOLKSWAGEN	BMW
PORSCHE	DACIA
AUDI AG	FIAT
AUDI HUNGARIA	FIAT
RENAULT	NISSAN
RENAULT	TOYOTA

6. *Has the number of registrations changed significantly compared to the previous year (+/- 10%)?*

If this is the case, please double-check whether this change is due to a change in actual sales or whether this is due to data errors or other reasons.

7. *Are individual vehicle approvals (IVA) and national small series (NSS) reported?*

Please ensure that IVA and NSS are included in the data submission.

8. *Does the dataset include outliers (extreme values)?*

According to our knowledge, the values reported in the following table can be considered outliers for passenger cars and should be cross-checked/ corrected before submissions:

Parameter	Too low values	Too high values
<i>M</i>	<400	>2160
<i>e</i>		>600
<i>At1</i>	<500	>3000
<i>At2</i>	<500	>3000
<i>W</i>	<500	>7000
<i>Ec</i>	<100	>5000
<i>Ep</i>	<20	>200

9. *Is there **high variability of numerical parameters** for the same TAN, T, Va and Ve?*

If for the same vehicle (i.e. same Manufacturer, TAN, Type, Variant and Version) the submitted mass and/or emission values vary considerably, please double check the data.

10. *Is the **fuel type** reported correctly?*

Fuel type and fuel mode should be reported as explained in chapter 3 of this document. Special attention should be paid to the emission value that has to be reported.

Example:

- a. **Battery electric vehicles (BEV), i.e. "pure" electric vehicles** should report Ft = electric, Fm = E, E = 0.
- b. **Petrol /diesel vehicles** should not have zero emission, i.e. it **cannot** be E = 0.
- c. **Bifuel vehicles:** Petrol/LPG should report LPG as Ft, petrol/NG (or Biomethane) should report NG (Biomethane) as Ft and emission values should be reported as stated in the CoC.
- d. **Hybrid vehicles:** Ft = petrol or diesel or E85, Fm = M.
- e. **Plug-in hybrid vehicles:** Ft = Petrol/Electric or E85/Electric or Diesel/Electric, Fm = M, E= the weighted combined emission value.

11. *Have you included **mass in running order (MRO)** in the dataset?*

Please ensure that the correct value for mass is included in the dataset. Mass in running order (MRO) as included in point 13. of the CoC or point 2.6. in the type approval documentation needs to be submitted (**please do NOT report actual mass** as included in point 13.2. of the CoC).

1. INTRODUCTION

This document provides technical guidance to the Member States for the preparation of the data to be delivered to the Commission pursuant to the following legislation and documents:

- Article 8 of Regulation (EC) No 443/2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO₂ emissions from light-duty vehicles
- Commission Regulation (EU) No 1014/2010 on monitoring and reporting of data on the registration of new passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council
- Article 8 of Regulation (EU) No 510/2011 setting emission performance standards for new light commercial vehicles as part of the Community's integrated approach to reduce CO₂ emissions from light-duty vehicles
- Commission Regulation (EU) No 293/2012 on monitoring and reporting of data on the registration of new light commercial vehicles pursuant to Regulation (EU) No 510/2011 of the European Parliament and of the Council.
- Commission Communication COM(2010)657 on the monitoring and reporting of data on the registration of new passenger cars.

These documents can be accessed via the following Commission webpages:

For cars: http://ec.europa.eu/clima/policies/transport/vehicles/cars/documentation_en.htm

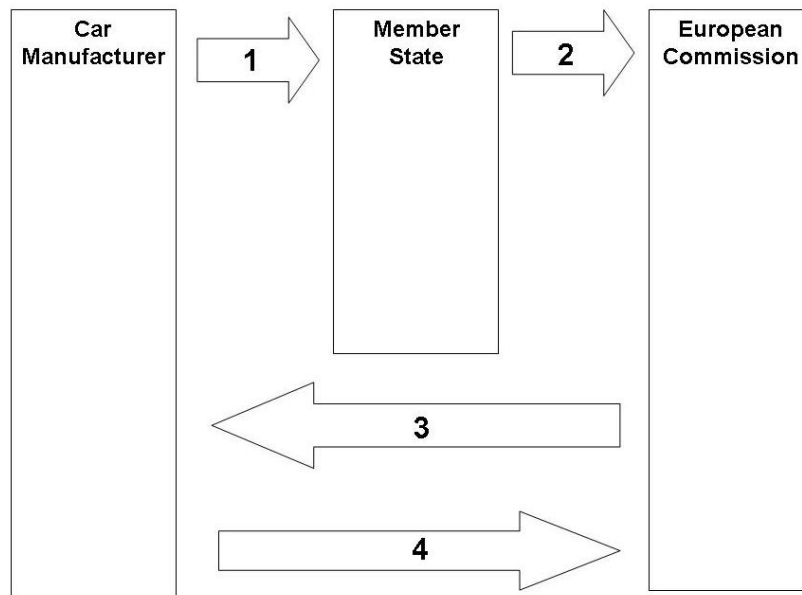
For vans: http://ec.europa.eu/clima/policies/transport/vehicles/vans/documentation_en.htm

2. THE MONITORING SYSTEM UNDER REGULATION (EC) NO 443/2009 AND REGULATION (EU) NO 510/2011

2.1 Overview of monitoring system for passenger cars (M1)

The CO₂ monitoring system for verifying compliance with Regulation (EC) No 443/2009 comprises of four steps (figure 1):

Figure 1: Schematics of the CO2 monitoring scheme according to Regulation (EC) No 443/2009

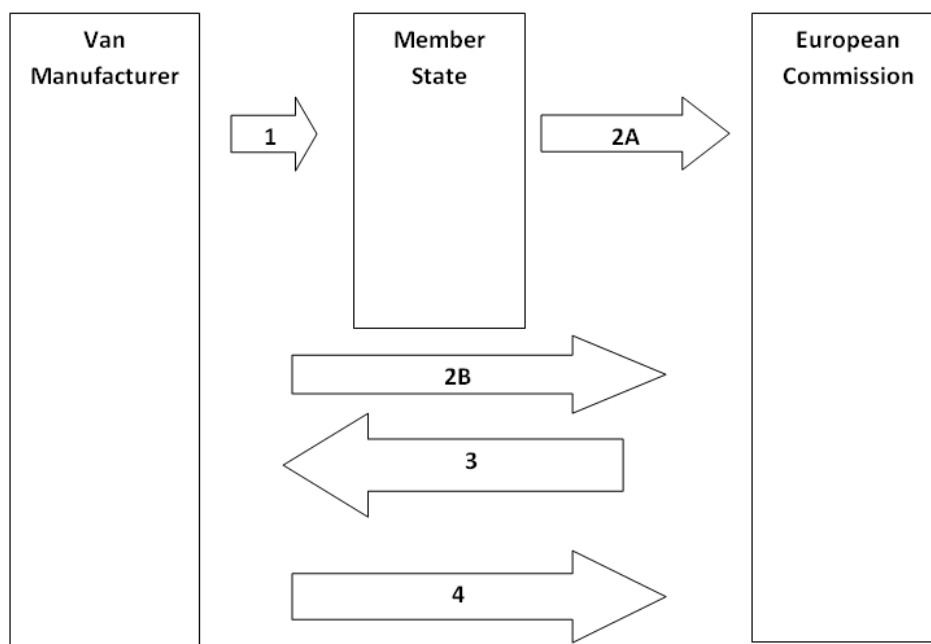


- Step 1: At the time of registration, the vehicle owner or manufacturer/dealer or importer presents the certificate of conformity (CoC), in electronic and/or paper format to the registration authority that incorporates the data in the national registry;
- Step 2: The Member States transmit the data for a full calendar year to the Commission **at the latest by 28 February** the following year;
- Step 3: The Commission verifies the data, and may, in agreement with the Member States concerned, correct the data. At the latest by 30 June of each year the Commission makes public the aggregated provisional data and notifies each manufacturer individually of its provisional CO2 average emissions and its emission target based on the data received;
- Step 4: The vehicle manufacturer may during three months following receipt of the Commission's notification of the provisional data verify the data and notify the Commission of the presence of any errors.

2.2 Overview of VIN based monitoring system for light commercial vehicles (NI)

The CO2 monitoring system for verifying compliance with Regulation (EU) No 510/2011 comprises also of four steps (figure 2):

Figure 2: Schematics of the CO2 monitoring scheme according to Regulation (EC) No 510/2011



- Step 1: At the time of registration, the vehicle owner or manufacturer/dealer or importer presents the certificate of conformity (CoC), in electronic and/or paper format to the registration authority that incorporates the data in the national registry;
- Step 2A: The Member States transmit the data for a full calendar year to the Commission **at the latest by 28 February** the following year including the VIN for each N1 category vehicle. Where, in the case of multi-stage vehicles, the VIN cannot be provided, detailed data must be provided for the complete vehicle, the completed vehicle as well as for the base vehicle;
- Step 2B: The vehicle manufacturers transmit the data accompanied with VIN codes for the vehicles sold and/or warranties (whichever is the closest in time to the date of registration) issued for the monitoring year including the last three months of the previous year for each N1 category vehicle **at the latest by 28 February**;
- Step 3: The Commission verifies the data, and may, in agreement with the Member States concerned, correct the data. At the latest by 30 June of each year the Commission makes public the aggregated provisional data and notifies each manufacturer individually of its provisional CO2 average emissions and its emission target based on the data received. The complete database will be published without VINs but with identification numbers (IDs) for each vehicle record. Manufacturers will also be notified of matching VINs. Manufacturers will then be able to identify and retrieve the relevant technical data of matching and non-matching VINs from the public database.
- Step 4: The vehicle manufacturer may during three months following receipt of the Commission's notification of the provisional data verify the data and notify the Commission of the presence of any errors.

The timetable for the different steps is strict and delays may seriously disrupt the monitoring procedure as a whole. A delay in the delivery of data by a Member State will therefore lead to enforcement action by the Commission.

It is important that Member States and manufacturers are aware that the inclusion of a manufacturer in the dataset reported to the Commission can make that manufacturer responsible for meeting a specific target and liable to pay excess emission premia. As a consequence, Member States must take due care in correctly identifying and recording the manufacturers concerned as well as the data that are reported to the Commission. Moreover, manufacturers that are notified of their inclusion in the dataset must react and inform the Commission within the given deadlines, should they not fall within the scope of the legislation.

2.3 Data quality

Errors in the data sets may occur either at the level of the manufacturer/dealerships when they complete and transmit the certificates of conformity to the registration authorities (step 1), or at the moment of registration and processing of the data by the Member States' registration authorities (step 2). It is therefore essential for the functioning of the monitoring system that **all parties** concerned are aware of the need for accurate data and take the necessary measures for ensuring this.

Errors in or omissions of the **codes for type, variant and version** or the **type approval numbers** in the data set are particularly serious since this means that the record cannot be verified and corrected by the manufacturer. Member States are therefore requested to pay special attention to ensure the correct and complete registration of these entries (see sections 2.3 and 2.4).

On the basis of previous data monitoring exercises, it has become evident that **missing records** is a problem, in particular for certain small volume manufacturers (less than 10 000 registrations). Although the number of missing records may be comparatively low, the impact of even a very small number of missing records can be significant since it may lead to incorrect target calculations for this category of manufacturers.

Missing records or the double counting of records may also occur when a vehicle is first **registered temporarily** in one Member State and then permanently registered in another. In order to avoid errors in the data set due to the transfer of new motor vehicles between Member States, it is appropriate to consider the temporary registration as the first registration of the vehicle which should be reported in the CO₂ data set. Where a Member State only reports permanent registrations in the CO₂ data set, it has to verify whether a temporary registration of the same vehicle in another Member State will be included in the CO₂ data submission of that Member State or not.

It should be noted in the case of **completed M1 or N1 vehicles**, that it is only the manufacturers of the incomplete EC-type approved vehicle - **the base vehicle manufacturer** - that is responsible for meeting a specific CO₂ emissions target. It is therefore important that the base vehicle manufacturer is identified and recorded in the data set (see section 2.5 on the monitoring of multistage vans).

The VIN based dataset for N1 vehicles should ensure adequate monitoring of multistage vehicles (MSV). Through a dataset created on the basis of matching VINs from Member States and manufacturers, it should be possible to link a completed vehicle to a base vehicle and thus determine the base vehicle manufacturer responsible and the relevant technical data required to accurately calculate specific emission targets and determine manufacturers' compliance with those targets.

2.4 Data verification

Following the publication and notification of the provisional data, the burden of proof that the data is incorrect lies with the manufacturers, i.e. the Commission cannot adjust the datasets ex officio. It is therefore necessary that manufacturers can verify the data and notify errors to the Commission. If no action is taken by the manufacturer, the provisional data will be considered as correct. Records whose reference mass exceed 2 840 kg¹ in the N1 dataset, will remain in the dataset but will not be used for the calculation of the targets.

The key parameters for identifying the vehicle and for verifying the data in the current system is the code for the type, variant and version and the type approval number. Where those parameters are accurately given, the manufacturer can verify whether the mass and the CO₂ values registered are correct. It should be noted that delivery of those parameters are mandatory for the monitoring of both M1 and N1 vehicles.

The VIN based dataset for N1 vehicles facilitates the verification of the provisional data especially for multi-stage vehicles (MSV). For the VIN based dataset, it is expected that manufacturers will be in a position to fully verify and where necessary correct the data. **It should however be stressed that it is only in the case where the Commission has access to both Member States and the manufacturer's VINs that a matching VIN based dataset can be created and shared with the manufacturer concerned.**

2.5 Monitoring of multistage vans

For the purpose of the verification of the provisional data Member States and vehicle manufacturers shall transmit the VIN for each N1 category vehicle to the Commission.

Where, in the case of multi-stage vehicles, a Member States cannot provide the VIN for a N1 vehicle, all detailed data must be provided for the complete vehicle, the completed vehicle as well as for the base vehicle in accordance with points (a), (b) and (c) of point 1.2 of Part A of Annex II of Regulation (EU) No 510/2011 (see section 3.1.20 for further details).

2.6 Monitoring of manufacturers with less than 1000 registrations

Manufacturers responsible for less than 1000 registrations of new vehicles in a calendar year are exempt from meeting their specific emission targets. It is important to note that **this new provision does not affect the monitoring of data relating to these manufacturers in any way**, i.e. these manufacturers should be monitored as all other manufacturers.

3. DATA SPECIFICATIONS

The data set shall be collected and submitted by Member States in accordance with the requirements specified in Article 8 and Annex II to Regulation (EC) No 443/2009 and Article 8 and Annex II to Regulation (EU) No 510/2011.

The Member States should ensure the maintenance, collection, control, verification and transmission of the aggregated monitoring data and the detailed monitoring data as set out in Article 4 of Regulation (EU) No 1014/2010 and Article 5 of Regulation (EU) No 293/2012.

¹ As reference mass is defined as mass in running order – 75 kg + 100 kg, all records with mass in running order exceeding 2 815 kg will not be used for the calculation of the targets under Regulation (EU) 510/2011.

Data shall be collected from valid and complete certificates of conformity (CoC) or from type approval documentation, provided that the latter source offers adequate and equivalent accuracy.

The data shall be delivered in the Central Data Repository (CDR) managed by the European Environmental Agency (EEA) using two separate files, one for the detailed monitoring data and one for the aggregated monitoring data. The lay out of .xml files compatible with the EEA system is available on the CIRCABC website². The procedure for data delivery is outlined in a separate document available on CIRCABC: "EEA data delivery system - guidance". For assistance as regards the up-loading on the CDR please contact CO2-monitoring@eea.europa.eu.

For the submission to be considered valid, the Member State should notify to the Commission when data has been uploaded on CDR by sending an email to the functional mailbox EC-CO2-LDV-IMPLEMENTATION@ec.europa.eu with copy to the functional mailbox CO2-monitoring@eea.europa.eu. For further details on the submission to be considered valid, please consult section 3 of the Commission Communication COM(2010)657³.

Details of the data specifications (text, text length, integer, decimal, number of decimal digits, etc.) are given in Annex 1 to these guidelines for M1 vehicles and in Annex 2 for N1 vehicles.

In case of missing values, a blank field should be used (never use the zero value⁴ or special characters, e.g. "-" signs).

Member States should appoint at least two representatives responsible for the monitoring of CO2 from M1 and N1 vehicles. The contact details of the nominated persons responsible for the data submissions should be sent **before 15 February each year** to the following e-mail address: EC-CO2-LDV-IMPLEMENTATION@ec.europa.eu. In case of need, the Commission will contact these representatives.

Any deviation in the reporting of the data from the present guidelines should be stated in a "readme" document that should be delivered in the CDR with the monitoring data.

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

² <https://circabc.europa.eu/w/browse/ba0cddaa-3e8b-4752-b4bf-8e665dfce2f9>

³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0657:EN:NOT>

⁴ Zero is a valid value for certain entries, e.g. the CO2 emissions from a battery electric vehicle (BEV), therefore it can be misleading if used as identifier of a missing entry.

3.1 Detailed data - Entry by entry

The following table presents the entries foreseen by the monitoring mechanism:

	Mandatory		Optional	
	cars	vans	cars	vans
Year	√	√		
Member State	√	√		
ID number			√	√
Name of the manufacturer EU standards denomination	√	√		
Name of the manufacturer OEM declaration	√	√		
Name of the manufacturer National registry denomination	√	√		
Category of the vehicle type approved	√	√		
Category of the vehicle registered	not applicable	√	not applicable	
Type approval number	√	√		
Type	√	√		
Variant	√	√		
Version	√	√		
Make	√	√		
Commercial name	√			√
Total new registrations	√	√		
Specific emissions of CO ₂	√	√		
Mass in running order	√	√		
Technically permissible maximum laden mass	not applicable	√	not applicable	
Default added mass	not applicable		not applicable	√
Foot-print - Wheelbase	√	√		
Foot-print – track width steering axle	√	√		
Foot-print – track width other axle	√	√		
Fuel type	√	√		
Fuel mode	√	√		
Engine capacity	√	√		
Engine power			√	√
Electric energy consumption	√	√		
Code for innovative technology or group of innovative technology	√	√		
CO ₂ emissions reduction due to an innovative technology	√	√		
Vehicle identification number	not applicable		not applicable	√

3.1.1 Year and Member State

These data can be stated only once in the detailed data file as part of the header. The year should be an integer number with 4 figures and the nomenclature of the Member State should be in accordance with ISO standard 3166 alpha-2⁵.

3.1.2 ID number (ID)

This entry is optional but it can be useful in case specific problems arise over certain records. The ID number can be specified in any format and it refers to the record number of the data contained in the national registry of each Member State.

3.1.3 Manufacturer name

The database contains three names for each manufacturer. These are needed in order to ensure the accurate identification of the obligated entity by allowing the matching of the manufacturer name recorded by the Member States with the manufacturer name declared by the manufacturer. The official list with manufacturer names (EU standard denomination and manufacturer denomination) is available on the CIRCABC website⁶. This list will be regularly updated. There are two separate lists for M1 and N1 including all manufacturer names under which vehicles may have been registered.

3.1.3.1 EU standard denomination (Mh)

The EU standard denomination is the name assigned by the Commission on the basis of the information submitted by the Member States and the name declared by manufacturers in accordance with Article 8 of Regulation (EC) No 1014/2010 and Article 9 of Regulation (EU) No 293/2012.

3.1.3.2 Manufacturer denomination (MAN)

Member States should record the manufacturer name as declared by the manufacturer. The name should correspond to the one indicated on side 1 in point 0.5 or 0.5.1. (manufacturer name of the base vehicle for completed vehicles) of the certificate of conformity.

Member States are asked to inform the Commission if they identify new manufacturers in the monitoring data that are not present in the list published by the Commission.

3.1.3.3 National Registry denomination (MMS)

For transparency vis-à-vis the manufacturer as regulated entities and vis-à-vis the citizens, it is advisable that Member States match the official manufacturer name set out in the Commission list with the manufacturer name contained in the national registry.

⁵ With the exception of Greece and United Kingdom for which the code is "EL" and "UK" respectively, see <http://publications.europa.eu/code/pdf/370000en.htm#pays>

⁶ https://circabc.europa.eu/sd/a/00e8fe6c-3ad8-4e9f-9a39-437501f609a4/Manufacturer_list.xls

Please note that for the individual vehicle approvals (IVA) and the national approvals of small series (NSS) the detailed data may be delivered on a voluntary basis. In that case Member States may give detailed values of the single version provided the manufacturer name is given as either AA-NSS or AA-IVA in accordance with Article 7 of Regulation (EU) No 1014/2010 and Article 8 of Regulation (EU) No 293/2012.

3.1.4 Category of the vehicle type approved (Ct)

The vehicle category (M1, N1 etc.) is set out in section 0.4 of the certificate of conformity or in the type approval documentation, Part I of Annex III to Directive 2007/46/EC.

3.1.5 Category of the vehicle registered (Cr) – vans data only

The vehicle category registered is necessary to verify if the vehicle falls within the scope as defined in Article 2 of Regulation (EU) No 510/2011.

3.1.6 Type approval number (TAN)

The TAN is set out in section 0.10. of the certificate of conformity or in the type approval documentation, Annex VI to Directive 2007/46/EC.

3.1.7 Type (T), Variant (Va) and Version (Ve)

These three entries are important since they will allow matching the data relating to the same version of the vehicle delivered from different Member States. The TVV code is essential for the verification by manufacturers of the data and the code must be recorded correctly including all digits. Care should therefore be taken in ensuring that these entries are recorded as stated in the certificate of conformity. The type, variant and version entries are set out in section 0.2 and 0.2.2. TVV of base vehicle in case of MSV of the certificate of conformity or in the type approval documentation as follows: Type in section 0.2 of Part I of Annex III and Variant, Version in Part I or II of Annex III or section 3 of Annex VIII to Directive 2007/46/EC.

3.1.8 Make (Mk)

The make of the vehicle is set out in section 0.1 of the certificate of conformity or in the type approval documentation, section 0.1 of Part I of Annex III to Directive 2007/46/EC. In the case of multiple spellings of the make see section 3.2.

3.1.9 Commercial name (Cn)

The commercial name can be used to further identify the manufacturer and the vehicle record. It may in particular be of interest to understand if this entry can be useful for the identification of multistage vans and as a consequence Member States are asked to provide this parameter on a voluntary basis for the N1 monitoring. The commercial name of a vehicle is set out in section 0.2.1 of the certificate of conformity or in the type approval documentation, section 0.2.1, Part I and Part II of Annex III Directive 2007/46/EC. In the case of multiple spellings of the commercial names see section 3.2.

3.1.10 Total number of new registrations (r)

This entry refers to the total registrations of vehicles having the same technical characteristics (i.e. the same TAN, type, variant, version as well as the same numerical values for specific

CO2 emissions, mass, wheelbase and axle track) and in the case of missing numerical values, the same missing entries. See section 3.2. for more information.

3.1.11 Specific emissions of CO2 (e)

The CO2 value shall be as stated in point 49.1 of the certificate of conformity (entry "combined" or "weighted combined" in case of hybrid-electric OVC vehicles) or in type approval documentation as stated in section 3 of Annex VIII to Directive 2007/46/EC. The value for the CO2 emissions depending on the different combination of fuel type and fuel mode can be found in section 3.1.15.

3.1.12 Mass in running order (m)

The mass to be monitored refers to the mass of the car with bodywork in running order as defined in Article 3(1)(d) of Regulation (EC) No 433/2009 and Article 3(1)(g) of Regulation (EU) No 510/2011. It should be noted that **the mass in running order is different from the actual mass** of the vehicle. The following monitoring sources may be used:

For existing vehicle types;

- Certificate of conformity: Section 13 (this should be the nominal value indicated by the manufacturer which should be within the range determined at type approval, if applicable)
- Type approval documentation: Section 2.6 of Part I of Annex III to Directive 2007/46/EC

From January 2014 for new vehicle types:

- Certificate of conformity Section 13 (not section 13.2 which indicates the actual mass) for complete vehicles and, in the case of incomplete or completed vehicles of category N1, section 14 provides **mass of the base vehicle in running order**.
- Type approval documentation: Section 2.6(b) of Annex I to Directive 2007/46/EC (mass in running order of each version) for complete vehicles or, in the case of incomplete or completed vehicles of category N1, section 2.17.1. of Annex I to Directive 2007/46/EC provides **mass of the base vehicle in running order**.

In the case the value as included in the CoC is not available and in the case of ranges in the type approval documentation, the minimum mass in running order should be reported.

3.1.13 Technically permissible maximum laden mass (TPMLM) (N1)

This value should in the case of multi-stage vehicles be provided for the base vehicle. The TPMLM will be needed to calculate the default added mass that should be used for the calculation of targets for base vehicle manufacturers in the case of multistage vans. The TPMLM is as stated in section 16.1 of the certificate of conformity or section 2.8 of Part 1 of Annex III to Directive 2007/46/EC.

3.1.14 Default added mass (DAM) (N1)

The procedure using default added mass for determining the CO2 emissions is mandatory from 1 January 2014. In case of VIN based data delivery the default added mass may be

submitted where applicable for MSVs instead of MRO of the base vehicle and TPMLM. In case of data without VIN the DAM shall be provided where applicable for MSVs if MRO of the base vehicle and TPMLM cannot be provided. DAM is specified in the TAD point 2.17.2. of Annex I to Directive 2007/46/EC.

3.1.15 Foot-print – Wheelbase (w), track width of steering axle (at1), track width of other axles (at2)

Regulation (EU) No 1014/2010 (M1) provides for the delivery of one value for the track width. In case the front and rear axle have different widths the Regulation specifies that the maximum value should be delivered. In case of ranges in the track width the maximum value in the range should be taken. Member States wishing to provide both values of the axle tracks may do so in the detailed dataset.

Regulation (EU) No 293/2012 (N1) provides for the delivery of two values for the track width: one for the steering axle and one for the other axles. Where a vehicle has more than one steering or non-steering axles with different width, the Regulation specifies that the maximum value should be delivered. For vehicles with more than two axles the distance between the front-most and back-most axles should be stated for the wheelbase.

Wheelbase is stated in section 4 of the certificate of conformity or Section 2.1 of Part 1 of Annex III to Directive 2007/46/EC

Foot-print - axle track(s) are stated in Section 30 of the certificate of conformity or in the type approval documentation, points 2.3.1. and 2.3.2. of Part I of Annex III to Directive 2007/46/EC.

3.1.16 Fuel type (Ft) and Fuel mode (Fm)

These parameters are mandatory and the following monitoring sources may be used:

Fuel type (Ft):

- Certificate of conformity: Section 26
- Type approval documentation: Section 3.2.2.1, Part I of Annex III to Directive 2007/46/EC.

Fuel mode (Fm):

- Certificate of conformity: Section 26.1
- Type approval documentation: Section 3.2.2.4 of the, Part I of Annex III to Directive 2007/46/EC.

Electric (BEV) and (plug-in) hybrid electric vehicles (OVC/NOVC) can be identified using the following monitoring sources:

- Certificate of conformity: Section 23 for electric vehicles and section 23.1 for hybrid electric vehicles
- Type approval documentation: Sections 3.4.1 and 3.4.2. of Part I of Annex III to Directive 2007/46/EC respectively.

Hybrid electric off vehicle charging (OVC), i.e. plug –in vehicles, include the CO₂ weighted average in section 49.1. and electric energy consumption in section 49.2. of the certificate of conformity.

The following table specifies the entries for fuel type and fuel mode for each fuel combination. For the fuel mode the permitted entries are:

- "M" for mono fuel vehicles;
- "B" for bi-fuel vehicles;
- "F" for flex-fuel vehicles.
- "E" for battery electric vehicles (BEV), i.e. "pure" electric vehicles (NOT hybrid vehicles)

Fuel combination	Fuel type to be reported	Fuel mode to be reported	Fuel for which the CO₂ value is taken (entry "combined" or "weighted combined" for hybrid electric OVC vehicles)
Petrol	Petrol	M	One value in the CoC
Diesel	Diesel	M	One value in the CoC
LPG	LPG	M	One value in the CoC
NG	NG-biomethane	M	One value in the CoC
Biomethane	NG-biomethane	M	One value in the CoC
Hydrogen	Hydrogen	M	One value in the CoC
Petrol-E85	E85	F	Petrol
Diesel-Biodiesel	Biodiesel	F	Diesel
Petrol-LPG	LPG	B	LPG
Petrol-NG	NG-biomethane	B	NG
Petrol-biomethane	NG-biomethane	B	Biomethane
Petrol-hydrogen	Hydrogen	B	Petrol
Electric	Electric	E	0 (zero)
Hybrid electric vehicle Off vehicle charging (OVC) (plug-in hybrid)	Fuel type combination with electricity Petrol/Electric; E85/Electric Diesel/Electric	M	One value in the CoC (weighted, combined)
Hybrid electric vehicle Not off-vehicle charging (NOVC) (Non plug-in hybrid)	Fuel type stated in COC: Petrol; E85; Diesel	M	One value in the CoC
Multiple fuels	Take the lowest CO ₂ value between all possible combinations of two fuels (see below). Write the fuel type and mode corresponding		

	to that fuel combination.
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Multi-fuel vehicles are capable of running on various combinations of the above fuel types. The lower CO₂ figures between all possible combinations of two fuels should be taken. For example for a vehicle capable of running on petrol / LPG / ethanol (E85) the possible combinations are: petrol, petrol-LPG, petrol-E85. The lowest CO₂ value between petrol (combined entry) and LPG should be reported and this vehicle should be treated as a petrol-LPG bi-fuel vehicle. Other examples are given below:

- Petrol / LPG / ethanol (E85) / hydrogen. Considering the relatively scarce availability of hydrogen compared to the other fuels the CO₂ values should be the same as for a Petrol / LPG / ethanol (E85) vehicle.
- Hybrid electric (off vehicle charging, OVC) vehicles ("plug-in hybrid"): the procedure outlined in Regulation (EC) No 692/2008 (Annex XII) for measuring both the fuel (Petrol/ Diesel/ Ethanol 85) consumption and the electricity consumption applies. For these vehicles, the figure to be considered is the **weighted combined CO₂ emission value** of the emission testing.
- Hybrid electric (not off vehicle charging, NOVC) vehicles are "non plug-in hybrid" vehicles that recuperate energy but cannot take electric energy from external sources. The same testing procedure as for petrol / LPG / ethanol (E85) applies.

3.1.17 Engine capacity (ec) and engine power (ep)

Engine capacity (mandatory) and engine power (optional) are important parameters for understanding emissions from road transport. This information is required for the Commission impact assessments for the cost-benefit evaluation of new policy measure and for the calculation of emission inventories used by several Member States and at Community level. Thus reporting engine capacity and power together with other parameters for new passenger cars and light commercial vehicles are essential for obtaining accurate modelling results for CO₂ and air pollution emission.

The entry "engine capacity" is set out in section 25 of the certificate of conformity and the engine power (the declared maximum net power) in section 27 of the certificate of conformity or in the type approval documentation the engine capacity is specified in point 3.2.1.3, the engine power in point 3.2.1.8. of Part I of Annex III to Directive 2007/46/EC.

3.1.18 Electric energy consumption (z)

The entry for electricity consumption is mandatory. This parameter is also required principally for further policy development. The value of electric energy consumption (Wh/km) is provided in section 49.2. of the certificate of conformity and set out in section 3 of Annex VIII in the type approval documentation.

3.1.19 Innovative technology or group of innovative technologies (IT) and the CO₂ emissions reduction due to that (those) technology(ies) (Er)

Where innovative technologies are reported in the CoCs, this entry is mandatory. The general code of the eco-innovation or group of eco-innovations is indicated in section 49.3.1. of the certificate of conformity or in the type approval documentation, section 3.5.3. of Annex I to

Directive 2007/46/EC or section 4 of Annex VIII to that Directive. The entry should include the code of the approval authority, e.g. "e1", and the individual code of each eco-innovation the eco-innovation code(s), e.g."1". For example, an eco-innovation type-approved by the German type-approval authority could be entered as follows: "e1 3".

The CO2 emission reductions to be reported are stated in section 49.3.2 of the certificate of conformity or in the type approval documentation section 3.5.3.3. of Annex I to Directive 2007/46/EC or section 4 of Annex VIII.

3.1.20 Vehicle identification number (VIN) for N1 Monitoring

Member States shall report the vehicle identification number (VIN) for all N1 vehicles.

The complete VIN (17 characters) should be taken from section 0.10 of the certificate of conformity and must comply with the VIN stamped on the vehicle body and stated on the manufacturer's statutory plate attached by the vehicle manufacturer on the vehicle. The VIN is schematically described for the purpose of the type approval in section 9.17 of Part I of Annex III to Directive 2007/46/EC.

In case of MSV two VINs might be stamped on the vehicle and two manufacturer's plates could be attached to the vehicle. In such cases the VIN for the base vehicle shall be delivered.

Where, in the case of multi-stage vehicles, a Member States cannot provide the VIN for a N1 vehicle, all detailed data must be provided for the complete vehicle, the completed vehicle as well as for the base vehicle in accordance with points (a), (b) and (c) of point 1.2 of Part A of Annex II of Regulation (EU) No 510/2011. The same data sources as described in the previous sections are applicable unless otherwise specified in Annex 2 of this document.

Please note that two tables are provided for the submission of N1 data (see Annex 2 of this document). The first table "Data with VINs" must be used for datasets including VINs and the second table "Detailed data without VINs" must be used for the submission of all detailed data in the case VINs cannot be provided. Please note that each Member State should use only one of these two table formats for the submission of N1 data in addition to the aggregated table.

Each Member State will therefore submit the following two tables for N1 data:

- "Data with VINs" or "Detailed data without VINs"
- Aggregated table.

3.2 **Multiple numeric values or missing values**

In the case where for a single vehicle version several values are applicable for one or more parameters, the same vehicle version should be reported in multiple records. Reporting data in separate records is essential to correctly calculate the averages levels for each manufacturer.

In the case of multiple spellings for non-numerical entries, i.e. make and commercial name, Member States may homogenize those spellings and report one single entry provided that all the numerical entries coincide and use, for example, the longest spelling as indicative of the text retaining most information.

The same should be done when, for the same vehicle version, some values are missing. The table below gives an example.

ID	Man	Ct	T	V	Ve	M	C	R	E	M	At1	At2	W	Ft	Fm
11	XX	M1	A	B	C	XX	X	1231	125	915				petro	M

12	XX	M1	A	B	C	XX	X	2643	125	915	1465	1475	2490	petro	M
13	XX	M1	A	B	C	XX	X	321	125	915	1465	1470	2490	petro	M
14	XX	M1	A	B	C	XX	X	149	125		1470	1460	2490	petro	M
15	XX	M1	A	B	C	XX	X	2		915	1475	1460	2490	petro	M

This is not applicable to N1 vehicles for which VINs are delivered.

3.3 *Range of values*

The certificate of conformity contains one value for each entry which should be reported. In case the type approval documentation is used and contains ranges for the parameters concerned, Member States should report the value corresponding to the one indicated in the certificate of conformity. If the precise value as indicated in the certificate of conformity cannot be reported in the case of mass in running order the minimum mass and in the cases of wheel base and axle widths the maximum value should be reported. In the case of non-numerical parameters, Member States shall ensure that the information entered in the monitoring report is as close to reality as possible.

3.4 *Aggregated data - Entry by entry*

The entries foreseen by the monitoring mechanism that will support the implementation and verification of the emission targets foreseen in Regulation (EC) No 443/2009 and Regulation (EU) No 510/2011:

Aggregated data header – (report once)	Passenger cars	Light commercial vehicles (vans)
Year	√	√
Member State	√	√
Data source	√	√
Total number of new registrations of new passenger cars /light commercial vehicles (subject to EC type-approval)	√	√
Total number of new registrations of new individually approved passenger cars /light commercial vehicles	√	√
Total number of new registrations of new passenger cars /light commercial vehicles approved nationally in small series	√	√
Total number of new registrations of new light commercial vehicles subject to multi-stage type-approval (where available)	Not applicable	√

Please indicate the source of the data besides the number of registrations: CoC for certificate of conformity, TAD for type approval documentation or MIX when data are

partially coming from the certificate of conformity and partially from the type approval documentation.

4. VEHICLES NOT COVERED BY EC TYPE APPROVAL

Individual Vehicle Approvals (IVA) and National approval of Small Series (NSS) do not go through the conventional type-approval process, so their documentation may not include all the necessary data. The number of such vehicles is monitored and reported in the aggregated data file under the dummy name set out in Article 7 of Regulation (EU) No 1014/2010 and Article 8 of Regulation (EU) No 293/2012. Should the number of IVAs or NSSs increase considerably over the years, the Commission may ask the Member State to investigate and report on why this is happening.

To identify NSS vehicles one can use the EC type approval number searching for the "NKS" label according to Annex VII to Directive 2007/46/EC (e.g. e13*NKS*0001*00).

It should be noted that the data of vehicles type approved in EC small series according to Chapter IX Article 22 of Directive 2007/46/EC (type approval number includes letters KS, e.g. e13*KS07/46*0001*00) should be collected and delivered the same way as other EC WVTA vehicles.

ANNEX 1 – M1 "CARS"

Please note that some data entries have been modified to ease the transmission of the data in an electronic-compatible format.

The column "*data needs*" indicates if the corresponding entry is:

MAN – mandatory, foreseen by Regulation (EC) No 443/2009;

OPT – optional.

The column *field length* is the total length of the data field while the *content* contains more information on the maximum, minimum values and/or details on the content. For example a decimal number with field length 6 and content 3 decimals means a number with maximum 3 integer, a point separator and 3 decimal digits.

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

- The separator is a comma. The correct separator is a point;
- The separator of thousand shall not be used;
- Rounding should be as reported in the column *sample content*. General mistakes could be, reporting decimals while expecting integer values. The value 142 indicate a value bigger or equal 141.5 and smaller than 142.5.

Detailed data M1 (cars)

header – report once only

Parameter	Data Need	Short name	Format	Field length (min/max/rules)	Content (min/max/rules)	Sample content	False content	Unit	Remarks
Year	MAN	Y	Integer	4	-	2010	10	-	-
Member State	MAN	MS	Text	Max 2	-	CH	Switzerland	-	ISO 3166 alpha-2 ⁷

data – report for each record

Parameter	Data Need	Short name	Format	Field length (min/max/rules)	Content (min/max/rules)	Sample content	False content	Unit	Remarks
ID	OPT	ID	Text	Max 30	-	-	-	-	Internal code in MS database. Used to identify a single row of data.
Manufacturer name EU standard denomination	MAN	MH	Text	Max 120	-	-	-	-	This is the short name assigned by the Commission service to easily identify each manufacturer. This denomination will not contain any special characters and it is contained in the list of manufacturers present in CIRCABC. ⁸
Manufacturer name OEM declaration	MAN	MAN	Text	Max 120	-	-	-	-	This is the name stated by the manufacturer in accordance with Article 8 of Regulation (EU) No 1014/2010. It is contained in the list of manufacturers present in CIRCABC.
Manufacturer name MS registry denomination	MAN	MMS	Text	Max 120	-	-	-	-	This is the name for the manufacturer as contained in the national registry of the Member State.
Type approval number and its extension	MAN	TAN	Text	Max 120	-	e1*2007/46*0001*00	-	-	Must be completed with all digits.
Type	MAN	T	Text	Max 120	-	-	-	-	Must be completed with all digits

⁷ With the exception of Greece and United Kingdom for which the code is "EL" and "UK" respectively.

⁸ https://circabc.europa.eu/sd/a/00e8fe6c-3ad8-4e9f-9a39-437501f609a4/Manufacturer_list.xls

Variant	MAN	Va	Text	Max 120	-	-	-	-	Idem
Version	MAN	Ve	Text	Max 120	-	-	-	-	Idem
Make	MAN	Mk	Text	Max 120	-	-	-	-	In case that the commercial name and the make are not separately entered into the national database on newly registered M1's enter the available information into the field "make".
Commercial name	MAN	Cn	Text	Max 120	-	-	-	-	Same as for the entry "make"
Category of the vehicle type approved	MAN	Ct	Text	Max 3	-	M1; M1G	-	-	-
Total new registrations	MAN	R	Integer	-	Min: 1	1203	1203.4 1'203	-	Number of registrations for vehicles of the same version with the same value for each numerical parameter.
Mass	MAN	M	Integer number	4	Min: 300 Max: 5000	1589	1589.8 1'589	kg	Mass in running order (not actual mass)
Specific CO ₂ Emissions	MAN	E	Integer	3	Min: 0 Max: 700	142	142.34	g/km	"Combined" value or "weighted combined " in case of Hybrid electric vehicles OVC (plug –in)
Wheel Base	MAN	W	Integer	Max. 4	Min: 500 Max: 6000	3300	3300.1 3'300	Mm	In case of ranges in the type approval documentation, please provide the value that is in accordance with the one stated in the CoC or the max from the range.
Axle width steering axle	MAN	At1	Integer	Max. 4	Min: 500 Max: 3000	1600	1600.1 1'600	Mm	In case of ranges in the type approval documentation, please provide the value that is in accordance with one stated in the CoC or the max value from the range.
Axle width other axle	MAN	At2	Integer	Max. 4	Min: 500 Max: 3000	1600	1600.1 1'600	Mm	Leave empty if delivering only one value for axle track.
Fuel type	MAN	Ft	Text	Max 120	petrol	petrol	gasoline	-	Mandatory for all fuel types
Fuel mode	MAN	Fm	Text	1	M: mono B: bifuel F: Flex E: electric	M	A	-	"E" for battery electric vehicles (BEV), i.e. "pure" electric vehicles (NOT hybrid vehicles)
Engine capacity	MAN	Ec	Integer	Max. 4		1589	1589.8 1'589	cm ³	Leave blank for electric vehicles
Engine power	OPT	Ep	Integer	Max 3		158	158.8 158,8	Kw	
Electric energy consumption	MAN	Z	integer	-		101	101.8	Wh/km	Following Annex XII of Commission Regulation (EC) No 692/2008
Innovative technology or group of innovative	MAN	IT	text	Max 25	Min 3	e1 10 15	1 10 15	-	

technologies									
Emissions reduction through innovative technologies	MAN	Er	Nearest one decimal point	Max: 4	Min: 1.0	1.1	0,9	g/km	

Aggregated data – M1 (cars)

Header – report once only

Parameter	Data Need	Short name	Format	Field length	Content rules	Sample content	False content	Unit	Remarks
Year	MAN	Y	Integer number	4	-	2010	10	-	-
Member State	MAN	MS	Text	Max 2	-	CH	Switzerland	-	-
Data sources	MAN	DS	Text	3	COC TAD MIX	COC	-	-	Use MIX if data source is a combination of COC and TAD
Total number of new registrations of new passenger cars subject to EC type approval	MAN	Rt	Integer	-	-	-	1'203 (no separator for thousands)	-	Number of registrations for vehicles of the same manufacturer, including vehicle with any missing technical data.
Total number of new registrations of new individually approved passenger cars	MAN	RIVA	Integer	-	-	-	1'200 (no separator for thousands)	-	Individually approved and stated into monitoring dataset as AA-IVA
Total number of new registrations of new passenger cars approved nationally in small series	MAN	RNSS	Integer	-	-	-	1'192 (no separator for thousands)	-	Type approved in national small series and stated into monitoring dataset as AA-NSS

ANNEX 2 – N1 "VANS"

Please note that two tables are provided for the submission of N1 data. The first table "Data with VINs" must be used for datasets including VINs and the second table "Detailed data without VINs" must be used for the submission of all detailed data in the case VINs cannot be provided. Please note that each Member State should use only one of these two table formats for the submission of N1 data in addition to the aggregated table.

Each Member State will therefore submit two tables for N1 data:

- "Data with VINs" or "Detailed data without VINs"
- Aggregated table

Please note that some data entries have been modified to ease the transmission of the data in an electronic-compatible format.

The column "*data needs*" indicates if the corresponding entry is:

MAN – mandatory, foreseen by Regulation (EU) No 510/2011;

OPT – optional.

The column *field length* is the total length of the data field while the *content* contains more information on the maximum, minimum values and/or details on the content. For example a decimal number with field length 6 and content 3 decimals means a number with maximum 3 integer, a point separator and 3 decimal digits.

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

- The separator is a comma. The correct separator is a point;
- The separator of thousand shall not be used;

- Rounding should be as reported in the column sample content. General mistakes could be, reporting decimals while expecting integer values. The value 142 indicate a value bigger or equal 141.5 and smaller than 142.5.

Detailed data with VINs – N1 (vans)

header – report once only

Parameter	Data Need	Short name	Format	Field length (min/max/rules)	Content (min/max/rules)	Sample content	False content	Unit	Remarks
Year	MAN	Y	Integer	4	-	2010	10	-	-
Member State	MAN	MS	Text	Max 2	-	CH	Switzerland	-	ISO 3166 alpha-2 ⁹

data – report for each record

In the case of **multi-stage vehicles (MSVs)** data shall be provided for the **base vehicle** unless otherwise specified. Where data cannot be provided for the base vehicle, the Member State shall as a minimum provide the data for the completed vehicle.

Parameter	Data Need	Short name	Format	Field length (min/max/rules)	Content (min/max/rules)	Sample content	False content	Unit	Remarks
ID	OPT	ID	Text	Max 30	-	-	-	-	
Vehicle identification Nr	MAN	VIN	Integer	17	-	WDB906633 1S111111	WDB90663 31S	-	Must be completed with all digits (17 characters)
Manufacturer name EU standard denomination	MAN	MH	Text	Max 120	-	-	-	-	This is the short name assigned by the Commission service to easily identify each manufacturer. This denomination will not contain any special characters and it is contained in the list of manufacturers present in CIRCABC. https://circabc.europa.eu/sd/a/00e8fe6c-3ad8-4e9f-9a39-437501f609a4/Manufacturer_list.xls

⁹ With the exception of Greece and United Kingdom for which the code is "EL" and "UK" respectively.

Manufacturer name OEM declaration	MAN	MAN	Text	Max 120	-	-	-	-	This is the name stated by the manufacturer in accordance with Article 8 of Regulation (EU) No 1014/2010. It is contained in the list of manufacturers present in CIRCABC. In case of MSV, indicate the name of the base vehicle manufacturer
Manufacturer name MS registry denomination	MAN	MMS	Text	Max 120	-	-	-	-	.In case of MSV, indicate the name of the completed vehicle manufacturer
Type approval number and its extension	MAN	TAN	Text	Max 120	-	e1*2007/46*0001*00	-	-	Must be completed with all digits.
Type	MAN	T	Text	Max 120	-	-	-	-	Must be completed with all digits
Variant	MAN	Va	Text	Max 120	-	-	-	-	Must be completed with all digits
Version	MAN	Ve	Text	Max 120	-	-	-	-	Must be completed with all digits
Make	MAN	Mk	Text	Max 120	-	-	-	-	In case that the commercial name and the make are not separately entered into the national database on newly registered N1's enter the available information into the field "make".
Commercial name	OPT	Cn	Text	Max 120	-	-	-	-	Same as for the entry "make"
Category of the vehicle type approved	MAN	Ct	Text	Max 3	-	N1, N1G	-	-	
Category of the vehicle registered	MAN	Cr	Text	Max 3	-	N1, N1G	-	-	-
Mass in running order Completed//complete vehicle	MAN	M	Integer number	4	Min: 300 Max: 5000	1589	1589.8 1'589	kg	
Mass in running order Base vehicle	OPT	MB	Integer number	4	Min: 300 Max: 5000	1589	1589.8 1'589	kg	For MSV, where available
Technically permissible maximum laden mass	MAN	TPMLM	Integer number	4	Min: 300 Max: 5000	1589	1589.8 1'589	kg	This entry is required for calculating the default added mass used for calculating the targets in the case of multistage vans In case of MSV indicate the base vehicle TPMLM if it is different from completed vehicle TPMLM
Default added mass	OPT	DAM	Integer number	Max. 4	Max: 800	200	200.4	kg	For MSV vehicles May be provided where applicable if MRO and TPMLM of base vehicle are not provided. DAM is specified in the TAD point 2.17.2. of Annex I to Directive 2007/46/EC

Specific CO ₂ Emissions	MAN	E	Integer	3	Min: 0 Max: 700	142	142.34	g/km	"Combined" value or "weighted combined " in case of Hybrid electric vehicles OVC (plug –in)
Wheel Base	MAN	W	Integer	Max. 4	Min: 500 Max: 9999	3300	3300.1 3'300	Mm	In case of ranges in the type approval documentation, please provide the value that is in accordance with the one stated in the CoC.or the max from the range.
Axle width steering axle	MAN	At1	Integer	Max. 4	Min: 500 Max: 3000	1600	1600.1 1'600	Mm	In case of ranges in the type approval documentation, please provide the value that is in accordance with the one stated in the CoC.or the max from the range.
Axle width other axle	MAN	At2	Integer	Max. 4	Min: 500 Max: 3000	1600	1600.1 1'600	Mm	Leave empty if delivering only one value for axle track.
Fuel type	MAN	Ft	Text	Max 120	petrol	petrol	gasoline	-	Mandatory for all fuel types
Fuel mode	MAN	Fm	Text	1	M: mono B: bifuel F: Flex E-Electric	M	A	-	For Battery Electric Vehicles (BEV) (NOT hybrid electric vehicles) the letter "E" should be used.
Engine capacity	MAN	Ec	Integer	Max. 5		1589	1589.4 1'589	cm ³	Leave blank for electric vehicles
Engine power	OPT	Ep	Integer	Max 3		158	158.4 158,4	Kw	
Electric energy consumption	MAN	Z	integer	-		101	101.4	Wh/km	Following Annex XII of Commission Regulation (EC) No 692/2008
Innovative technology or group of innovative technologies	MAN	IT	text	Max 25	Min 3	e1 10 15	1 10 15	-	
Emissions reduction through innovative technologies	MAN	Er	Nearest one decimal point	Max: 4	Min:1.0	1.2	0,9	g/km	

Detailed data without VINs– N1 (vans)

header – report once only

Parameter	Data Need	Short name	Format	Field length (min/max/rules)	Content (min/max/rules)	Sample content	False content	Unit	Remarks
Year	MAN	Y	Integer	4	-	2010	10	-	-
Member State	MAN	MS	Text	Max 2	-	CH	Switzerland	-	ISO 3166 alpha-2 ¹⁰

data – report for each record

Where, in the case of multi-stage vehicles, a Member States cannot provide the VIN for a N1 vehicle, all detailed data must be provided for the complete vehicle, the completed vehicle as well as the for the base vehicle in accordance with points (a), (b) and (c) of point 1.2 of Part A of Annex II of Regulation (EU) No 510/2011.

Parameter	Data Need	Short name	Format	Field length (min/max/rules)	Content (min/max/rules)	Sample content	False content	Unit	Remarks
ID	OPT	ID	Text	Max 30	-	-	-	-	
Manufacturer name EU standard denomination	MAN	MH	Text	Max 120	-	-	-	-	This is the short name assigned by the Commission service to easily identify each manufacturer. This denomination will not contain any special character and it is contained in the list of manufacturers present in CIRCABC: https://circabc.europa.eu/sd/a/00e8fe6c-3ad8-4e9f-9a39-437501f609a4/Manufacturer_list.xls

¹⁰ With the exception of Greece and United Kingdom for which the code is "EL" and "UK" respectively.

Manufacturer name OEM declaration Complete/Base vehicle	MAN	MAN	Text	Max 120	-	-	-	-	This is the name stated by the manufacturer in accordance with Article 8 of Regulation (EU) No 1014/2010. It is included in the list of manufacturers (see CIRCABC). In case of MSV the base vehicle manufacturer is indicated in point 0.5.1. of the CoC or point 0.5. in the TAD
Manufacturer name OEM declaration Completed vehicle	MAN	MANED	Text	Max 120	-	-	-	-	This is the name stated by the manufacturer in accordance with Article 8 of Regulation (EU) No 1014/2010. It is included in the list of manufacturers (see CIRCABC).
Manufacturer name MS registry denomination	MAN	MMS	Text	Max 120	-	-	-	-	.In case of MSV indicate the name of the completed vehicle manufacturer
Type approval number and its extension Complete/base vehicle	MAN	TAN	Text	Max 120	-	e1*2007/46* 0001*00	-	-	See section 0.2.2 of the CoC or, if not available, section 0.10 of the CoC.
Type Complete/base vehicle	MAN	T	Text	Max 120	-	-	-	-	See section 0.2.2 of the CoC or, if not available, section 0.2. of the CoC.
Variant Complete/base vehicle	MAN	Va	Text	Max 120	-	-	-	-	See section 0.2.2 of the CoC or, if not available, section 0.2. of the CoC..
Version Complete/base vehicle	MAN	Ve	Text	Max 120	-	-	-	-	See section 0.2.2 of the CoC or, if not available, section 0.2. of the CoC.
Type approval number and its extension Completed vehicle	MAN	TANED	Text	Max 120	-	e1*2007/46* 0001*00	-	-	See section 0.10(b).of the CoC
Type Completed vehicle	MAN	TED	Text	Max 120	-	-	-	-	See section 0.2. of the CoC
Variant Completed vehicle	MAN	VaED	Text	Max 120	-	-	-	-	See section 0.2. of the CoC
Version Completed vehicle	MAN	VeED	Text	Max 120	-	-	-	-	See section 0.2. of the CoC

Make	MAN	Mk	Text	Max 120	-	-	-	-	In case that the commercial name and the make are not separately entered into the national database on newly registered N1's enter the available information into the field "make".
Commercial name	OPT	Cn	Text	Max 120	-	-	-	-	Same as for the entry "make"
Category of the vehicle type approved	MAN	Ct	Text	Max 3	-	N1, N1G	-	-	
Category of the vehicle registered	MAN	Cr	Text	Max 3	-	N1, N1G	-	-	-
Total number of new registrations	MAN	R	Integer	-	Min: 1	1203	1203.4 1'203	-	Number of registrations for vehicles of the same version with the same value for each numerical parameter.
Mass in running order (complete/completed vehicle)	MAN	M	Integer number	4	Min: 300 Max: 5000	1589	1589.8 1'589	kg	
Mass in running order (base vehicle)	MAN	MB	Integer number	4	Min: 300 Max: 5000	1589	1589.4 1'589	kg	For MSV vehicles
Technically permissible maximum laden mass	MAN	TPMLM	Integer number	4	Min: 300 Max: 5000	1589	1589.4 1'589	kg	This entry is required for calculating the default added mass used for calculating the targets in the case of multistage vans
Default added mass	OPT	DAM	Integer number	Max. 4	Max: 800	200	200.4	kg	For MSV vehicles Shall be provided where applicable if MRO and TPMLM of base vehicle are not provided. DAM is specified in the TAD point 2.17.2. of Annex I to Directive 2007/46/EC
Specific CO ₂ Emissions	MAN	E	Integer	3	Min: 0 Max: 700	142	142.34	g/km	"Combined" value or "weighted combined " in case of hybrid electric vehicles OVC (plug –in)
Wheel Base	MAN	W	Integer	Max. 4	Min: 500 Max: 9999	3300	3300.1 3'300	Mm	In case of ranges in the type approval documentation, please provide the value that is in accordance with the one stated in the CoC.or the max from the range.
Axle width steering axle	MAN	At1	Integer	Max. 4	Min: 500 Max: 3000	1600	1600.1 1'600	Mm	In case of ranges in the type approval documentation, please provide the value that is in accordance with the one stated in the CoC.or the max from the range.
Axle width other axle	MAN	At2	Integer	Max. 4	Min: 500 Max: 3000	1600	1600.1 1'600	Mm	Leave empty if delivering only one value for axle track.
Fuel type	MAN	Ft	Text	Max 120	petrol	petrol	gasoline	-	Mandatory for all fuel types

Fuel mode	MAN	Fm	Text	1	M: mono B: bifuel F: Flex E: Electric	M	A	-	For Battery Electric Vehicles (BEV) (NOT hybrid electric vehicles) the letter "E" should be used.
Engine capacity	MAN	Ec	Integer	Max. 5		1589	1589.4 1'589	cm ³	Leave blank for electric vehicles
Engine power	OPT	Ep	Integer	Max 3		158	158.4 158,4	Kw	
Electric energy consumption	MAN	Z	integer	-		101	101.4	Wh/km	Following Annex XII of Commission Regulation (EC) No 692/2008
Innovative technology or group of innovative technologies	MAN	IT	text	Max 25	Min 3	e1 10 15	1 10 15	-	
Emissions reduction through innovative technologies	MAN	Er	Nearest one decimal point	Max 4	Min: 1.0	1.2	0,9	g/km	

Aggregated data – N1 (vans)

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Parameter	Data Need	Short name	Format	Field length	Content rules	Sample content	False content	Unit	Remarks
Year	MAN	Y	Integer number	4	-	2010	10	-	-
Member State	MAN	MS	Text	Max 2	-	CH	Switzerland	-	-
Data sources	MAN	DS	Text	3	COC TAD MIX	COC	-	-	Use MIX if data source is a combination of COC and TAD.
Total number of new registrations of new light commercial vehicles subject to EC type approval	MAN	Rt	Integer	-	-	-	1'203 (no separator for thousands)	-	Number of registrations for vehicles of the same manufacturer, including vehicle with any missing technical data.
Total number of new registrations of new individually approved light commercial vehicles	MAN	RIVA	Integer	-	-	-	1'200 (no separator for thousands)	-	Individually approved and stated into monitoring dataset as AA-IVA
Total number of new registrations of new light commercial vehicles approved nationally in small series	MAN	RNSS	Integer	-	-	-	1'192 (no separator for thousands)	-	Type approved in national small series and stated into monitoring dataset as AA-NSS
Total number of new registrations of new light commercial vehicles subject to multi-stage type-approval (where available)	MAN	NMSV	Integer	-	-	-	1'192 (no separator for thousands)	-	Type approved incomplete or completed vehicles