

COMMISSION IMPLEMENTING DECISION (EU) 2022/252**of 21 February 2022****amending Implementing Decision (EU) 2020/1167 in order to specify the testing requirements to be applied to a 48 Volt efficient motor generator integrated in the transmission housing and combined with a 48 Volt/12 Volt DC/DC converter****(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO₂ emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 ⁽¹⁾, and, in particular, Article 11(4) thereof,

Whereas:

- (1) On 24 May 2021, the supplier ZF Friedrichshafen AG ('the Applicant') submitted an application for the approval, as an innovative technology, of a technology used in a 48 Volt efficient motor-generator with a 48 Volt/12 Volt DC/DC converter for use in certain not-off vehicle charging hybrid electric passenger cars and light commercial vehicles (NOVC-HEVs).
- (2) The technology used in 48 Volt efficient motor-generators with a 48 Volt/12 Volt DC/DC converter for use in the same type of NOVC-HEVs as referred to by the Applicant, has been approved as an innovative technology pursuant to Regulation (EU) 2019/631 by Commission Implementing Decision (EU) 2020/1167 ⁽²⁾.
- (3) The technology specified by the Applicant in its application is a motor-generator that is directly connected to the transmission input shaft, i.e. an 'integrated starter generator', which allows reducing the mechanical losses occurring between the drive source and the generator. It operates only in the engine speed range of the internal combustion engine.
- (4) The technology specified by the Applicant has been found to deliver a high level of efficiency, and should be considered providing the same functionality as that approved by Implementing Decision (EU) 2020/1167. It should therefore be considered as an innovative technology to which the eco-innovation code 32 can be applied.
- (5) The testing methodology set out in Implementing Decision (EU) 2020/1167 is applicable, except for the rotational frequencies and frequencies of the operating points to be used for the measurement of the motor-generator efficiency, which need to be adapted in view of the specific technical characteristics of the technology specified by the Applicant.
- (6) The testing methodology set out in the Annex to Implementing Decision (EU) 2020/1167 should therefore be modified accordingly,

⁽¹⁾ OJ L 111, 25.4.2019, p. 13.

⁽²⁾ Commission Implementing Decision (EU) 2020/1167 of 6 August 2020 on the approval of the technology used in a 48 Volt efficient motor-generator combined with a 48 Volt/12 Volt DC/DC converter for use in conventional combustion engine and certain hybrid electric passenger cars and light commercial vehicles as an innovative technology pursuant to Regulation (EU) 2019/631 of the European Parliament and of the Council (OJ L 258, 7.8.2020, p. 15).

HAS ADOPTED THIS DECISION:

Article 1

The Annex to Implementing Decision (EU) 2020/1167 is amended in accordance with the Annex to this Decision.

Article 2

This Decision shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Done at Brussels, 21 February 2022.

For the Commission
The President
Ursula VON DER LEYEN

ANNEX

The Annex to Implementing Decision (EU) 2020/1167 is amended as follows:

(1) point 2.1 is amended as follows:

(a) the second and third paragraphs are replaced by the following:

‘The manufacturer shall provide evidence to the type-approval authority that the frequency ranges of the 48V motor-generator are the same as or equivalent to those set out in Table 1 or Table 1a.

The efficiency of the 48V motor-generator shall be determined on the basis of measurements at each of the operating points listed in Table 1 or Table 1a.’

(b) the following is inserted as a fifth subparagraph:

‘Where the motor-generator is fitted in passenger cars or light commercial vehicles that meet the requirements set out in Article 1(a)(ii), and it is connected directly to the transmission input shaft, i.e. as an integrated starter generator, the rotational frequencies and frequencies of the operating points shall be set in accordance with Table 1a.’

(c) the following Table 1a is added after Table 1:

Table 1a

Operating points

Operating point i	Holding time [s]	Rotational frequency n_i [min ⁻¹]	Frequency of operating points h_i
1	1 200	950	0,30
2	1 200	1 250	0,50
3	600	1 550	0,16
4	300	1 850	0,04