



xEV identification on the vehicles of categories M1 and N1, L3 and L4

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Statistical data in Russia

-NAMI-

Electric and hybrid vehicles (01.2023):
311 524 (+11) units (0,47% of the total fleet)

- HEV/PHEV: 258 902

- EV: 50 600

- EV BUS: 2011 (marking)

- FCEV: 11

Li-ion REESS

Gas-powered vehicles (2024):
about 1 310 000 units
mandatory marking of buses

Number of electric vehicles in Russia

2019	2020	2021	2022	2023	07.2024
7 000	10 000	16 500	21 459	25 700	50 600*+170**

***0,11% of the total fleet**

**** electric motorcycle L4, the development of electric vehicles of the L7 category is underway.**

Currently, the number of different brands and models:

- More than 90 different brands
- More than 450 different models

What we did:

1. Introduction of the GOST ISO 17840 group of standards – 01 Juli 2024.

Associated countries:

1) Republic of Armenia (not identified)

2) Republic of Belarus



3) Kyrgyz Republic (not identified)

4) Russian Federation (not identified)

5) Republic of Uzbekistan.



2. Additions have been made to the Technical Regulation CU TR 018/2011 (include UN Regulation 100-2, UN Regulation 134, UN Regulation 136) – date of adoption of amendments is unknown.

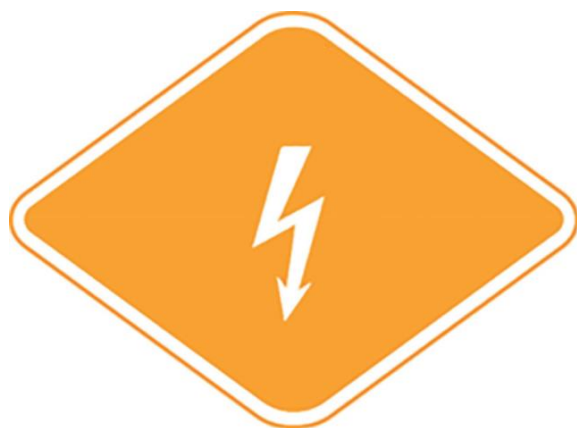
However, developers of xEV and REESS are already independently guided by the provisions of UN Regulation 100-2.

3. For the first time, we conducted practical training on extinguishing lithium-ion batteries and REESS together with the Ministry of Emergency Situations (EMERCOM).

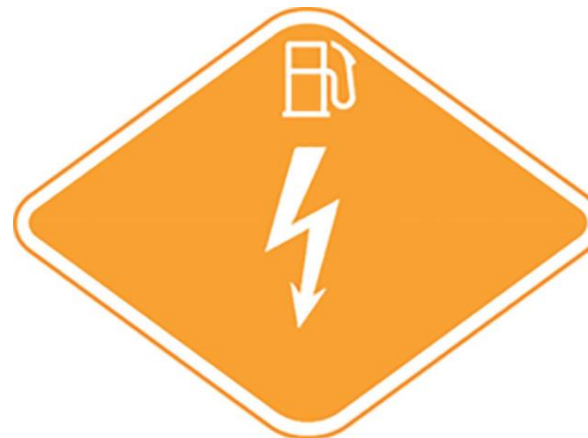
When summing up the results, the EMERCOM staff once again asked to work on the issue of identifying xEV.

A standard was previously developed in Russia: GOST R 59127-2020 «Electric vehicles and motor vehicles with combined power plants. Identification» - **invalid after the release of the new standard.**

GOST ISO 17840-4-2023. Motor vehicles. Information for emergency operational and emergency rescue services. Part 4. Identification of the energy source. – **valid since July 2024.**



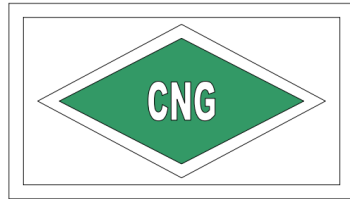
EV



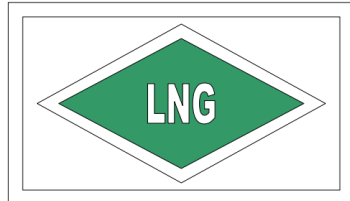
HEV, PHEV

Currently, the issue of mandatory labels on vehicles with high-voltage components is being worked out. Owners of electric vehicles and hybrids are informed about new standards and labels through specialized media.

Examples of identification in UN regulation



Provisions on CNG identification mark for vehicles of categories M2 and M3, N2 and N3
E/ECE/324/Rev.2/Add.109/Rev.3 E/ECE/TRANS/505/Rev.2/Add.109/Rev.3 Annex 6



Provisions on LNG identification mark for vehicles of categories M2 and M3, N2 and N3
E/ECE/324/Rev.2/Add.109/Rev.6 E/ECE/TRANS/505/Rev.2/Add.109/Rev.6 Annex 7

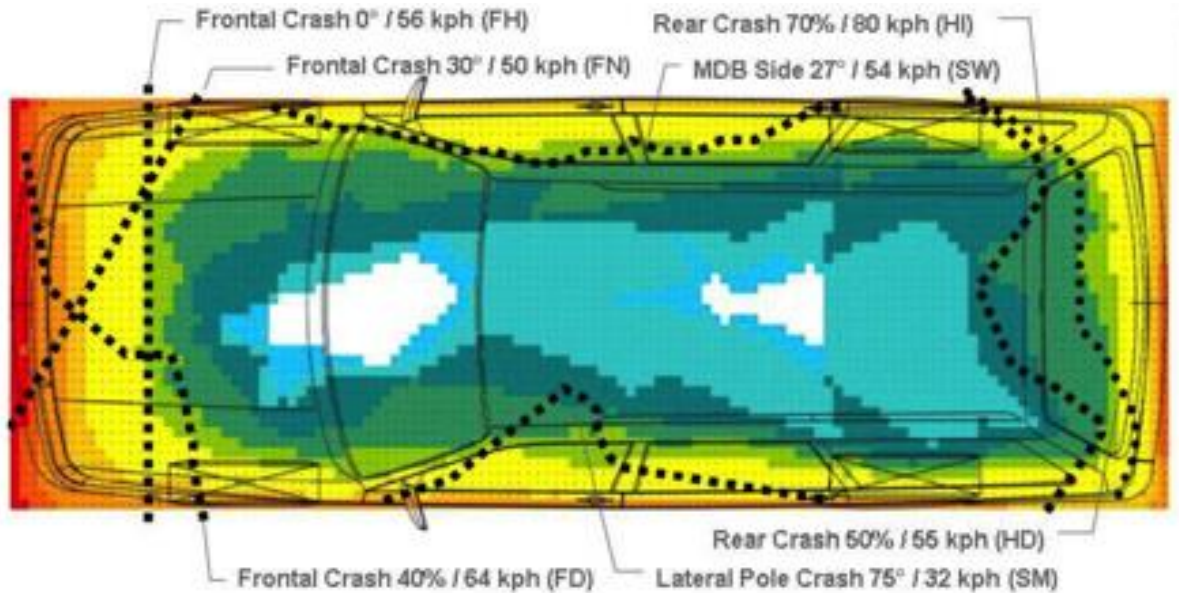
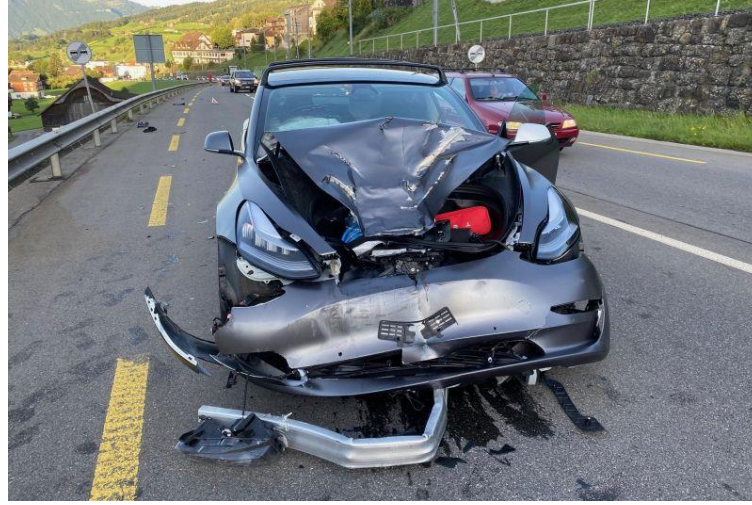


Provisions regarding LPG identification mark for M2 and M3 category vehicles
E/ECE/324/Rev.1/Add.66/Rev.5 E/ECE/TRANS/505/Rev.1/Add.66/Rev.5 Annex 17

The marking of the type of energy source, according to TR CU 018, is already used in Russia on vehicles of certain categories using liquefied petroleum gas (LPG) or compressed natural gas (CNG) as fuel. They are marked with identification marks provided for by **UN Regulations No. 67 and No. 110**, in the form of a green diamond with a white border.

By the end of 2022, there were **26 million xEV in the world**. It is expected that by the end of 2023 there **40 million**. At the same time, there are no more **than 30 million gas-powered vehicles**.

What does an xEV look like in an accident in cases of damage to the REESS



Since bumpers are most often affected in accidents, identification of an xEV by a license plate is impossible in most cases.



It is proposed to install:

Front: on the windshield at the top of the passenger side (does not interfere with the driver)

Rear: upper corner of the rear window (body wall) on the driver's side

The location of the sticker on the windows increases the possibility of identifying the energy source in case of an accident.

For identification from the side: the sticker is applied in the lower corner of the front side window near the B-pillar on both sides.

Revision and harmonization with UN Regulation No. 125 is required - Revised version 3 - The field of view of drivers from the front.

Research on identification marking in Russia 2022

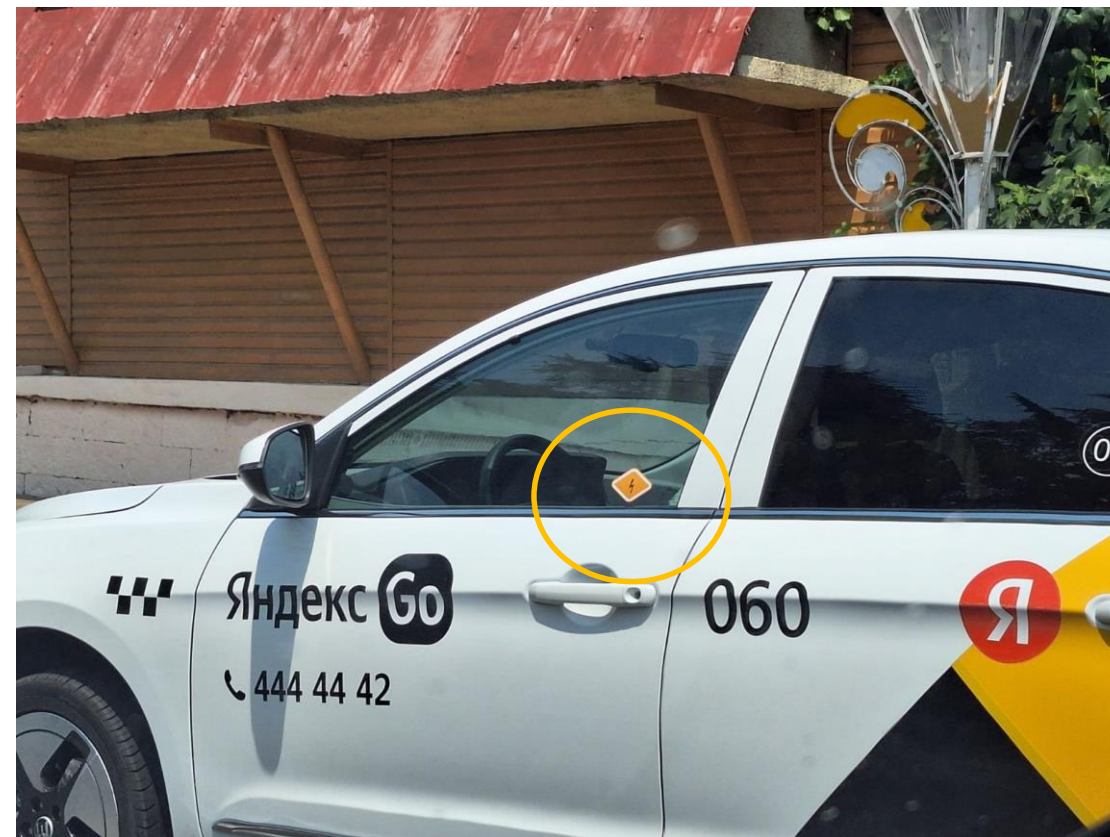
GOST R 59127-2020 «Electric vehicles and motor vehicles with combined power plants. Identification» is applied in Russia.



in 2022, we contacted the owners of xEV and offered to label their cars with stickers. The majority took the offer positively. But some were more concerned that their car would be more recognizable to receive various benefits. The emergency services staff reported that they understood such labeling and took the experiment positively.

Research on identification marking in Russia 2024

GOST R 59127-2020 «Electric vehicles and hybrid vehicles. Identification» is applied in Russia.



Electric vehicle manufacturer Evolute (Lipetsk, Russia) has voluntarily started labeling electric vehicles at the factory. There is a problem: buyers are not informed about the purpose of the sticker and remove it.

UN Rules 100 supplement:

Provision concerning the arrangement or placement of the identification mark of the vehicles of categories M1 and N1 equipped with the electric power train which includes a REESS.

The identification sticker on the vehicles of categories M1 and N1 shall be placed on four sides (Figure 1):

- at the front: upper corner of the windscreen from the passenger side;
- on the right and on the left: in the lower corner of the side window near the B-pillar of the body;
- at the rear: upper corner of the rear window from the driver side. In case of absence of the rear window, on the rear part of the body from the driver side.

UN Rules 136 supplement:

The identification sticker on the vehicles of categories L3 and L4 shall be placed on two sides (Figure 2):

- left and right side on the REESS or REESS covers.

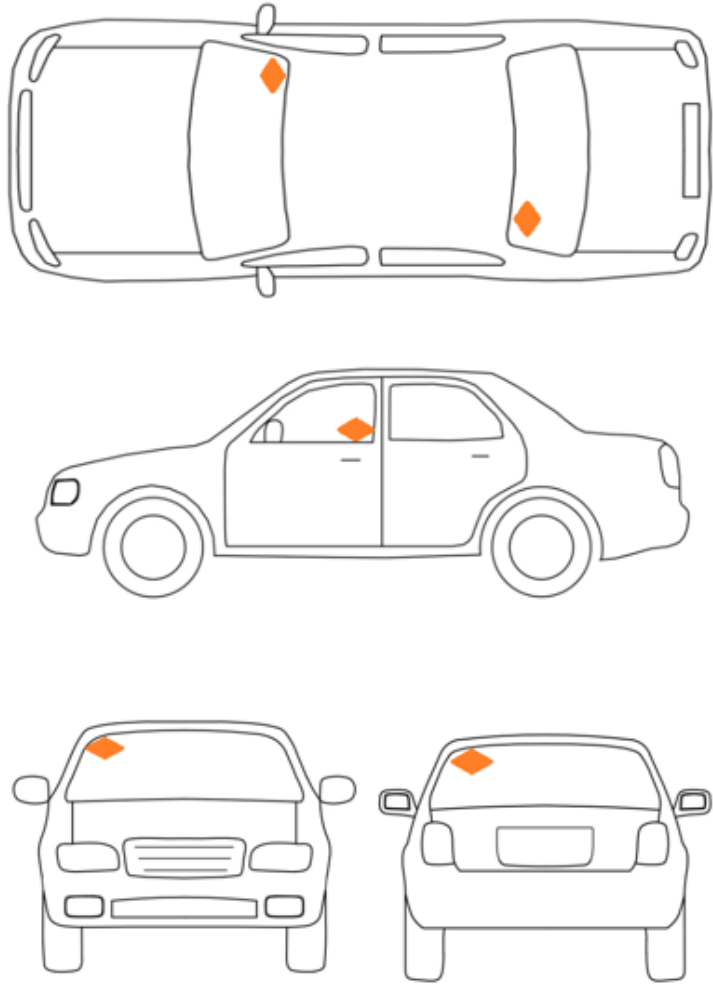


Figure 1 – Placement on a vehicle category M1

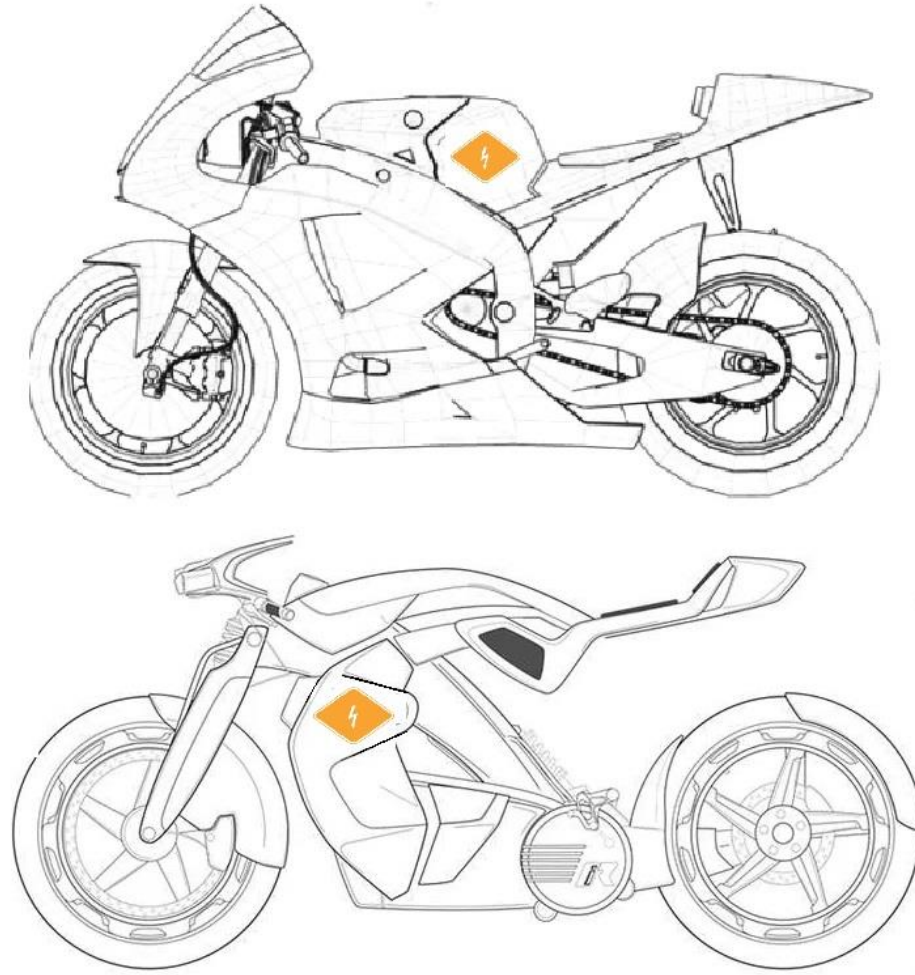


Figure 2 – Placement on a vehicle category L3/L4

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THANK YOU

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