



# xEV identification

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There was a presentation at the last session, which indicated the need for identification of xEV. We support this proposal.



**Li-ion Cell Venting Risks, Detection, and Countermeasures**



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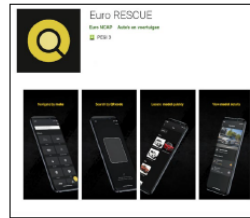
Chair: SAE J2990 First/ Second Responders Task Force  
Vice President, NAAITBATT Windows



# First & Second Responders Survey 2021

**Survey issued in 2020/21: >500 respondents, ~30% experienced xEV incidents**  
Kurt Vollmacher, ISO17840

- Additional training needed in all regions
- Need for clear recognition of xEV's
  - Belgium: proposed ISO icon on plate; Germany "E" at end of plate
- Uniform, globally available information per ISO 17840
- Uniform disconnect system design and placement
- Uniform procedures for extrication and firefighting
- System to make it easy to extinguish HV batteries
- Safety systems to deal with HV stranded Energy
- Handling of xEV's in car parks



**PROPOSALS TO IMPROVE SAFETY FOR FIRST AND SECOND RESPONDERS**

**PASSENGER CARS AND LIGHT COMMERCIAL VEHICLES**

Kurt Vollmacher  
AUGUST 1 2021

## **FSUE "NAMI" held the first seminars on the study of vehicles with new types of power plants among the personnel of emergency services**

### **The most frequent questions:**

How do we know that we have an electric car in front of us?

How do we know where the mass breaker is?

How do we know the subtleties of the design?

### **Wishes:**

Introduce a clear and unified identification of the type of energy source

Create a database of emergency response manuals

Conduct regular training

Develop common approaches to eliminate the consequences of an accident

Standardize the locations of the breakers

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

In the coming year, we plan to introduce state standards similar to the standards ISO 17840-4 . Then we plan to include in the Technical Regulations of the Customs Union 018/2011 the requirements for marking xEV and mandatory provision of rescue schemes and emergency response manuals when the car is put into circulation in the territory of the Customs Union of the Eurasian Economic Union countries.

Number of electric vehicles in Russia				
2019	2020	2021	2022	2025
7 000	10 000	16 500	22 000*	50 000*

**Currently:** 5 manufacturers of electric vehicles

**At the stage of development or localization:** 6 manufacturers of electric vehicles.

# Identification by license plate

-НАМИ-



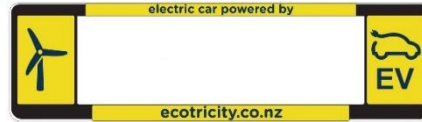
South Korea



China



India?



New Zealand



England



Norway



Hungary



Латвия



Norway



Germany



Belarus

There is no single standard for identification. Numbers for electric vehicles in each country have their own shape and color.

# 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.

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## Proposal:

### Complement UN GTR No. 20 - Electric Vehicle Safety (EVS)

To section 5.1.1.1.4. Marking.

Add paragraph 5.1.1.4.3. A vehicle equipped with an electric power train and a rechargeable electric energy storage system (REESS) must have a sticker informing about the type of energy source, in accordance with Figure 1A for an electric vehicle, Figure 1B for a hybrid electric vehicle \*.



Figure 1A



Figure 1B

\* - ISO 17840-4:2018 Road vehicles — Information for first and second responders — Part 4: Propulsion energy identification

## Proposal:

### **Complement** Regulation No. 100 - Uniform provisions concerning the approval of vehicles with regard to specific requirements for the electric power train

To section 5.1.1.4. Marking

Add paragraph 5.1.1.4.3. A vehicle equipped with a rechargeable electric power train and an electric energy storage system (PSEE) must have a sticker informing about the type of energy source, in accordance with Figure 2A for an electric vehicle, Figure 2B for a hybrid electric vehicle \*.



Figure 2A



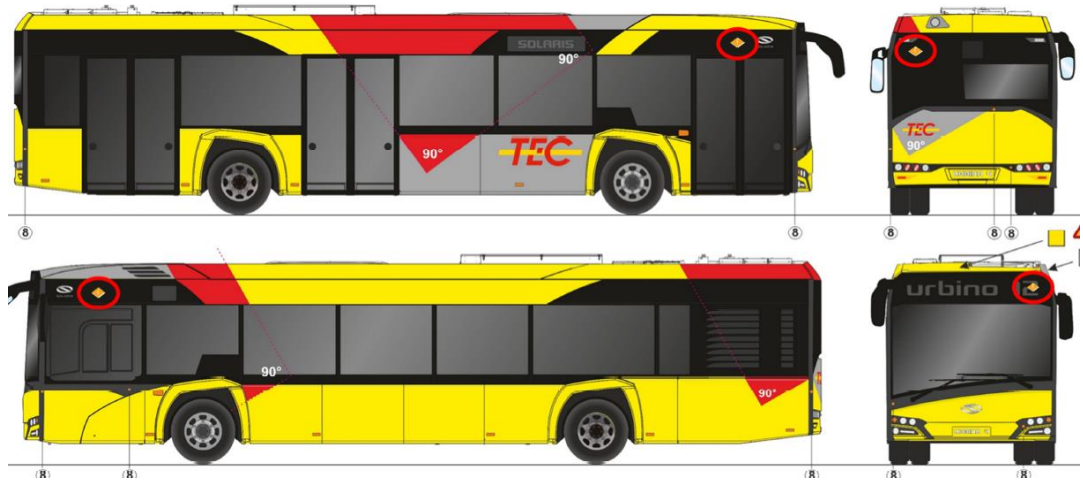
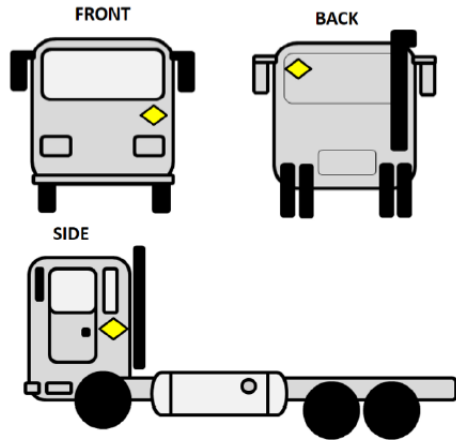
Figure 2B

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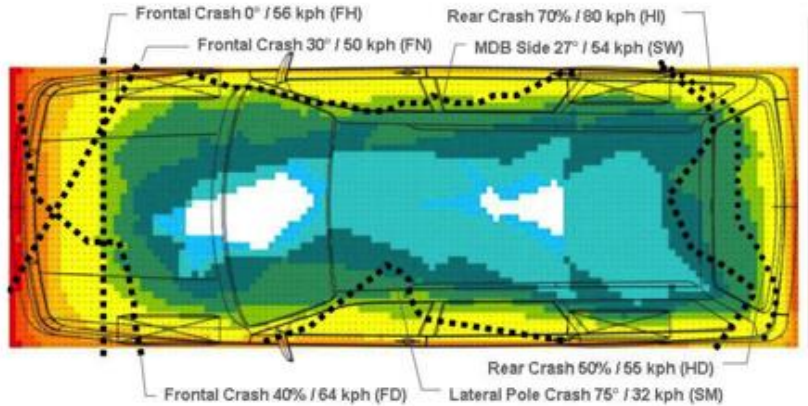
# Locations of identification stickers according to the CTIF instructions

For trucks, buses and emergency vehicles, the CTIF (International Association of Fire and Rescue Services) gave recommendations on the location of a sticker identifying the type of energy source. The recommended sizes are also indicated.



Specify the type of vehicle propulsion system in 5 places (front/rear/sides/top), since the approach to the vehicle can be carried out from different sides, and for safety reasons, identification must be provided from either side.

# Proposal: Locations of identification stickers



**It is proposed to install:**

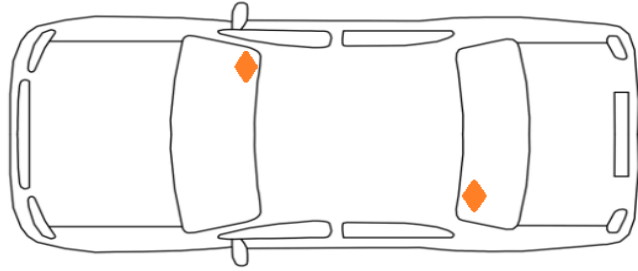
**Front:** on the windshield at the top of the passenger side (does not interfere with the driver)

**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.

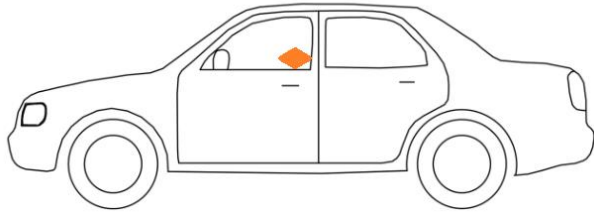
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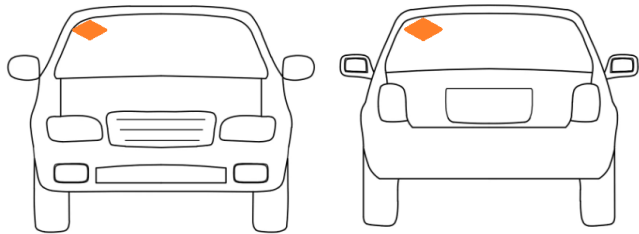
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**Thanks for your attention.**