

1st Meeting of informal group “Electric Safety”

Amendment of ECE R100 regarding
electric safety of electric, hybrid and
hydrogen/fuel cell vehicles

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German proposal

- 5.1.2.1.1. Protection against electric shock means either preventing person to simultaneously come into contact with two or more live parts having a voltage between them or to limit the current and its duration in case of such contact (max. 10 mA are continuously allowed, which corresponds to 100 Ω/V min. resistance).
- 5.1.2.1.2. Protection against electric shock shall be comprised of
 - Basic protection (protection against direct contact with live parts under normal (fault-free) conditions) and
 - Protection under any first failure condition with respect to electric shock
- 5.1.2.1.3. The protection measures as described in 5.1.2.2., 5.1.2.3. and 5.1.2.4. are required only for voltage class B electric circuits.

1st Meeting of informal group “Electric Safety”

German proposal (continues):

1. SCOPE

The following prescriptions apply to safety requirements with respect to protection against electric shock of all vehicles of categories M, N and O with a maximum design speed exceeding 25 km/h with the exception of vehicle components type approved according to another regulation and with respect to specific requirements for the construction, functional safety and hydrogen emissions of all battery electric road vehicles of categories M and N with a maximum design speed exceeding 25 km/h.

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US NPRM regarding FMVSS No. 305

Based on concern that the agency’s standard on electric-powered vehicles, as currently written, may inadvertently hinder the development of fuel cell vehicles in the United States, NHTSA is proposing to amend the electrical safety requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 305, *Electric-powered vehicles: electrolyte spillage and electrical shock protection*. The amendment would ensure that state-of-the-art fuel cell vehicles (FCVs) are consistent with the interests of safety and encompassed by FMVSS No. 305 so that the market may continue to develop. This NPRM also proposes to harmonize FMVSS No. 305 with the revised FMVSS No. 301, as regards rear moving barrier impact test conditions. This rulemaking commenced in response to a petition from the Alliance of Automobile Manufacturers.

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Japan standards:

- Annex 110.
Technical Standard Concerning the Protection of Occupants From High Voltage Etc. of Electrical Vehicles and Electrical Hybrid Vehicles
- **Scope**
This technical standard applies to the power train, charging system coupling system, etc. of road vehicles driven by motors operating by electrical power (excluding two-wheeled vehicles, two-wheeled vehicles with side cars, three-wheeled vehicles, light vehicles with tracks and skis, large special vehicles, small special vehicles, drawn vehicles, and fuel cell vehicles).

1st Meeting of informal group “Electric Safety”

Japan standards (continued):

- Annex 111.
Technical Standard Concerning the Protection of Passengers From High Voltage Etc. After Collision of Electrical Vehicles and Electrical Hybrid Vehicles
- **Scope**
This technical standard applies to the power train and traction battery modules, and traction battery packs of road vehicles driven by motors operating by electrical power (excluding two-wheeled vehicles, two-wheeled vehicles with side cars, three-wheeled vehicles, light vehicles with tracks and skis, large special vehicles, small special vehicles, drawn vehicles, and fuel cell vehicles).