June 14, 2024

U.S. Department of Transportation,
1200 New Jersey Avenue SE, West Building,
Washington, DC 20590

RE: Docket No. NHTSA-2024-0012-0001

Federal Motor Vehicle Safety Standards; FMVSS No. 305a Electric-Powered Vehicles: Electric Powertrain Integrity Global Technical Regulation No. 20, Incorporation by Reference

Submitted Electronically to *http://www.regulations.gov.*

The Electric Drive Transportation Association (EDTA) is the cross-industry trade association promoting the advancement of electric drive technology and electrified transportation. EDTA's members represent the entire value chain of electric drive, including vehicle manufacturers, battery and component manufacturers, utilities and charging infrastructure developers and operators.

Collectively, we are working to realize the economic, national security and environmental benefits of electrifying transportation with hybrid, plug-in hybrid, battery, and fuel cell electric vehicles. Achieving these goals includes advancing safety innovation that evolves with electric drive technologies. We appreciate the opportunity to comment on NHTSA's proposed Federal Motor Vehicle Safety Standard (FMVSS) No. 305a to replace FMVSS No. 305, "Electric-powered vehicles: Electrolyte spillage and electrical shock protection.

EDTA supports NHTSA's effort to harmonize the FMVSS with international safety standards as detailed in the Global Technical Regulation (GTR) No 20. To ensure the most effective safety standards for the developing electric vehicle segment, we recommend the following:

Overcurrent protection

An overcurrent condition can occur during a short circuit in several scenarios. It can occur while charging, as a result of a collision, or as a result of insulation breakdown. In each of these scenarios, the power to the battery must be shut off to avoid shock hazards to occupants and first responders and to reduce the risk of fire from contacts overheating.

NHTSA's proposal would adopt the GTR requirement that manufacturers submit documentation of potential battery system risks and how they are addressing them.

The effectiveness of the proposal could be enhanced by requiring that the vehicle battery be isolated in the case of an overcurrent condition. Further, in the event of an overcurrent event or vehicle collision, the battery system should include protection against a single point of failure, in keeping with standard industry practice.

The reporting requirements should include a requirement that manufacturers demonstrate that the positive and negative poles of the battery can be fully isolated following a vehicle crash or overcurrent event.

Water Ingress

NHTSA also proposes to adopt the GTR No. 20 washing test, which tests the battery for water ingress protection under normal driving conditions. NHTSA declines to adopt any flooding style scenario protections, specifically declining to adopt China GB-38031 and the Korean Motor Vehicle Safety Standard (page 82-83 of the NPRM), arguing these tests do not match real-world flooding scenarios. We do not disagree with the assessment but recommend that NHTSA undertakes a process to identify and address those scenarios.

Specifically, we recommend that NHTSA commits to a technical amendment and begin a convening process to collaborate with stakeholders in collecting data, with the goal of adopting a testing requirement that appropriately addresses real-world flooding scenarios.

In the interim, EDTA would recommend that the rule require, for each battery pack at the end of the assembly line, a leak check test that includes all sealing surfaces of the battery pack.

Again, we appreciate the opportunity to participate in the development of these important standards and look forward to working with you to achieve our shared goals for safety and innovation.

Sincerely,

Genevieve Cullen
President