High Voltage Battery Disposal

Sample

Important Safety Warnings

When disposing of high-voltage batteries, **it is crucial to first eliminate any risks associated with high-voltage systems.** If any high-voltage electrical components remain undetached, the inherent dangers of electrical energy and the risks within the battery can cause severe injuries. Therefore, it is imperative to follow all safety guidelines during the process. Additionally, if the battery is damaged or compromised, resulting in electrolyte leakage, it can lead to environmental contamination and injuries due to its chemical properties.

Consumers should never attempt to handle the battery on their own; the process must be carried out by the manufacturer or a qualified professional. All EV components possess electrical characteristics and must be dismantled according to the procedures.

General Precautions

- High-voltage systems may retain power after being disabled.
- Do not assume the power is off just because the vehicle is silent.
- Personal protective equipment must be worn when handling high-voltage power cables or components.
- Avoid physical impacts that could cause damage to the system, as electrolytes can be flammable or toxic.
- Metallic items (e.g., watches, rings, bracelets, necklaces) should not be worn when working on the battery.
- EV batteries should not be exposed to high temperatures.
- Avoid inhaling sprays, gases, or aerosols emitted from the battery.
- Appropriate protective clothing, gloves, and eye/face protection should be worn.
- Seek medical attention immediately if an accident occurs or unusual symptoms are experienced.
- EV systems should only be dismantled in well-ventilated areas.
- Prevent contamination of the environment by battery contents.
- Refer to manufacturer-provided manuals for additional guidance.

- If battery contents are ingested, rinse the mouth with water and seek medical attention promptly.
- EV batteries are heavy and require mechanical support during handling.
- Improper use or damage to lithium-ion batteries can result in high temperatures, fire, or gas emissions.
- Individuals with electronic medical devices, such as pacemakers, should not participate in EV dismantling.

Handling and Removal Procedures for High Voltage Batteries

The following information outlines measures to prevent secondary damage that may occur while the vehicle is in service or awaiting repair after a collision involving xEV (HEV, PHEV, EV, FCEV) vehicles.

- The composition and layout of parts may vary by vehicle model, so battery disposal should be carried out by a professional.
- Disconnect the 12V auxiliary battery terminals.
- Remove the high-voltage battery fuse (or service plug) if possible.
- Disconnect the high-voltage battery interlock connector.
- After removing the high-voltage battery, discharge it using discharge equipment or by submerging it in saline water.
    - Submersion conditions: 2wt% or less saline water for 3 days.

    * Discharge the battery cells to 1V (e.g., for HEV battery systems with 72 cells in series, discharge to 72V system voltage).
- If the high-voltage battery cannot be removed, submerge the vehicle.

    * Submersion and discharge conditions are the same as above.
- If neither battery removal nor vehicle submersion is possible, store the vehicle using a waterproof cover.

    * The waterproof cover should be of a size and material that prevents water ingress into the battery system.