Electric and Hybrid Vehicle Quick Reference

Fire Service Edition

INITIAL RESPONSE ACTIONS:

Conduct an Initial Scene Assessment to identify hazards.

Then: **1. IDENTIFY the drive system.**

2. IMMOBILIZE the vehicle.

3. DISABLE high voltage & SRS.

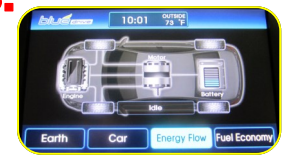
Photo courtesy of Kevin Cooney

IDENTIFY

BADGES:

LABELS:

INSTRUMENTS:



COMPONENTS:

Orange Cables = High Voltage

IMMOBILIZE

1. Chock wheels

2. Set Emergency BRAKE

3. Place vehicle in PARK

DISABLE

1. Ensure ignition is OFF*

2. Disconnect 12V battery

***If vehicle is equipped with proximity key, move it at least 16 feet away.**

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GENERAL WARNING AND CAUTIONS

- Never cut orange high voltage (HV), or yellow or blue medium (MV) voltage cabling. Never touch damaged or submerged HV or MV cables or components.
- Lack of engine noise in most hybrids and electrics does not mean that the vehicle is OFF. Silent movement or instant restart capability exists until vehicle is fully shut down.

SUBMERSION

- Vehicle chassis is safe to touch.

- High voltage (HV) system is isolated from chassis.
- Do not touch submerged HV cables or components.

FIRE

- High voltage (HV) battery fires may take much longer to extinguish than conventional fires.

- Water is the best extinguishing agent.
- Establish a water supply from hydrant or static source.
- Smoke is toxic.

POST INCIDENT

- Tow with a flatbed. Towing with drive wheels on ground may cause electrical fire.
- If high voltage (HV) battery is damaged, store vehicle at least 50 ft. from structures or vehicles.

- Monitor for signs of HV battery damage (inform tow operator).

For more detailed information and vehicle-specific alternate shutdown methods, see NFPA's **EV Emergency Field Guide**

DAMAGED HIGH VOLTAGE BATTERIES

- High voltage (HV) electrolyte leakage should be minimal, but is likely caustic and/or flammable *if* released.
- Warning signs of hazardous damage: sparks, smoke, Increasing temperature, gurgling/ bubbling sounds from HV battery.

- If any of these signs are observed, ventilate the vehicle immediately. The HV battery may be giving off harmful/ flammable gases and may become a delayed fire hazard.

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