



## INFORMATION FOR FIRST AND SECOND RESPONDERS

### EMERGENCY RESPONSE GUIDE



NIKOLA

TRE BEV

BATTERY ELECTRIC



VERSION: 002

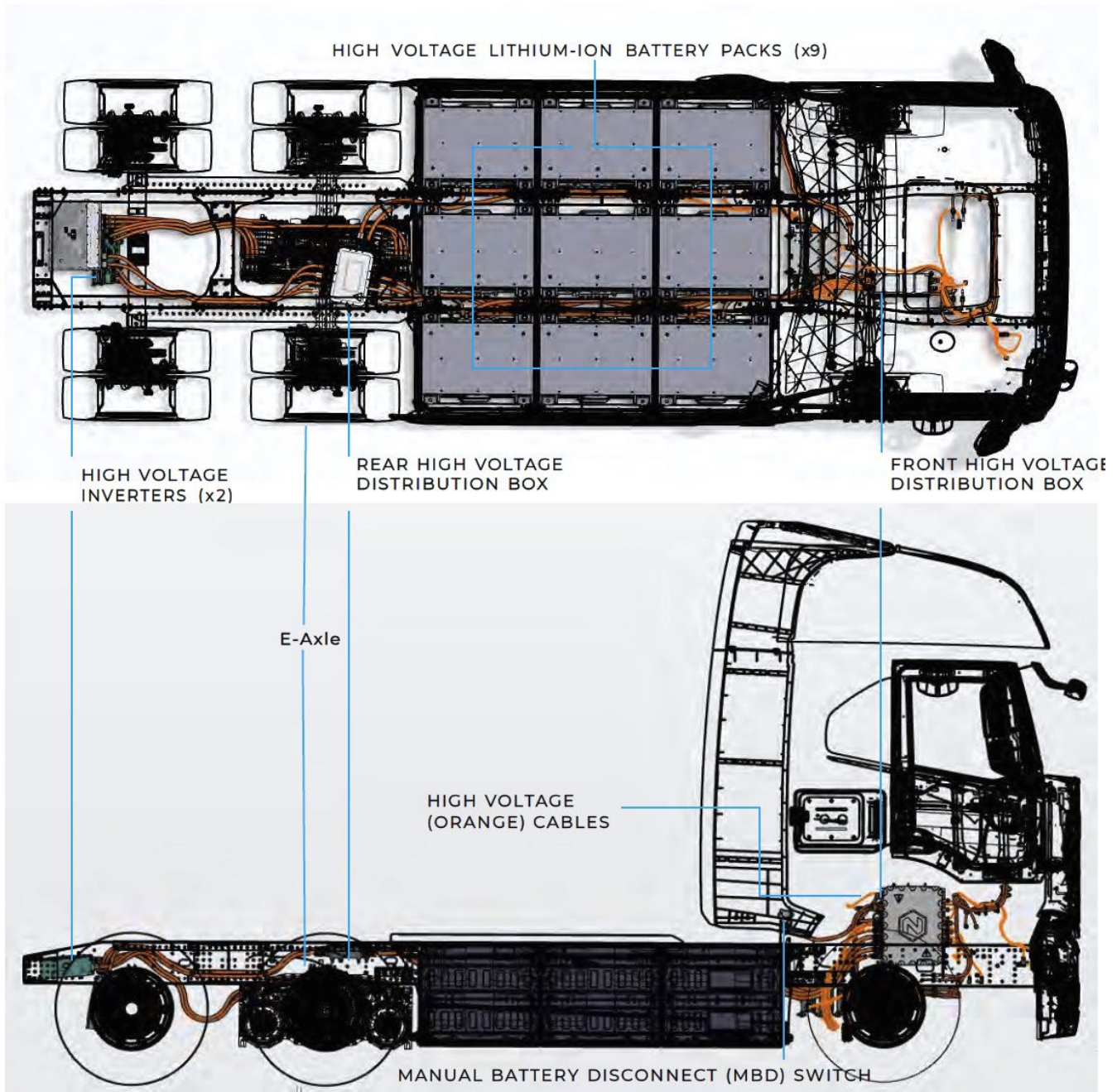


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## High Voltage (HV) System Diagram



**WARNING**

All high voltage (HV) wires and harnesses are wrapped in orange insulation. NEVER cut these sections. Do not try to touch without proper PPE (HV insulated gloves and boots, safety glasses, etc.).



1. Identification / Recognition



**Vehicle Identification Number (VIN):**

All Nikola manufactured vehicles are equipped with a HV system and can be identified as a Nikola vehicle by the first three characters of the VIN which will always be "1N9."

Furthermore, the 6th character of the VIN will either be a "B" to indicate battery electric vehicle or an "H" to indicate hydrogen fuel cell electric vehicle.

The VIN is found on the driver side A-pillar and stamped on the frame railing inside driver side wheel well.



2. Immobilization / Stabilization / Lifting



A. Chock the trailer and truck wheels



B. Activate the parking brakes by lifting up on the right side of both the yellow and red switches



C. If the vehicle is on, and time allows, turn it off by pressing the START | STOP button

MBD ON



MBD OFF



D. Turn the MBD switch counterclockwise (CCW) to off



**WARNING**

Do not touch, cut, or open high-voltage components and/or high-voltage batteries.

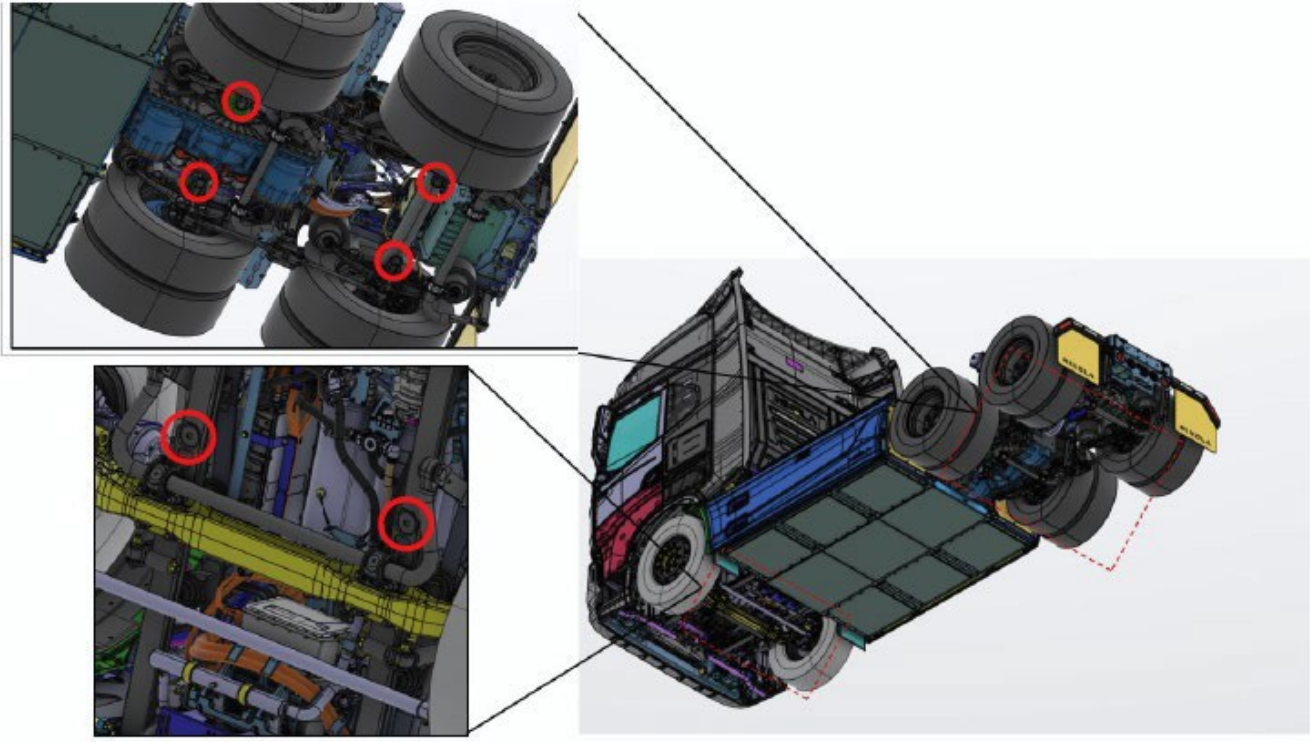
Always wear the full firefighting PPE and proper insulated electrical PPE (safety glasses, gloves rated for at least 1,000V, HV insulated safety shoes, etc.).

Remove all metallic jewelry including rings, chains, and watches.



**Lifting Points:**

The Vehicle can be lifted/jacked at the points along each axle shown in the figure below.



**WARNING**



Never stabilize or lift the vehicle directly from the battery pack or anywhere along the high voltage system.



### 3. Disable Direct Hazards / Safety Regulations

#### Disabling High Voltage (HV):



- A. Fold the passenger side aero fairing to access manual battery disconnect (MBD) switch
- B. Locate the MBD switch
- C. Turn the MBD switch counterclockwise (CCW) to off
- D. Wait a minimum of **5 minutes** for the high voltage system to de-energize

MBD ON



MBD OFF



#### WARNING



It is possible for the HV system to keep significant levels of voltage for a short duration after the system has been deactivated. Allow 5 minutes for voltage to de-energize before interacting directly with HV components.

Do not touch, cut, or open high-voltage components and/or high-voltage batteries.

Always wear full firefighting and proper insulated electrical PPE (safety glasses, gloves rated for at least 1,000V, HV insulated safety shoes, etc.). Remove all metallic jewelry including rings, chains, and watches.



4. Access to the Occupants

**Windows:**

The side windows and sunroof glass on the Tre BEV are made of tempered glass.  
The windshield is made of laminated safety glass.



- 1. Tempered Glass
- 2. Laminated Safety Glass



**WARNING**



Electrical and mechanical components (seats, doors, steering wheel, etc.) may be compromised after a collision.

If extrication is needed, do not touch, cut, or open high-voltage components and/or high-voltage batteries.





5. Stored Energy / Liquids / Gases / Solids

		<p><b>800V</b></p>
		<p><b>12V and 24V</b></p>
		<p><b>Coolant (R1234yf)</b></p>



**WARNING**

If coolant escapes from the cooling system, there is a risk of thermal reaction within the high voltage battery system.

Monitor temperature of the high voltage battery for thermal reaction.



## 6. In Case of Fire

USE COPIOUS AMOUNTS OF WATER TO FIGHT A HIGH VOLTAGE BATTERY FIRE.

If the battery catches fire, is exposed to high heat, or is generating heat or gases, use large amounts of water to cool the battery. It can take over 2,600 gallons of water (applied directly to the battery) to effectively cool and extinguish a high voltage battery fire.

If a Lithium Ion (Li-Ion) HV battery is involved in a fire, there is a possibility that it could reignite after being extinguished. If available, use thermal imaging to watch the battery. Re-apply water as necessary to cool the battery packs. Battery packs must be kept below 120°C (248°F). Do not store a vehicle containing a damaged or burned Li-Ion HV battery in or within 50 feet of a structure or other vehicle until the battery can be discharged.

High voltage batteries are in protective cases which make it difficult to spray water directly to burning cells. Applying large amounts of water may lower the HV battery temperatures enough to prevent the fire from spreading to adjacent cells.



### **WARNING**

Follow all safety guidelines and procedures before entering the emergency scene.

All personnel should wear and use full firefighting PPE and SCBA as needed at all vehicle fires.



## 7. In Case of Submersion

Battery electric vehicles that have been submerged in water should be handled with greater caution due to the potential risk of a high voltage electrical battery fire. First responders should be prepared to respond to a potential fire risk. Pull the vehicle out of the water and allow the water to drain out of the vehicle's high voltage battery packs. Follow section 3 of this document, ***Disable Direction Hazards/Safety Regulations***, once the vehicle is out of the water.



### **WARNING**



Use extreme caution around submerged units as electrocution and/or electrical hazards may be present.

Make sure to follow department standard operating procedures when dealing with submerged vehicles.



## 8. Towing / Transportation / Storage

The vehicle can be pushed at speeds below 3 mph for up to a total of 1 mile to clear it from the roadway. The vehicle must be placed in Neutral, and the parking brake must be disengaged prior to pushing.

The E-axle in the vehicle can generate power if the wheels spin during towing which could lead to overheating and cause significant damage. The vehicle can be towed from the rear (reverse tow or 5<sup>th</sup> wheel lift method), the front (with front hook), or with a lowboy trailer. Always transport the vehicle with the E-axle off the ground and restrict the wheels from spinning. The vehicle must remain in Neutral during towing.

High voltage components may be compromised because of a collision. Before transporting, it is important to assume these components are energized. Always follow high voltage system safety precautions and avoid transporting until the HV system has been properly deenergized. Failure to do so may result in serious injury.

Damaged battery electric vehicles should be kept in an open area-instead of in a garage or other type of enclosed storage facility- until the batteries have been properly discharged.

Follow all local, state, and federal guidelines for scrapping vehicles with a high voltage battery system.



### **WARNING**

The potential for battery re-ignition exists after a crash or fire incident. Vehicle should be stored outside at a safe distance (50 ft minimum) from other vehicles and structures.











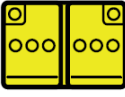


## 9. Important Additional Information

First responders and training officers with questions may contact Nikola at **888.690.3050**.



10. Explanation Pictograms Used

	Acute Toxicity
	Battery Electric Vehicle
	Caution / Danger
	Corrosive
	Explosive
	Flammable
	Gases under pressure
	Hazards to the Human Health
	High Voltage Battery
	High Voltage Warning
	Low Voltage Battery