# INFORMATION FOR FIRST AND SECOND RESPONDERS EMERGENCY RESPONSE GUIDE



BrightDrop Zevo 400/600

3 Door Panel Van

FWD/AWD

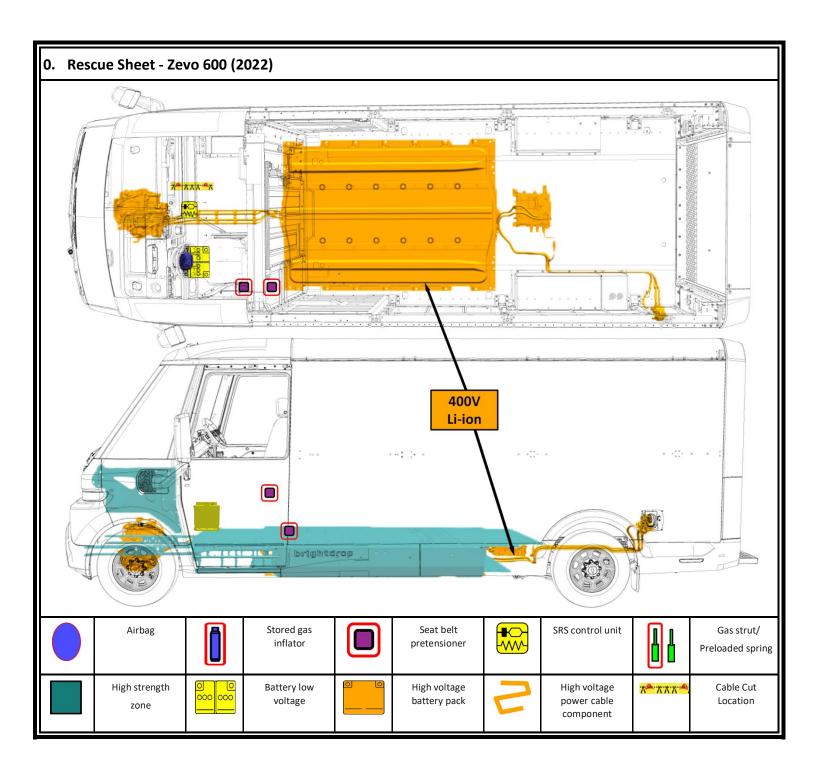


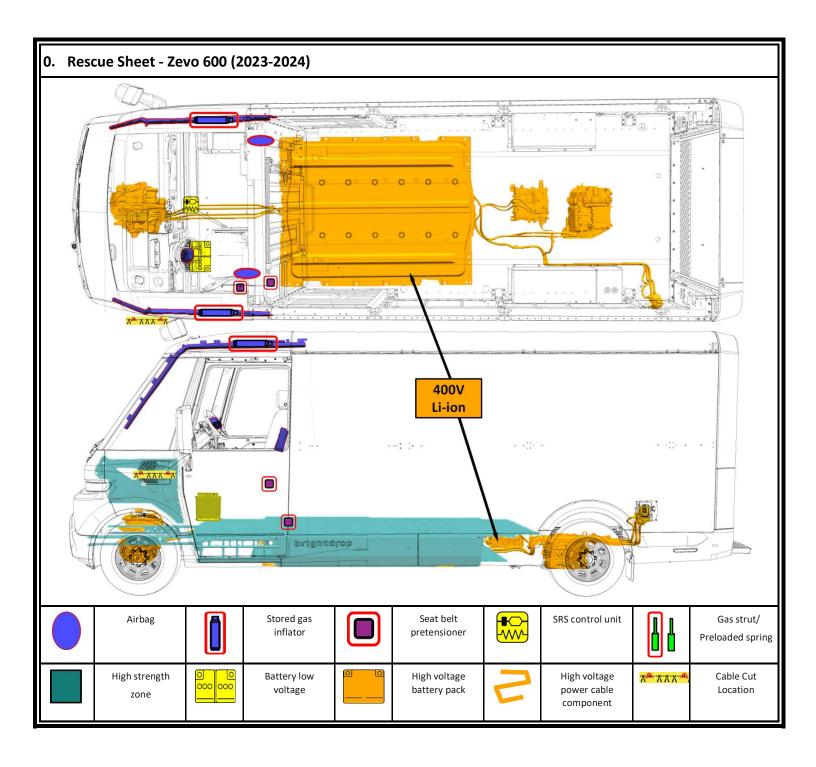


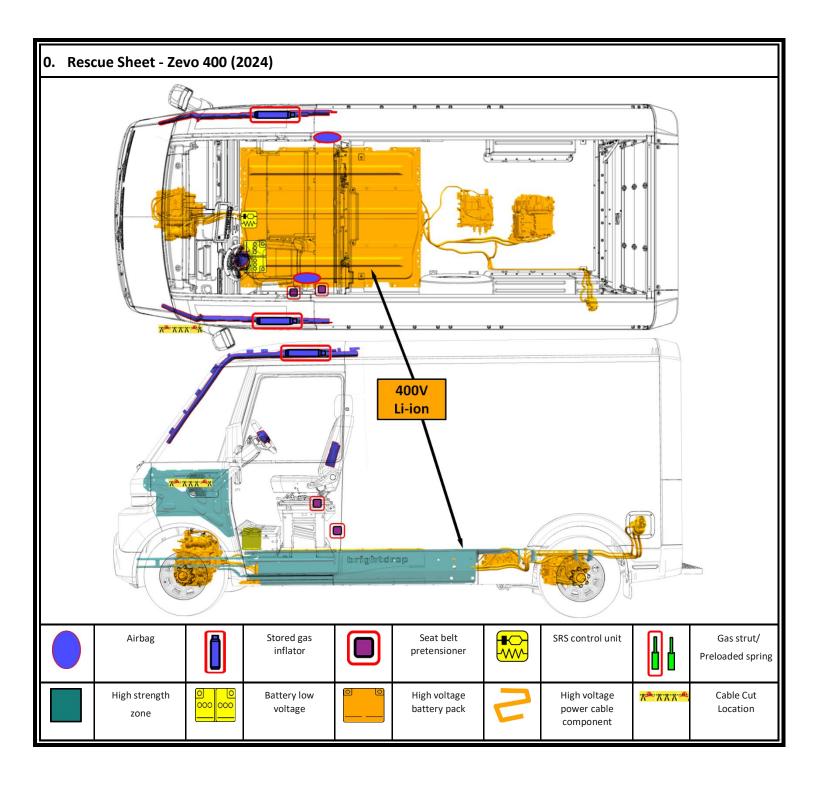
Version: 5

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## 1. Identification / recognition

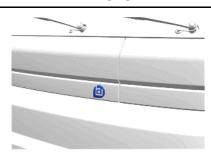


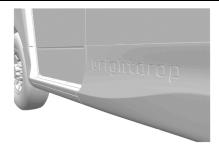
Advise Dispatch and all responders that an electric vehicle is involved.

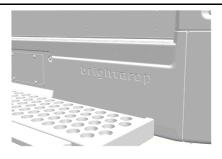


Lack of engine noise does not mean vehicle is off: vehicle movement capability exists until vehicle is fully shut down. Always wear appropriate PPE.

## **Emblems and Badging**







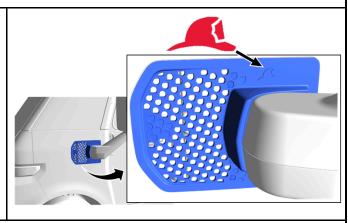
Hood Emblem Side Badging Rear Badging

#### **Visual Identification of Cut Loop Location**

With the addition of Roof Rail and Side impact airbags for the 2023 model year, the low voltage cut loop was re-located outside the vehicle.

For 2023 and 2024 models, the cut loop is located behind the outside rearview mirror cover on the left side of the vehicle. A fire helmet icon is molded into the cover.

If the cover does not have the fire helmet icon, the vehicle is a 2022 model year vehicle and the low voltage cut loop will be located under the instrument panel.





## **High Voltage Battery Information**



The battery is a High Voltage (Class B) Li-ion pack, that is a mounted under the vehicle and is a structural part of the floor pan.



## **Battery Warning Label (2022)**



The battery warning label is located on the dash panel upper extension on the right side of the vehicle.

NOTE: The cut loop was re-located outside the vehicle after the 2022 Model Year.





EMERGENCY PERSONNEL
To help avoid personal injury in an emergency
• Turn ignition to "Off". Cut any battery cables or wires narked by yellow tape

PERSONNEL D'URGENCE : Pour éviter toutes blessures corporelles en cas d'urgence, • Mettez le commutateur

d'allumage en position « Off » (Arrêt).

Couper tous les câbles ou fils de batterie marqués par du ruban jaune (voir le schéma).

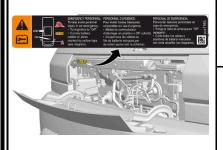
PERSONAL DE EMERGENCIA: Para evitar lesiones personales en Ponga la llave de arranque en "Off" (apagado)
 Corte todos los cables o

alambres de batería marcados con cinta amarilla (ver diagrama).





#### Battery Warning Label (2023 and 2024)



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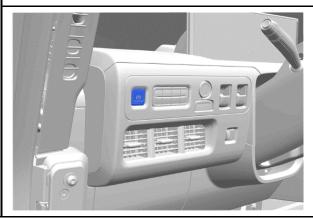
## 2. Immobilization / stabilization / lifting



#### **IMMOBILIZE VEHICLE**

- Block the wheels.
- Follow procedures for conventional vehicles.

## Electric Parking Brake (EPB)



#### **Applying the Electric Parking Brake**

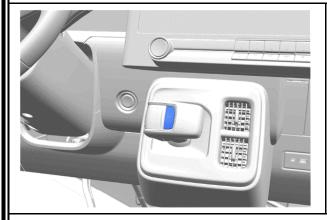
Press the EPB switch momentarily. The red parking brake status light will flash and then stay on once the EPB is fully applied.

#### **Releasing the Electric Parking Brake**

- Turn the vehicle on.
- Apply and hold the brake pedal.
- Press the EPB switch momentarily.

The EPB is released when the red parking brake status light is off.

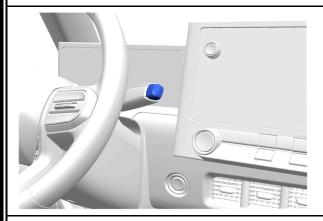
## Electric Drive Unit Shift Lever (2022 and 2023)



#### **Shifting into Park**

When the vehicle is stopped, press the button on top of the shift lever to shift to P (Park).

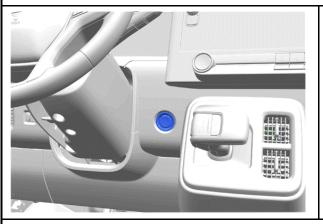
## **Electric Drive Unit Shift Lever (2024)**



## **Shifting into Park**

When the vehicle is stopped, press the button at the end of the shift lever to shift to P (Park).

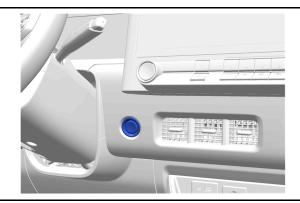
## Power Button (2022 and 2023)



To turn the vehicle off, press the button on top of the shift lever to shift to P (Park) and press the POWER button.

Alternatively, press and hold the POWER button. The electric drive unit will shift to P (Park) then shut off automatically.

## Power Button (2024)



To turn the vehicle off, press the button at the end of the shift lever to shift to P (Park) and press the POWER button.

Alternatively, press and hold the POWER button. The electric drive unit will shift to P (Park) then shut off automatically.



## Lifting Points - Zevo 600 (2022)

There are features on the body of the vehicle, for use as primary lifting points.

The lifting point features should only be used for lifting the vehicle. Do NOT use these features as attachment points to move or tie the vehicle down.

Do NOT lift the vehicle from any locations on the high voltage battery.



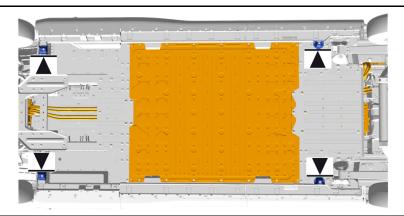


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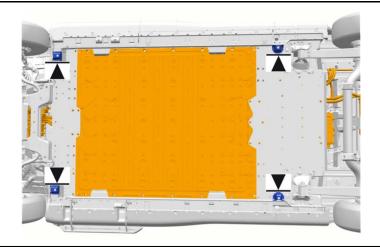


## Lifting Points - Zevo 400 (2024)

There are features on the body of the vehicle, for use as primary lifting points.

The lifting point features should only be used for lifting the vehicle. Do NOT use these features as attachment points to move or tie the vehicle down.

Do NOT lift the vehicle from any locations on the high voltage battery.



## 3. Disable direct hazards / safety regulations

## **Thermal Runaway Alert and Mitigation**



The vehicle is equipped with a 12v battery management system with internal fault detection, including thermal runaway alert and mitigation for the high voltage battery.

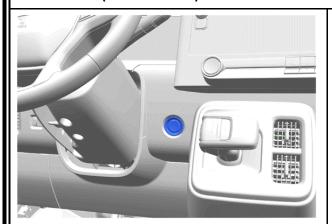
To keep thermal runaway alert and mitigation available, DO NOT disable the 12v battery.

Automatic safety systems are enabled when low voltage power is available.

12v power is required for the high voltage battery management system to operate. The system is designed to detect internal faults and, if necessary, activate thermal runaway mitigation. A "Battery Danger Detected, Safely Exit Vehicle" notification may be displayed on the instrument panel with additional information, an OnStar call may be attempted to be placed and the horn, chime, and hazard lights may activate. OnStar advisors are trained to contact first responders.

DO NOT disable the 12v battery to disable the horn.

#### Power Button (2022 and 2023)

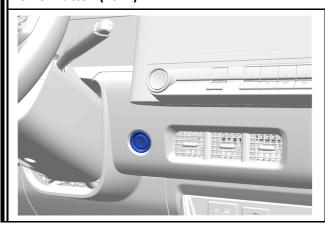


If the vehicle is already in PARK state, press the POWER button to disable vehicle propulsion.

Alternatively, press and hold the POWER button. The electric drive unit will shift to P (Park) then shut off automatically.

The high voltage system can remain energized even when the vehicle is in the OFF state.

#### Power Button (2024)

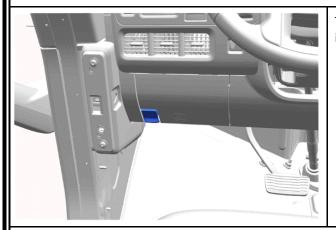


If the vehicle is already in PARK state, press the POWER button to disable vehicle propulsion.

Alternatively, press and hold the POWER button. The electric drive unit will shift to P (Park) then shut off automatically.

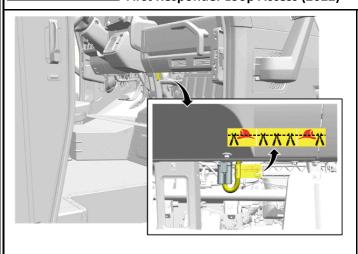
The high voltage system can remain energized even when the vehicle is in the OFF state.

## Hood Release



The hood release handle is located at the outboard side of the instrument panel.

## First Responder Loop Access (2022)





#### **Low Voltage Cable Cut Point**

From INSIDE the vehicle, double cut the first responder loop on both sides of the yellow tape and remove the cut section of cable from the vehicle. Ensure that the cuts are clean and that there is no risk of loose wires touching.

This cut will disable the high voltage.

Airbags can be disabled by removing the 12v battery negative cable. This will disable the thermal runaway alert and mitigation.

DO NOT CUT ANY ORANGE COLORED HIGH VOLTAGE CABLES.



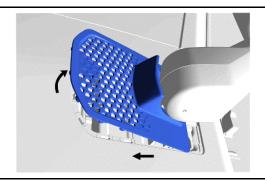
#### First Responder Loop Access (2023 and 2024)



## **Low Voltage Cable Cut Point**

Remove the outside rearview mirror cover:

- 1. Start at the bottom of the cover and pry out.
- 2. Release the tabs at the front and top of the cover.
- 3. Slide the cover forward to remove.

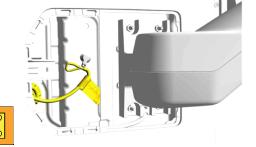


Double cut the first responder loop on both sides of the yellow tape and remove the cut section of cable from the vehicle. Ensure that the cuts are clean and that there is no risk of loose wires touching.

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Airbags can be disabled by removing the 12v battery negative cable. This will disable the thermal runaway alert and mitigation.

DO NOT CUT ANY ORANGE COLORED HIGH VOLTAGE CABLES.





#### **VEHICLE AT CHARGE STATION:**

If able, terminate charging by removing the charge handle from the vehicle. It may be appropriate to terminate charging at the station, as well.

The common charge handle is shown; The DC Fast Charge handle is moderately larger and may require additional effort to disconnect.

## 4. Access to the occupants

Refer to the vehicle <u>Rescue Sheet</u> for illustrations that show the locations of High Strength Structural Components, High Voltage Components, and Safety Components.

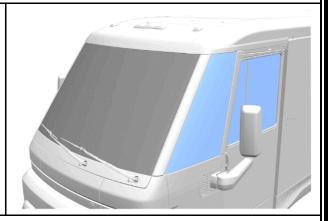
#### **Vehicle Glass**



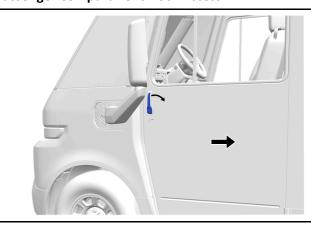
- The windshield is made of Laminated Glass



The front quarter and side pocket door windows are made of Tempered Glass



#### **Passenger Compartment Door Access**

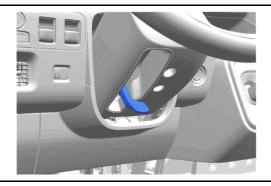


The side access and bulkhead doors are <u>pocket door</u> designs. These doors incorporate upper and lower guide tracks.

- The side pocket doors slide from front to rear.
- The bulkhead door slides from right to left and is stored in the bulkhead behind the driver.

The inside and outside door handles are actuated by rotating the top of the handle from the front to the rear of the vehicle.

## Steering Column Adjustment

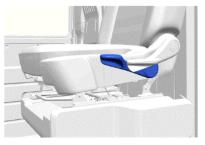


- 1. Pull (or lower) the lever down.
- 2. Move the steering wheel up or down.
- 3. Move the lever up to lock the steering wheel in place.

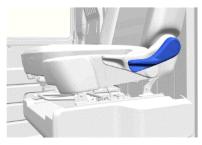
#### **Driver Seat Controls**







Height Adjuster



Recline Adjuster

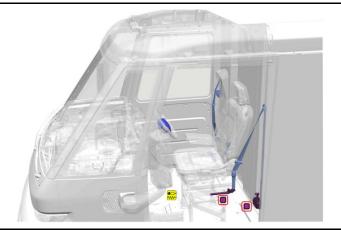
## **Passenger Jump Seat**



## **Occupant Restraint Systems (2022)**

The 2022 Zevo 600 is equipped with a Driver Airbag on the steering wheel.

There are seat belt restraints for two occupants. The driver seat belt system includes two pre-tensioners. One is seat belt retractor-mounted and the other is mounted to the seat belt anchor on the seat riser.

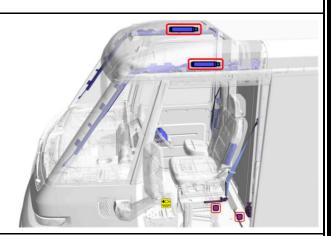


#### Occupant Restraint Systems (2023 and 2024)

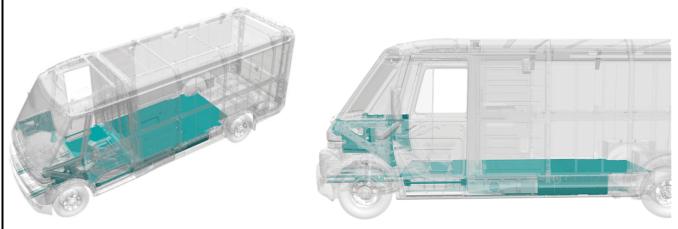
Zevo 400 and Zevo 600 models are equipped with five airbags:

- Steering wheel mounted.
- Driver side impact (seat mounted)
- Passenger side impact (body pillar mounted)
- Driver and Passenger roof rail

There are seat belt restraints for two occupants. The driver seat belt system includes two pre-tensioners. One is seat belt retractor-mounted and the other is mounted to the seat belt anchor on the seat riser.

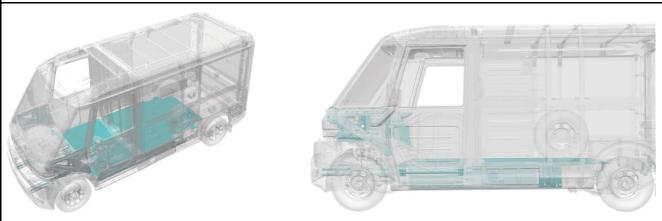


## **High Strength Steel Structure – Zevo 600**



The passenger compartment is protected using high strength steel in the pillars, rocker panels, door reinforcement beams, and floor structure.

#### High Strength Steel Structure - Zevo 400

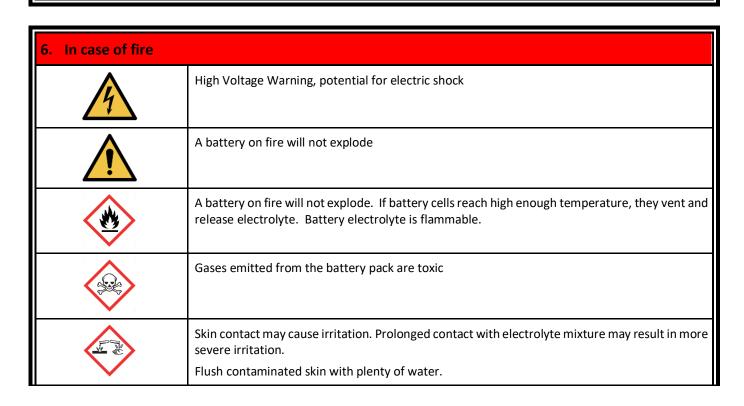


The passenger compartment is protected using high strength steel in the pillars, rocker panels, door reinforcement beams, and floor structure.



As with any occupant extrication, exercise caution. The vehicle's high voltage cables and components may be energized with high voltage. Avoid touching or cutting high voltage cables or components during any rescue operation.

5. Stored energy / liquids / gases / solids				
12V Lead Acid	Low Voltage Lead Acid Chemistry Battery			
Li-ion	High Voltage Lithium Ion Chemistry Battery			
4	High Voltage Warning, potential for electric shock			
	Gases emitted from the battery pack are flammable			
	Gases emitted from the battery pack are toxic			
	Skin contact may cause irritation. Prolonged contact with electrolyte mixture may result in more severe irritation.  Flush contaminated skin with plenty of water.			
	Fluids leaking inside the battery pack can become unstable and possibly a risk for fire. Check the battery pack temperature with a thermal imaging camera.			





Potential for eye, nose, and throat irritation with prolonged exposure.



Always wear Self-Contained Breathing Apparatus (SCBA).

Use copious amounts of water to cool the battery and to extinguish a fire.

Do NOT use an ABC dry chemical extinguisher because it will not extinguish a battery fire.



Potential for Battery Re-Ignition.

#### 7. In case of submersion

The high voltage battery is isolated from the vehicle chassis. If the vehicle is immersed in water, there is no risk of electrocution by touching the vehicle.

After the vehicle was removed from the water, do the following:

- 1. Allow the vehicle to dry out.
- 2. Perform the high voltage disabling procedure in Section 3.

## 8. Towing / transportation / storage

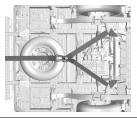
#### **Tow Hooks**

Carefully open the cover in the fascia by using the small notch that conceals the tow eye socket. Install the tow eye into the socket and turn it until it is fully tightened. When the tow eye is removed, reinstall the cover with the notch in the original position.

The vehicle has specific attachment points to be used to pull the vehicle onto a flatbed car carrier from a flat road surface. Do not use these attachment points to pull the vehicle from snow, mud, sand, or ditch.







## **Vehicle Towing and Transportation**

BrightDrop recommends a flatbed carrier to transport a disabled vehicle. A wheel lift truck along with properly rated tow dollies can be used if a flatbed carrier is not available.





The lifting point features should only be used for lifting the vehicle. Do NOT use these features as attachment points to move or tie the vehicle down.







Moving the vehicle with the drive wheels on the ground will generate unwanted energy. Limit the movement of the vehicle to the distance required to prepare the vehicle for towing.



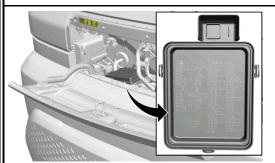


Potential for continued hazards (rekindling/re-gassing/etc) if a damaged vehicle battery is jostled during recovery, including the towing and storage process.



After a "Battery Damaged Detected, Safely Exit Vehicle" notification or thermal runaway mitigation cycle completed, it might be appropriate to wait up to an hour before towing to a certified dealer for vehicle inspection even though evidence of a thermal event such as smoke may not be visible, and unusual odors may not be detected from the vehicle. To disable the horn to tow the vehicle, remove the horn fuse.

#### Horn Fuse Removal



If the horn must be disabled prior to transport, locate and remove the horn fuse from the underhood electrical center.

#### **Post-Crash Vehicle Storage**

Store the vehicle outside at a safe distance (15 meters / 50 feet) or separated from flammable objects.

#### Disposal

The high voltage battery and leaked battery fluids should be properly disposed of according to local regulations. General Motors recommends removing and recycling the battery. Refer to *recyclemybattery.com* for more information on storing, disabling, removing, and shipping the battery along with a list of available recycling facilities.

#### 9. Important additional information

This vehicle is supported by OnStar, where available.

10. Explanation of pictograms used						
4	Electric Vehicle	$\wedge$	General Warning	4	Warning, Electricity	
Li-ion	Battery Technology		Lifting Points	☐ IR SS	Thermal Imaging Camera	
	Flammable		Toxic	T. T	Corrosive	
<b>③</b>	Injury Risk		Use Water		Front Compartment Release	
	High Voltage Disconnect	<del>X* X X *X</del>	Cable Cut Location			